# Australian Cornish Mining Sites: Burra
## Conservation Management Plan

March 2021, ref 18188

**Swanbury Penglase**

# Contents

We wish to acknowledge the custodians of this land, the Ngadjuri people and their Elders past and present. We acknowledge and respect their continuing culture and the contribution they make to the life of this city and this region.

# 1.    Executive Summary

## 1.1.    Background

Swanbury Penglase were engaged by the Regional Council of Goyder to develop a Conservation Management Plan (CMP) for the Australian Cornish Mining Sites: Burra in September 2018. The project has come about as a result of the National Listing of Australian Cornish Mining Sites: Burra and Moonta by the Federal Government in May 2017.

This document for the Australian Cornish Mining Sites: Burra (ACMS (Burra)) has been developed in accordance with the Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance 2013) and the Federal Government's guidelines for Managing National Heritage Places. It will be used as a tool by owners together with the Council, State and Commonwealth Government agencies to inform future development, decision making and management strategies for the area.

The background historic research and site analysis necessary to establish an understanding of the place has reinforced the existing established National Heritage Values. Several other places both within the boundaries of the ACMS (Burra) were identified as worthy of further research to determine if it would be beneficial to determine if they also meet the criteria for inclusion in the current listing.

A number of issues and opportunities which currently or potentially may impact on the National Heritage Values have been identified including; the statutory context, land ownership, management, cultural landscape, safety, physical conservation, the Ngadjuri people's heritage, interpretation, tourism, planning issues and further research. Specific policies have been developed to address the implications of these issues.

A detailed review of the policies and guidelines has been carried out and recommendations developed to address any inconsistencies in the existing Regional Council of Goyder Development Plan. These address the implications and responsibilities as a result of the National Heritage Listing. Consequently, a list of recommended priorities and actions have been developed.

# 1.2.  Recommendations

For action within the next two years

- Facilitate endorsement of this CMP for the ACMS (Burra).

- Establish an Advisory Committee to advise and report independently back to Council on the management of the ACMS (Burra) site and on the implementation of the recommendations contained in this CMP.

- Prepare a Development Plan Amendment to integrate the objectives and recommendations of this CMP into the planning policy of Council's Development Plan (or planning code equivalent given the planning reform process underway in SA).

- Training of Heritage SA officers on the requirements and obligations under the EPBC Act 1999 to allow Heritage SA to understand the National Heritage values, together with the preparation of a guide for their internal use to help facilitate this understanding.

- Develop an archaeological map to identify areas of high and low potential for undisturbed sites.

- Updating of the existing *Guidelines for development* to include information about the obligations of owners within the ACMS (Burra) under the *EPBC Act (1999)*.

- Facilitate training of those responsible for the management of the ACMS (Burra) to highlight obligations under the EPBC Act and the recommendations outlined in this document.

- Facilitate training of state government business enterprises with a presence within the ACMS (Burra) to highlight obligations under the EPBC Act and the recommendations outlined in this document.

- Review and audit all tourism strategies and proposals to ensure the authenticity of the ACMS (Burra) is not compromised.

- Prepare a Reconciliation Action Plan and develop Indigenous policies to enable authentic collaboration, engagement and celebration of Ngadjuri culture alongside Cornish and western culture.

- Develop a walking and cycling strategy for the ACMS (Burra) to encourage walking and cycling opportunities.

- Develop a coordinated interpretation strategy to increase the public understanding of the National Heritage values of the ACMS (Burra).

- Develop a signage strategy for the ACMS (Burra) to increase wayfinding through the place and to assist with linking the individual components.

- Prepare a conservation strategy for the Burra Historic Mine site (SAHR 10970) to realise its potential as the key component for the interpretation of Cornish mining practices represented at the ACMS (Burra), and conservation of its significant components to minimise the risk of further deterioration.

- Redefine the former Burra Historic Mine site (SAHR 10970) boundary (prior to the subdivision of Graham in the north east corner of the site) in the SA State Heritage Register.

- Amend zoning to Historic Mining from Town Centre to reconnect the mine site and protect other mine related heritage places.

- Prepare a conservation strategy for the Burra Smelts Historic Site (SAHR 10989) and the Burra Smeltsyard and Storehouse (SAHR 10024) to realise its potential as a key component for the interpretation of Welsh smelting technology and processes represented at the ACMS (Burra), and conservation of its significant components to minimise the risk of further deterioration. This should include the review of the actions recommended in the 1990 Bannear Plan.

- Redefine the former Smelts site boundary in the South Australian Heritage Register.

- Undertake master planning for the Burra Creek based on previous work undertaken (Woods Bagot Landscape Concept Plan and EBS Ecology Revegetation Action Plan) to realise its potential as a recreational space and as a pedestrian/cycling link for the components of the ACMS (Burra) supported by interpretation on its significance to the National Heritage values.

- Stabilise places identified as being at risk of collapse, specifically:
  - Mine Offices (SAHR 10056)
  - Former Engine/Crusher House (SAHR 10045)
  - SAMA Store Room, Yard and Walls (SAHR 10019)
  - Smelts Stableyard and Storehouse (SAHR 10024)

- Develop a master plan for the caravan park to increase amenity and to de privatise the Creek edge- offset this with increased space north along Bridge Terrace and/or over Bridge Terrace.

For action within the next five years

- Investigate opportunities for the inclusion of the ACMS (Burra) as part of existing world heritage listing for the Cornwall and West Devon Mining Landscape.

- Develop a maintenance programme for the major components of the ACMS (Burra), including buildings, ruins, fencing and interpretation.

- Establish a Heritage Grant Scheme for the ACMS (Burra) to enable funding for heritage conservation works.

- Catalogue and assess the heritage significance of moveable heritage within the ACMS (Burra), including items on the ground, and a review of mining related artefacts held by the National Trust which are associated with the site.

- Undertake a site safety and security audit of all places at risk of collapse or potential falling hazards, sensitive/fragile sites requiring fencing for actioning to improve safety and amenity across ACMS (Burra). Pending its completion, this should include immediate works to repair existing barriers/fencing at existing mine shafts.

- Assess market trends from the Tourism Strategy and the Goyder Master Plan to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in the ACMS (Burra).

- Consider entry statements at the southern and northern approaches into the ACMS (Burra) to better highlight the entrances to the town.

- Develop a strategy for the ACMS (Burra) to be used as a base for training in conservational based skills including archaeological training, building upon the existing association created by the Burra Charter.

- Relocation of chainmesh site fencing around the open cut at the Burra Mines Historic Site to remove visually intrusive sections, particularly around the Morphett's Enginehouses.

- Develop a Burra Creek Walk to link key components of the ACMS (Burra) together along the banks of Burra Creek from the Cemetery (SAHR 10432) in the south to the northern gateway and beyond to the Burra railway station with interpretation at key points.

- Development of maintenance schedules for the Burra Mines Historic Site (SAHR 10970) and the Burra Smelts Historic Site (SAHR 10989).

- Carry out stabilisation of the Morphett's shaft along with repairs to the timber lining to the top of the shaft and the drainage tunnel to allow this to be reopened to public access.

- Prepare a conservation strategy for the Bon Accord Mine site (SAHR 10023) to conserve its significant components to minimise the risk of further deterioration, to improve disability access and to consider broader tourism and interpretation opportunities.

- Develop a master plan for the Burra railway station environment to integrate car parking, access and movement, landscaping, shade and other amenities for tourists and visitors.

- Explore options to screen or otherwise reduce the visual intrusion of the water supply tank on the Burra Mine Historic Site.

- Research and analysis to determine suitable conservation methodologies for the stabilisation of the Miner's Dugouts (SAHR 10050).

- Rectify inappropriate stormwater drainage through the Dugouts Site, Burra Creek (SAHR 11187).

For action in more than five years

- Reinstate the street typology cross section with street trees in all streets where possible.

- For the Burra Mines Historic site (SAHR 10970), prepare a long-term strategy for the removal of the open cut overburden to unearth and showcase buried mine infrastructure such as the Jigging Grounds, Buddle Pits and Ore Floors and return the topography of this area back to its original form.

- Remove incongruous and intrusive development adjacent Burra Creek over time including Burra SA Ambulance Service and Burra Discount Tyres that block access to the Creek and return it to open space.

- Prepare a conservation strategy for Hampton (SAHR 10359) to ensure its conservation and interpretation.

- Prepare a conservation strategy for the Burra Cemetery to ensure its conservation and interpretation, including the review and integration of the recommendations of the 1991 Conservation Plan by McDougall & Vines.

- Relocate the water tank on the Burra Mines Historic site (SAHR 10970) to a less sensitive site or put the tank underground on the same site.

- Develop a conservation strategy for the Redruth Gaol (SAHR 10042) to ensure the conservation of its fabric, explore strategic re-use and interpretation options, as well as considering the upgrading of its immediate environment, car parking, access and movement, landscaping, shade and other amenities for visitors.

- Develop a master plan for the rejuvenation of Bests Place as a secondary town centre to Burra with the main focus on stimulating commercial and civic activity, and consideration of traffic management, returning road space to green pedestrian space with improved shade and amenity.

- Investigate the longer-term strategic acquisition of key places that relate to the Cornish mining practices of the National Heritage values of the ACMS (Burra). These places include:
  - Former SAMA Store Room, Yard and Walls (SAHR 10019) & SAMA Storeman's Dwelling (SAHR 10049)
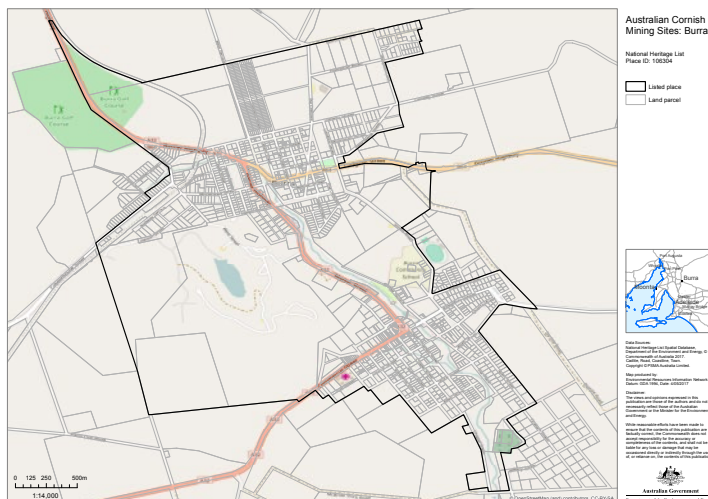  - Former Burra Smeltsyard and Storehouse (SAHR 10024)

# 2. Introduction

## 2.1. Background

This CMP was commissioned by the Regional Council of Goyder and addresses the Australian Cornish Mining Sites at Burra (ACMS (Burra)) located in the Mid North region of South Australia. The project brief which has guided the content and direction of this CMP has been included for reference in Appendix E. The ACMS (Burra) is inscribed on the Australian National Heritage List as a place of outstanding national heritage significance where Cornish mining technology, skills and culture is demonstrated to a high degree.

The place is defined in the National Heritage List as comprising the Burra State Heritage Area and includes the Burra mine area and the surrounding collection of small historic town settlements associated with the mine. The historic Burra Mine was operated in two major phases: first as an underground mine from 1845 until 1867 using the Cornish tribute method and steam powered pump engines; and then from 1870 until 1877 it was worked using the open-cut method, one of the first metalliferous mines in Australia to attempt the newly developed surface mining technique.

The CMP is intended as a document which helps owners, managers and authorities understand the National Heritage values of Burra. It specifies how those values can be best conserved over time. It is intended to be used as a tool by Owners, Council, State and Commonwealth Government agencies to manage change, inform future development and decision making and management strategies for the place.

This study was funded by the Australian Government through the Protecting National Historic Sites Program and has been prepared with reference to the principles of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) and Regulations.



Burra Mines State Heritage Area (outlined in black). Source: http://www.environment. gov.au/system/files/pages/031c80f6-89ac-4bcb-944c-832aa052c51d/files/ boundary-map-burra.pdf

## 2.2. Objectives

The primary objectives of the CMP are to:

- Review, identify and analyse the heritage values of ACMS (Burra) and its components.
- Develop conservation policies relating to the National Heritage List
- Develop policies and guidelines for inclusion in the Goyder Council Development Plan.
- Make practical recommendations for its ongoing conservation, management and promotion of the ACMS (Burra).
- Contribute to the community's sense of identity – its past, present and future.
- Provide the basis for ongoing cultural resource management.

In addition, the CMP has the opportunity to influence:

- Tourism and marketing associated with the place.
- The aesthetic form, function and accessibility.
- Staging and sequencing of projects.
- Funding opportunities.

## 2.3. Location

Burra is located 160 kilometres north of Adelaide. The physical scope or boundary of this document is as per the map for Burra in the Government Gazette notices relating to the inclusion of the two places which form the National Heritage Listing (Burra and Moonta). For Burra, the scope of this document correlates with the State Heritage Area of Burra (Heritage Number 27549 and State Heritage ID 16183) and which is included in the Development Plan for the Regional Council of Goyder. It includes all former villages which now constitute the town of Burra including Kooringa, Redruth, New Aberdeen, Aberdeen, Llwchwr and Hampton and other key elements such as the Mine site, Smelts site, the Cemetery and the Burra Creek. From Burra's mining based population of approximately 5,000 in the 1850s, the township now records a population of 907 people according to the 2016 census. Burra continues to function as an important pastoral district and mining tourism and heritage continue to be a strong draw card for visitors.
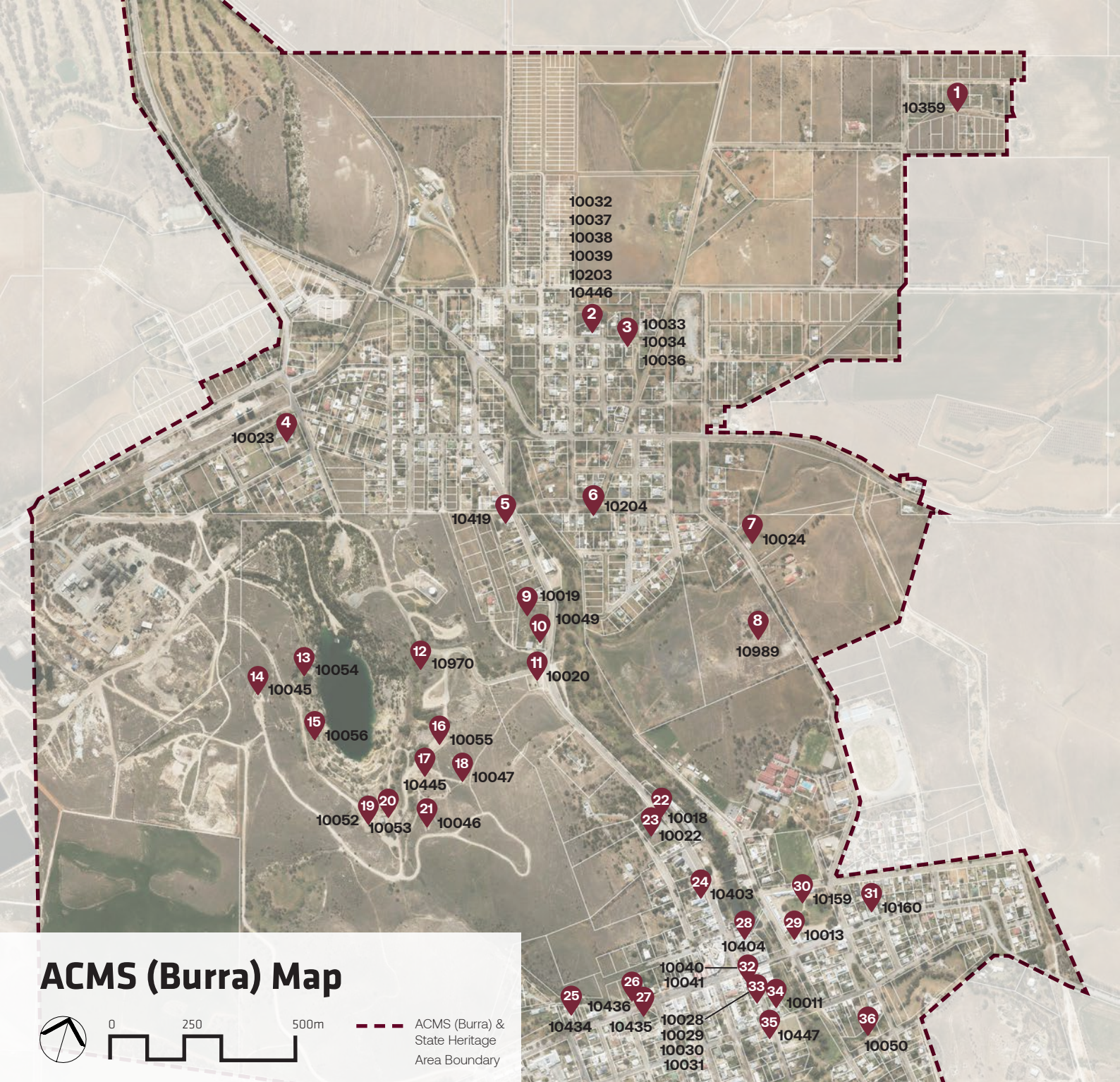
# ACMS (Burra) Map

0  250  500m

- - - ACMS (Burra) &
State Heritage
Area Boundary

📍 Key Structures Referenced in National Values Statement (Table 1)

1.  Hampton Township Precinct **10359**
2.  Attached Dwellings ('Tiver's Row') **10032, 10037, 10038, 10039, 10203, 10446**
3.  Attached Cottages **10033, 10034, 10036**
4.  Former Bon Accord Mine Site **10023**
5.  Dwelling (former Smelter's Home Hotel) **10419**
6.  Former Smelts Superintendent's Dwelling & Wall **10204**
7.  Former Burra Smeltsyard & Storehouse **10024**
8.  Former Burra Smelts Historic Site **10989**
9.  Former South Australian Mining Association Store Room, Yard & Walls **10019**
10. Former South Australian Mining Association Storeman's Dwelling **10049**
11. Peacock's Chimney **10020**
12. Burra Mines Historic Site **10970**
13. Former Graves Pump House **10054**
14. Former Powder Magazine **10045**
15. Former Mine Manager's Dwelling and Office **10056**
16. Former Ore Sorting Floor **10055**
17. Former Engine/Crusher House **10445**
18. Former Crusher Chimney **10047**
19. Former Winding House **10052**
20. Former Morphett's Pump House **10053**
21. Former Haulage Engine Chimney **10046**
22. St Mary's Anglican Church **10018**
23. St Mary's Anglican Church Hall **10022**
24. Burra Town Hall **10403**
25. Timber Dwelling of the 1840s **10434**
26. Stone Wall located on north side of Commercial Street **10436**
27. Stone Wall located on south side of Commercial Street and Ware Street **10435**
28. Burra Hotel **10404**
29. Office (former Burra Bible Christian Chapel) **10013**
30. Dwellings (Paxton Square Cottages) **10159**
31. Former Burra Salvation Army Citadel **10160**
32. Attached Stone Cottages built for the South Australian Mining Association **10040, 10041**
33. Dwellings built by the South Australian Mining Association **10028, 10029, 10030, 10031**
34. Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) **10011**
35. Dwelling **10447**
36. Former Miners' Dugouts **10050**
37. Former Dugout Sites **11187**
38. Burra Cemetery **10432**

## 2.4. State Heritage Places Mentioned in the National Heritage Values

The following tables list the heritage places entered in the South Australian Heritage Register which are mentioned in the National Heritage values statement. It is assumed that the places listed in Tables 2 & 3 require further research for their contribution to the National Values to be better understood.

Table 1 contains the details of individually listed State Heritage places which are specifically referenced in the National Heritage values statement that fall within the ACMS (Burra) (SHP 16183).

Table 2 contains other State Heritage places within the ACMS (Burra) (SHP 16183) which our historical research indicates are important to the development of the ACMS (Burra).

Table 3 contains other places not individually State Heritage listed which our historical research indicates are important to the development of the ACMS (Burra).

These places are reported on in further detail in the following chapters of this document.

All existing State Heritage Places in Table 1 are shown on the previous page.

**Table 1**
Individual State Heritage Places within the ACMS (Burra) site mentioned in the National Heritage values statement.

| South Australian Heritage Register (SAHR) Number | Details |
|---|---|
| 10011 | Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) |
| 10013 | Office (former Burra Bible Christian Chapel) |
| 10018 | St Mary's Anglican Church |
| 10019 | Former South Australian Mining Association Store Room, Yard & Walls, Burra Mine Area |
| 10020 | Peacock's Chimney [Cornish], Burra Mine Area |
| 10022 | St Mary's Anglican Church Hall |
| 10023 | Former Bon Accord Mine Site (including Mine Buildings, Wall Sections and Slag Heap) |
| 10024 | Former Burra Smeltsyard & Storehouse |
| 10028 | Dwelling built by the South Australian Mining Association |
| 10029 | Dwelling built by the South Australian Mining Association |
| 10030 | Dwelling built by the South Australian Mining Association |
| 10031 | Dwelling built by the South Australian Mining Association |
| 10032 | Attached Dwelling ('Tiver's Row') |
| 10033 | Attached Cottage |
| 10034 | Attached Cottage |
| 10036 | Attached Cottage |
| 10037 | Attached Dwelling ('Tiver's Row') |
| 10038 | Attached Dwelling ('Tiver's Row') |
| 10039 | Attached Dwelling ('Tiver's Row') |
| 10040 | Attached Stone Cottage built for the South Australian Mining Association |
| 10041 | Attached Stone Cottage built for the South Australian Mining Association |
| 10045 | Former Powder Magazine, Burra Mine Area |
| 10046 | Former Haulage Engine Chimney [Welsh], Burra Mine Area |
| 10047 | Former Crusher Chimney [Cornish], Burra Mine Area |
| 10049 | Former South Australian Mining Association Storeman's Dwelling, Burra Mine Area |
| 10050 | Former Miners' Dugouts, tributary of Burra Creek |
| 10052 | Former Winding House |
| 10053 | Former Morphett's Pump House |
| 10054 | Former Graves Pump House |

| Table 1 (continued) | |
|---|---|
| 10055 | Former Ore Sorting Floor, Burra Mine Area |
| 10056 | Former Mine Manager's Dwelling and Office |
| 10159 | Dwellings (Paxton Square Cottages) |
| 10160 | Former Burra Salvation Army Citadel |
| 10203 | Attached Dwelling ('Tiver's Row') |
| 10204 | Former Smelts Superintendent's Dwelling & Wall |
| 10359 | Hampton Township Precinct |
| 10403 | Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) |
| 10404 | Burra Hotel (previously Miners Arms Hotel) |
| 10419 | Dwelling (former Smelter's Home Hotel) |
| 10432 | Burra Cemetery |
| 10434 | Timber Dwelling of the 1840s |
| 10435 | Stone Wall located on south side of Commercial Street and Ware Street |
| 10436 | Stone Wall located on north side of Commercial Street |
| 10445 | Former Engine/Crusher House |
| 10446 | Attached Dwelling ('Tiver's Row') |
| 10447 | Dwelling |
| 10970 | Burra Mines Historic Site [includes Burra Jinker - object of heritage significance] |
| 10989 | Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office |
| 11187 | Former Dugout Sites, Burra Creek |

**Table 2**
Other State Heritage Places within the ACMS (Burra) site that our research indicates are important to the development of the ACMS (Burra).

| South Australian Heritage Register (SAHR) Number | Details |
|---|---|
| 10007 | National Australia Bank Burra Agency [National Bank of Australasia] |
| 10014 | Former Redruth (North Burra) Police Station, Cells and Stables |
| 10021 | Mine Bridge [Stone Arch] abutments and wall on east side of Market Street |
| 10027 | Former Redruth Courthouse |
| 10042 | Former Redruth Gaol (sometime Girls Reformatory) |

**Table 3**
Other places not individually State Heritage listed within the ACMS (Burra) site that our research indicates are important to the development of the ACMS (Burra).

| South Australian Heritage Register (SAHR) Number | Details |
|---|---|
| - | Former Foreman's Residence on Mine site |
| - | Former Mine Hospital |
| - | Redruth Wesleyan Church |

# 2.5. Methodology

This CMP has been prepared based on the principles and processes set out in *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter 2013* and broadly follows the methodology established by Dr James Semple Kerr's *The Conservation Plan: A Guide to The Preparation of Conservation Plans for Places of European Cultural Significance* (2013).

The CMP has also been prepared in accordance with Schedule 5A of the *Environment Protection and Biodiversity Conservation Regulations, (Aus) 2000*: 'Management Plans for Commonwealth Heritage Places' which sets out various requirements such as a comprehensive description and condition of the place; the methodology used to establish its heritage values; provision of a management framework including relevant statutory requirements; the provision of policies for the management and conservation of the place; and an implementation plan.

Also, the CMP was undertaken in accordance with the guidance of *Ask First - A Guide to Respecting Indigenous Heritage Places and Values* prepared by the Australian Heritage Commission.

## 2.5.1 Consultation

Community consultation and key stakeholder engagement was collaboratively undertaken between Council and the consultant team. Council has led the wider community consultation process with the consultant team assisting by providing presentation and supporting material for workshops. This consultation builds on the previous community engagement performed by Council and others as part of the national heritage listing process and the list of stakeholders generated was guided by these earlier activities.

Council's Community Consultation Policy, and the principles of the International Association for Public Participation (IAP2) underpin the approach to consultation taken. The four pillars of the IAP2 consultation and engagement process are: inform, consult, involve and collaborate. These principles were applied in the consultation for this project.

**Process**
The method for consultation and engagement for the CMP consisted of two parallel processes.

The first involved a series of individual meetings with key stakeholders to understand the history of the project, and of the place and to test ideas iteratively. The list of stakeholders engaged includes:

- Regional Council of Goyder
- Heritage SA (SA Government)
- National Trust
- Burra History Group
- Burra Revegetation Group
- Department of the Premier and Cabinet – Aboriginal Affairs & Reconciliation Division (SA Government)
- Department of Agriculture, Water and the Environment – Historic Heritage Section (Federal Government)

More widely, a publicly advertised community information night was held on Monday 12th November 2018 in Burra.

A presentation was given to introduce the project and explain what conservation management plans are and what they do. The presentation was designed to be informal and interactive and followed the principles of the International Association for Public Participation (IAP2) pillars to inform, consult, involve and collaborate with the community. Questions were raised iteratively throughout the evening and a map of the ACMS (Burra) showing all State Heritage listed places, as well as those listed in the National Values Statement was pinned up for attendees to interrogate and add notes, queries and concerns.

Attendees of the community information night consisted of residents and landowners, members of community groups, local Councillors and staff from Goyder Regional Council. A list of attendees is included in Appendix B.

This information night led to a series of follow up meetings with residents and members of community groups throughout the week while the consultant team was based in Burra.

### 2.5.2 Physical Investigations

A week-long exercise was carried out in ACMS (Burra) to undertake a physical inspection of all places mentioned in the National Heritage Values Statement and the site generally. This inspection process analysed and helped to understand the configuration and condition of the places with the intent of proposing future ongoing management and maintenance recommendations in the Plan.

New high-resolution aerial photography and mapping was commissioned to assist with this exercise. This allowed the consultant team to set up town wide and detailed individual site investigations sheets ahead of the site visit for a more informed and tailored process to occur.

The consultant team also investigated the broader urban design characteristics of Burra, including entry statements and vistas, streetscape character, key sites and general amenity.

How and where future development could occur in the town in a sensitive and integrated approach was analysed relative to the heritage places.

### 2.5.3 Historic Research and Analysis

Information collected during the physical investigations was analysed against background material and historic data. Further research and contextual analysis was undertaken to provide evidence and justification for the conservation management principles, policies and actions required for the places listed in the National Heritage Values Statement relating to ACMS (Burra). This research and analysis forms the basis of the following Chapters in this document.

### 2.5.4 Previous Reports

In 1978, coinciding with the passing of the South Australian Heritage Act, a two stage Conservation Study was jointly commissioned by the District Council of Burra Burra, the Department of Housing Urban & Regional Affairs, the SA Department for the Environment and the National Trust, funded by the Australian Heritage Commission. The first stage, undertaken by Ian L. Auhl and S. Gilbert, surveyed the Burra area to identify the characteristics of areas and structures that make it a place of historic significance within the Australian and South Australian contexts. The work also included an evaluation of the current state of repair. Unfortunately, the individual place sheets have since been lost.

The second stage, carried out by Lester Firth & Murton Architects, Urban Planners and Environmental Consultants identified qualities which collectively contributed to Burra's townscape and character and formulated objectives and policies to guide the future conservation and change in the town. These were later incorporated into the Goyder Council Development Plan. The study included an urban design framework, guidelines and policies that are still relevant and accurate today and are used as reference points for the development of this CMP.

In 1983 a heritage survey was commissioned of eight lower north towns by the South Australian Heritage Commission and included Burra. It was jointly undertaken by Historical Consultants Pty Ltd and Hames Sharley Australia. The objectives of the study were to make recommendations for inclusions of places on the Register of State Heritage Items and for the declaration of State Heritage Areas; to identify areas to be declared Historic (Conservation) Zones; and to provide an inventory of heritage places. The report recommended 90 places for entry in the State Heritage Register within in the Burra area and establishment of the Burra State Heritage Area.

Following the nomination of the ACMS (Burra) for the National Heritage List, The Australian National University was engaged by the Australian Heritage Council in 2014 to prepare an assessment of national heritage significance. The assessment included consultation with community groups and a physical survey of places identified to contribute to ACMS (Burra)'s national significance.

In addition, conservation plans and studies have been prepared for several heritage places mentioned in the ACMS (Burra) National Values Statement. These include the following:

- Hampton Village Conservation Study, Danvers Architects (1988).
- Burra Creek Dwellers Dugout Conservation Study, Austral Archaeology (1999).
- The Burra Smelting Works: A survey of its history and archaeology, David Bannear (1990).
- Conservation Study of Burra National Trust Museums, State Conservation Centre of South Australia (1990).
- Paxton Square Cottages: Feasibility Study, Lester Firth & Murton.
- Conservation Plan for Burra Cemeteries, McDougall Vines, Architectural & Heritage Consultants (1991).
- Former Smelters Home Hotel: Grant Application for Proposed Conservation Work, Flightpath Architects (1993).
- Burra Mines Storeroom Yard and Wall Conservation Plan, Habitable Places & Phillips+Pilkington Architects (1996).
- Conservation Management Study: Old Redruth Methodist Church, Department of Environment, Water & Natural Resources (2013).

## 2.6. Project Team

This report has been prepared by the following people:

- Andrew Klenke
- Stephen Schrapel
- Susan Lustri
- Simon Carter
- Emma Dohrmann
- Heath Edwards
- Lana Greer
- Felicity Swanbury
- Greg Drew (Peer review of History Section)
- Heather Burke

## 2.7. Acknowledgements

In 1845, copper was discovered at Burra Burra Creek by shepherd Thomas Pickett. His discovery led to the development of one of Australia's, and South Australia's, most important mines - The Burra Burra Mine. It is reputedly said that the Mine saved the young South Australian colony from bankruptcy. The copper lode was so extensive that it became known as the "Monster Mine" both in Australia and overseas, and South Australia soon became known as the Copper Kingdom. Thousands of Cornish miners and their families flocked to Burra joining the already well-established Cornish community in South Australia. They brought with them not only their mining expertise, technological knowledge, and engineering, but also their social and cultural customs, beliefs, and identity.

## 3.1.    International Context

**Introduction: Copper mining in Cornwall**

Cornwall and West Devon are counties located in the south-west of England. Geologically, Cornwall is known for its rich mineral deposits notably tin, copper and arsenic. Since the early Bronze Age, metals have been mined there.[1] For almost 2,000 years, tin mining was a major industry in Cornwall with traders exporting to Europe and throughout the Roman Empire.[2]

From the eighteenth century, copper mining became increasingly important. Demand for copper was high, "prices were good and copper reserves were large ... At its peak the copper mining industry employed up to 30% of the county's male workforce".[3] Copper was not only highly sought after for domestic uses such as kitchenware and kettles, but also by the shipbuilding industry for copper sheathing to sailing ships.[4] By the early nineteenth century, Cornwall became the world's leading producer of copper;[5] "producing two-thirds of the world's supply".[6]

During the eighteenth and early nineteenth centuries, Cornwall and West Devon were transformed by both tin and copper mining. The landscape was rapidly industrialised and characterised by "deep underground mines, engine houses, foundries, new towns, smallholdings, ports and harbours, and their ancillary industries".[7] Huge volumes of "ore were moved, mining areas having their entire appearance transformed by the sinking of shafts, the construction of engine houses and the disposal of millions of tons of waste material in surface pits".[8] At its peak, there were approximately 1,000 mines in the region.[9]



"Looking east from Camborne towards Redruth", Cornwall's mines, c.1890.
Source: Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 Oct. 2018.

### The Steam Engine in Britain and Cornwall: Beam Engines and Cornish Engineering

The success of Cornish mining was significantly influenced by the development of British engineering in particular the revolutionary steam engine. Cornwall and West Devon led the way, not only in deep hard-rock mining but also in steam engine technology and "played a major role in their worldwide diffusion".[10]

The earliest underground mining in Cornwall occurred in the thirteenth and fourteenth centuries. Tin deposits near the surface were mined using "lode back workings"; a system of shallow shafts cut into lodes of tin.[11] By the sixteenth and seventeenth centuries, these tin lodes were gradually exhausted. This necessitated deeper underground mining. However, as the mines were dug deeper, more water was encountered. Thus, drainage became a key issue. These early deep underground mines utilised the "shaft and adit" method whereby an adit - a sloping tunnel, was used to drain the mine. Pumps were used to drain the water. Until the middle of the eighteenth century, they were manual-, horse-, or waterwheel-powered.[12]

From 1700 to the early 1900s Cornish mining entered a new phase. This was initiated by the introduction not only of gunpowder for rock breaking but also, more importantly, steam power. The challenge of mining in Cornwall was that it:

> is a very wet county and miners were hampered by water, the deeper they went. These drainage problems and the prospect of huge profits for people who could solve them led to the development of large and very powerful steam engines. Cornish beam engines, initially developed by Thomas Newcomen in the late C18th and developed by James Watt and Richard Trevithick, were built locally in such places as Hayle (Harveys Foundry), the Perran Foundry, Perranarworthal and Camborne (Holmans). This industry grew rapidly, producing engines and mining equipment for export. As a result, Cornish mining technology could be found all over the world.[13]

Earlier, around 1712, the first Atmospheric Steam Beam Engine was designed by British ironmonger and inventor, Thomas Newcomen (1664-1729).[14]

> The term beam engine refers to a steam engine with a vertical steam piston pushing and/or pulling on one end of a beam, pivoted at its near-centre, the rise and fall at the other end operating a pump or other mechanical device. ... The first practical operating engine was a beam engine, the forerunner of all mechanical engines other than windmills and watermills.[15]

Newcomen's engine was used for dewatering mines in England and around the world. It allowed mining to occur at greater depths; twice as deep, than traditional "shaft and adit" mining. Deep mining was integral to large scale ore production and, in turn, to the Industrial Revolution. By 1740, deep mining of copper was established in Cornwall as a result of these engines.[16] However, Newcomen's engines were relatively inefficient and expensive to run.
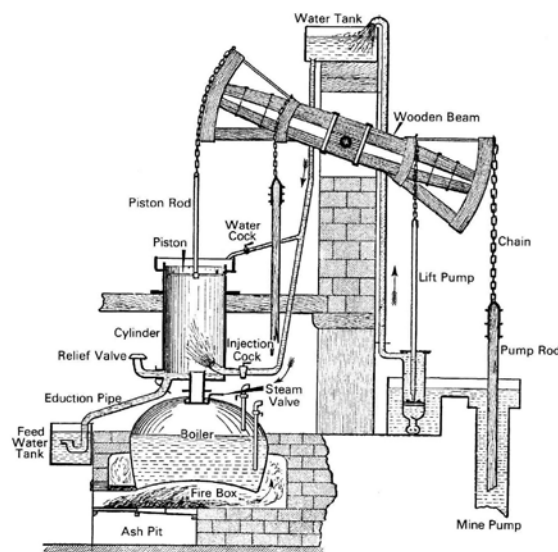


Newcomen's Atmospheric Engine, 1712.
Source: Jamieson cited in Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p20.

Scottish instrument-maker and inventor, James Watt (1736-1819) improved on Newcomen's steam engine. Watt worked with English manufacturer and engineer Matthew Boulton. Together they "held patents over the key features of the beam engine".[17] In 1769, Boulton and Watt invented the Separate Condenser Engine. These were more powerful and less expensive engines to operate. In the mid 1770s, Watt installed numerous pumping engines in Cornish copper and tin mines.[18] By 1800, these engines allowed, "mines ... to attain depths of 300 metres below adit".[19]

In 1800, Cornishman, British inventor and mining engineer, Richard Trevithick (1771-1833) invented the first High-pressure Steam Engine "which resulted in the typical Cornish beam engine which came into use after 1810".[20] Trevithick's Cornish Beam Engine and Boiler became the most efficient, powerful and economic engine around the world. Indeed, Trevithick also pioneered the first steam locomotive. The "Cornish engines were quickly adopted by the industry and by the 1870s mine depths of almost 600 metres below adit were being achieved".[21] These large steam engines required purpose-built, masonry, Cornish Engine Houses and at its peak there were around 3,000 engine houses in Cornwall.[22]

These steam engines were not only highly influential in Cornwall but also had a profound effect on mining internationally. Thus "Cornish technology embodied in engines, engine houses and mining equipment was exported around the world ... [they] were the heartland from which mining technology rapidly spread".[23] This had a flow-on effect to other industries. As "Britain's most important non-ferrous metal-mining region. ... These metals [copper] provided raw materials for major industrial developments elsewhere in Britain: notably the copper-smelting of South Wales centred on Swansea, the global centre of the industry during most of the nineteenth century".[24]

**Cornish diaspora**

By the mid nineteenth century, with the "discovery of huge [mineral] deposits elsewhere in the world ... the price of copper fell. By this time the best Cornish deposits had been exhausted and mining in Cornwall was in a perilous state".[25] Although the discovery of tin led to a later, second mining boom, this was short-lived. Following the discovery of tin elsewhere around the world, tin mines also gradually closed.

> *In effect, mining ... [had become] firmly rooted within the culture of Cornwall. Its economy and ways of life were so intertwined with the industry that when economic depression hit in the early 1840s (followed by a crash in copper prices two decades later) Cornishmen and their families left in droves, often looking to continue their trade in newly discovered mining districts, taking their language, technical expertise, and culture of mining with them.[26]*

This gave rise to the "Cornish diaspora"; the mass emigration of people from Cornwall around the world.

> *In each decade from 1861 to 1901, about a fifth of the Cornish male population migrated abroad – three times the average for England and Wales. In total a quarter of a million people left Cornwall between 1841 and 1901. Miners made up most of the numbers, but the emigrants also included farmers, merchants and tradesmen. Cornish miners quickly grasped the opportunities promised by the discovery of gold, silver and copper across the globe. Emigrating offered the chance of better pay and conditions, and the opportunity to rise in society. The Cornish expertise in hard rock mining was highly valued and agents were employed by mining companies to recruit from the Cornish mines.[27]*

The Cornish travelled to countries including the United States of America, Australia, Mexico, Spain and South Africa. The success of Cornish miners overseas was partly due to not only their mining experience but also their engineering expertise, and willingness to travel.

Thus, the significance of the Cornwall and West Devon Mining Landscape lies in its:

> *Innovative Cornish technology embodied in high-pressure steam engines and other mining equipment [which] was exported around the world, concurrent with the movement of mineworkers migrating to live and work in mining communities based in many instances on Cornish traditions. The transfer of mining technology and related culture led to a replication of readily discernible landscapes overseas, and numerous migrant-descended communities prosper around the globe as confirmation of the scale of this influence.[28]*

In 2006, the Cornwall and West Devon Mining Landscape was entered on UNESCO's World Heritage List due to its profound influence not only to the Industrial Revolution in Britain but also to mining internationally.[29]

# 3.2. National context

**The beginning of Australia's metal-mining era**

Australia's mining industry was slow to be established. It is often remarked that "South Australia, the last of the colonies to be settled, ... [was] the first to discover the nature of its mineral wealth".[30] In September 1840, two Cornish miners, named Thomas and Hutchins, discovered a lode of silver-lead ore in the Mount Lofty Ranges (above Glen Osmond). In 1841 this became "Australia's first metal mine"[31] named Wheal Gawler after Governor Gawler. "Wheal" was a Cornish word meaning a single shaft or mine.

In 1842, South Australian pastoralists, Charles Hervey Bagot's son, Charles Samuel, and Francis Stacker Dutton discovered copper carbonate in the Mid North. On 8 January 1844, they established Australia's first commercial copper mine at Kapunda. Bagot and Dutton "engaged a team of experienced Cornish miners and set them to work digging up copper ore".[32] The mine was officially opened by German mineralogist and geologist, Professor Johannes Mengé.[33] In 1845, copper ore was first discovered near Kanmantoo. The "most important mines in the district were Kanmantoo, belonging to the South Australian Co., and Paringa and Bremer Mines on land owned by the Paringa Mining Co."[34] However, concurrently copper was discovered at Burra.

## 3.3.  Burra

**The Ngadjuri People: the traditional landowners**

The traditional owners of the Mid North area of South Australia, including the town of Burra, are the Ngadjuri people. Their traditional land extends from Gawler, in the south, to Orroroo, in the North.

> *Aboriginal people have used the terrain from Burra to Broken Hill extensively over thousands of years. Archaeological evidence of the [Ngadjuri people's]... engagement with their land includes campsites, economic sites, such as where tools were made, quarries, stone arrangements, sacred trees, burials, rock engravings (petroglyphs) and painting sites. Several sites in the area represent major gathering places that demonstrate multiple activities, including, domestic, economic and ceremonial evidence.[35]*

The "Ngadjuri people's language has contributed many names to the modern landscape".[36]  These include the names of surrounding local towns: Bundaleer (meaning "among the hills"); Bungaree ("my country"); and Kapunda ("water jump out").[37]  Ancient Aboriginal tool fragments have been found in Redbanks Reserve, not far from Burra. In addition, the Ngadjuri people's rock engravings (petroglyphs) can also be found near Burra, around Firewood Creek. The engravings "consists of circles and wavy lines, possibly representing a wombat, some oval and elongated circles, a probable emu track, and a single large leaf shaped figure some metres above the others".[38]  In the vicinity of Burra, there is also a wall of engravings which is believed to be a ceremonial site.[39]



Rock engravings (petroglyphs)
Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), p53.

**The discovery of copper near Burra Burra Creek**

In 1834 the British Parliament passed the South Australia Act which "made provision for 300,000 square miles to become the territory in which British settlers could begin the colony of South Australia".[40] Following the establishment of the colony of South Australia in 1836, the Mid North, including Burra, was one of the earliest areas to be occupied by British settlers, who established large pastoral properties. One such pastoralist family was the Browne brothers who started "sheep farming on land purchased in the Lynedoch Special Survey, in 1839, [they] moved north squatting on tracts of land which became the Booborowie (D.C. Burra Burra) and Canowie (outside the region) runs in 1843".[41] Near Clare, John Horrocks also established a sheep station in 1839 and George Charles Hawker established Bungaree in 1841.

Henry Ayers "insisted that the word Burra Burra was of Hindustani origin… The English translation of the Hindustani word 'Burra Burra' as 'Big Big' can well be applied to the Burra Burra Creek. It is the largest creek in this section of the Northern Mount Lofty Ranges."[42] Indeed, there were Indian and other shepherds working in the area at the time.

In mid-1845, two shepherds independently discovered separate indications of copper near Burra Burra Creek. Shepherd William Streair discovered outcrops of copper. While shepherd Thomas Pickett discovered a "bubble of copper".[43] Streair and Pickett told two different groups of their discoveries known as the "Nobs" (large capitalists including Bagot and Dutton of the Kapunda Mine) and the "Snobs" (minor capitalists – Hindley and Rundle Street shopkeepers and merchants who later merged with the South Australian Mining Association).[44]

In July 1845, Governor Grey was "presented with applications for a Special Survey and found himself with a battle on his hands, between the two groups, the "Nobs" and the "Snobs", for its possession".[45] The "Nobs" and "Snobs" both wanted possession of the land. Earlier, in 1842, regulations had been established that specified the minimum parcel of unsurveyed land which could be purchased was 20,000 acres, at a cost of one pound per acre. Grey confirmed that the survey would be 20,000 acres costing £20,000. Neither side had adequate funds, so they joined together. The "Nobs" and "Snobs" jointly bought the land. However, soon after, they separated, and the 20,000 acres were halved. Each half incorporated one of the mining discoveries; Pickett's to the north and Streair's to the south. Each group drew lots to determine which parcel of land they were allocated. The "Snobs" (later the South Australian Mining Association) drew the northern lode - Pickett's lode. This became the highly lucrative Burra Mine. The "Nobs" (later the Princess Royal Mining Association) drew the southern section – Streair's lode – which turned out to be an unproductive mine which later closed in 1851. Unfortunately, despite his important discovery, "Thomas Pickett was paid ten pounds for revealing the site of the lode and a further ten pounds when the lode was proved. That, despite his letters of protest, was all he ever received. In 1851 he was burned to death in a fire in a shepherd's hut".[46]
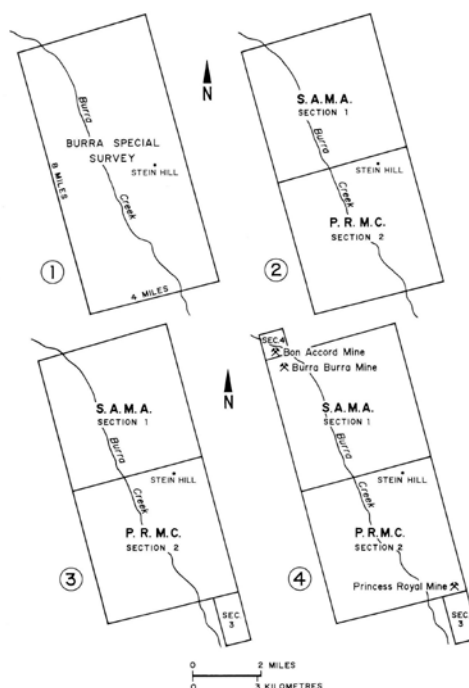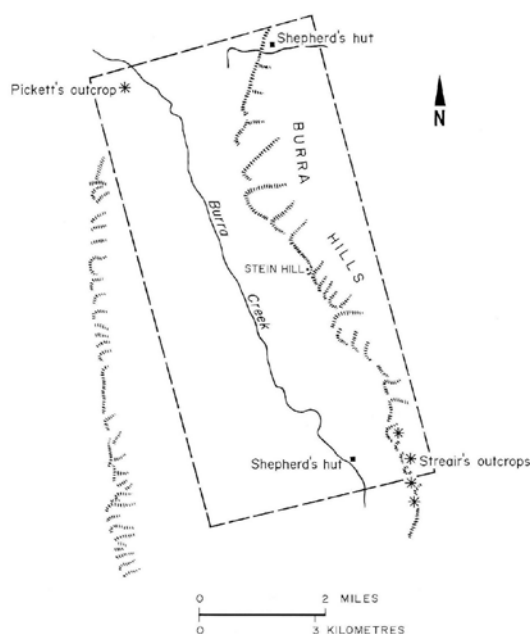


Diagram showing Burra Special Survey and the location of Pickett's and Streair's copper discoveries.
Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), pp35-36. Drawn by the South Australian Department of Mines and Energy.

**The Burra Burra Mine: the "Monster Mine"**

In September 1845, the "Snobs", the South Australian Mining Association (SAMA) and 10 Cornish miners with a Cornish mining overseer, Captain Thomas Roberts, commenced exploration and discovered a large mass of ore. On 29 September 1845, The Burra Burra Mine, located on Burra Burra Creek, was opened. It rapidly developed into "one of the great copper mines of the world"[47] and earnt its name of the "Monster Mine".[48] From 1845 to 1855, the Burra Burra Mine was the largest in Australia and, together with the Kapunda Mine, signalled the beginning of Australia's prosperous mining industry. By 1850, "South Australia was the third largest copper producer in the world, the bulk of this production coming from Burra".[49] Its influence was so great that, Henry Ayers (1821-1897), Secretary of the SAMA stated that "all of South Australia was directly or indirectly employed by the Burra Mine".[50] The success of the Mine is often reported to have saved the young colony from bankruptcy.



Surface operations of the Burra Burra Mine, 1848
Source: State Library of South Australia (SLSA), B 69728/4



OPENING OF LODE IN STOCK'S AIR-HOLE, IN THE MINE.

Interior of Burra Burra Mine, 1848.
Source: SLSA, B 69728/2

### The Ngadjuri People: in Burra Burra

The Ngadjuri people were "one of the first Aboriginal groups to suffer the full impact of European intrusion as colonists moved north from Adelaide in search of pastoral lands and mineral resources. Initial contact between the two groups had been one of fear, curiosity, tolerance, interest and even sharing".[51] The "first real contact the Ngadjuri [people] had with Europeans came with the beginnings of pastoral activities in the mid-north from 1840, and by 1842 a police station had been established at Bungaree Station about 30 miles north-west of Burra".[52]

The "rapid establishment of a large mining community at Burra probably initially did not have a major impact on the Ngadjuri [people] regionally, but as the town developed and more people flooded in, the effects on the Ngadjuri [people] must have multiplied. ... The influx of so many people, the establishment of farms, road networks and other new settlements, and the already established and northward expanding pastoral industry had cumulative and irreversible consequences for the Ngadjuri [people]".[53]

As early as the 1840s and 1850s the "Ngadjuri [people] were camping near Kooringa ... and there was interaction between them and the European population, recorded in a handful of reminiscences. Solomon Williams ... writing of the Cornish Whitmonday holiday in the 1850s, mentions the roasting of beef and that 'on one occasion there were a number of Aborigines there who took great quantities of half raw beef away to their camp nearby'. This celebration occurred 'on the level ground just beyond the Burra Hotel'".[54] William Copley also writing in the "early 1850s states that Aboriginal people 'were very plentiful around the Burra during my school days ... One other reminiscence in the *Burra Record* in 1928 ... mentions a 'corrobboree nigh the stack on smeltin' works hill', but gives no indication as to date".[55]

During the 1850s Victorian gold rush, there was an exodus of miners from Burra to Victoria and the "Ngadjuri [people] ...filled the labour shortage".[56] Indeed, in June 1852, the Protector of Aborigines reported that there were "over 20,000 sheep in the charge of Aboriginal shepherds".[57] It was recorded in 1917 that in the early days of the Burra Burra Mine, Aboriginal people were "very numerous, and it was no uncommon sight to see them holding their corroborees".[58] On 8 January 1861, it was stated that on "Sunday night about 40 of the natives held a corroboree near the Bon Accord Mines, a goodly number of Redruth and Aberdeen people being there to see the dance and hear the songs".[59] Similarly, on 3 February 1866, around 60 Aboriginal people from "Bungaree, Crystal Brook, Canowie, and Mount Bryan, assembled together, about two miles north of the Burra, and held a corroboree [however] so scarce are the natives here now that the sight of such a number is considered quite a rarity".[60] Others recalled "watching corroborees on the site of the Burra School. This would suggest large gatherings of Ngadjuri [people] at Burra in the late 1860s ... even if [they were] rare".[61]

The "few figures ... available, indicate that the numbers of Ngadjuri [people] in the 1850s were small ... At some point the Ngadjuri [people] virtually disappeared from around most of the towns in this region, but it is uncertain when. ... It seems likely that as agriculture overtook the pastoralists in the region during the 1860s and 1870s, the Ngadjuri [people] were finally forced away. A combination of closer settlement, the fencing of the land and more stringent European control of resources, probably saw to that".[62] Introduced diseases, deprival of water sources and hunting grounds, hostility and fencing significantly affected the Ngadjuri people.[63] In c.1878, J.B. Wood in his book The *Native Tribes of South Australia* claimed that the "Adelaide tribe is extinct, and so are those which dwelt near Gawler, Kapunda, [and] the Burra".[64] By 1891 the Census reported that "no Aboriginal people were shown as living in the county of Burra".[65] However, these claims are debated and relate to the dispersal of people. In the 1930s, Australian anthropologist and archaeologist, Norman Tindale wrote that the Ngadjuri people had been "dispersed in the early days of white settlement".[66] Despite this the "Ngadjuri people and culture have endured and continue to thrive".[67]

Historical archaeologist Peter Birt who is "familiar with the European settlement story of Burra and to a lesser extent of South Australia's mid-north region generally" wrote of "the near invisibility of the Ngadjuri people within this story of pastoral expansion, followed by agriculture, pushing further north from the early 1840s to the 1870s. The second part of this story was the rapid development of large copper mining towns, first at Kapunda in 1844 and then Burra in 1845, which further spurred the regions' settlement and development".[68] However, the Ngadjuri people "are largely missing in historical documentary sources"[69] and in 2004 they "themselves ... [were] only in the early stages of rediscovering their places".[70] "It is only in the last few years that the Ngadjuri [people] have begun to return".[71] Birt argued that regarding "cultural significance, South Australia's mid-north is an important region ... The mid-north's history of pastoral and agricultural settlement, mining and wine making all represent significant aspects of South Australia's past and present. The Ngadjuri [people's] presence in this region, while less obvious, was as significant".[72]

Additionally, Waterton et al (2019) write "We know from historical and archaeological sources that the Ngadjuri [people] suffered greatly in the aftermath of European settlement, enduring epidemics from various introduced diseases, massacres, and their eventual displacement to the missions. But there is little to no mention of their stories in the town itself, instigating an unjust silence produced by the assumption that the Ngadjuri peoples 'died out' (Smith, Copley, & Jackson, 2018). As Smith et al (2018) observed, however, for the past 20 years the Ngadjuri [people] have worked hard to revive their connections with country, as well as the knowledge and stories that they have lost. In time, we hope their stories will be genuinely added to those that are told in Burra."[73]

### The Cornish in Burra

In South Australia, with the "discovery of minerals, it became ... [local] practice to recruit experienced teams of miners direct from Cornwall to open new mines; this ... happened at Kapunda in 1844, and at Reedy Creek (Tungkillo) and Glen Osmond in 1847."[74] However, the Cornish were already well-established in South Australia at the time.

*There is a strong historical connection between the Cornish in Australia and the mining industry, but South Australia's Cornish community was established before any metalliferous mining industry existed on the Australian continent. The utopian free-enterprise ethos of early South Australia attracted a high proportion of immigrants from Cornwall and the West Country generally, where the Methodist faith, political liberalism and anti-establishment beliefs had a strong following. One in ten applications for passage to South Australia in the first five years of the introduction of the free Migration Scheme – representing 941 families – came from Cornwall (Migration Museum 1995: 97) ... Even before a single mine had been opened, the population of South Australia was about 8-10% Cornish-born, the largest enclave of Cornish immigrants in Australia (Payton 1984: 12). Precisely because these immigrants included a large number of people with experience in mining, they were able to play a major role in establishing enterprises very early in South Australia's history (Blainey 1969: 106).[75]*

Burra "was the first significant concentration of Cornish in Australia".[76] By 1846, the Burra Burra Mine was "known in Cornwall ... as 'the eighth wonder of the world'".[77] Cornish traditions were established in Burra, and included Cornish wrestling, and the celebration of days such as St Piran's Day (5th March), the Duke of Cornwall's birthday, Mid Summer Eve, and Whit Monday.[78] Not to mention cultural food traditions such as the Cornish pasty, which is still evident in the town today.

### Cousin Jack and "Johnny Green"

By the 1840s, "there were two predominant imaginings of the Cornish miner ... [one being] 'Cousin Jack' [and the other] ... 'the lawless tinner'".[79] "Cousin Jack" was an image of a hard-working miner with superior mining experience and expertise. A miner whose Methodist religious values were central to the image based on sobriety and order.[80] By contrast, the "lawless tinner" image was based on the rioting miners from Cornwall who were desperate for food, particularly during the winter of 1846-1847. It was this image that was publicised during the Burra Strike of September 1848. However, "Cousin Jack" was a more positive image of the miner, and "Johnny Green" – a mascot of the miners since 1852, remains as a memorial to the "Cousin Jacks and their fellow miners at the Burra Mine".[81] A later figure of Johnny Green can still be found atop Peacock's Chimney. These important Cornish cultural symbols were transplanted to Burra.
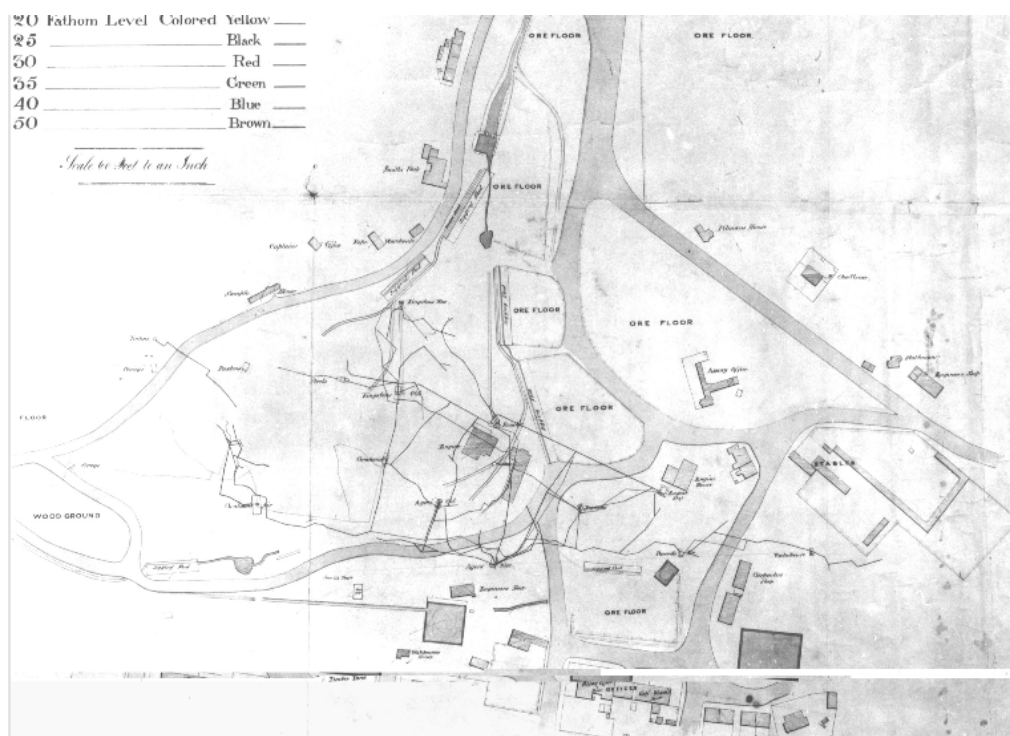
Site plan of Burra Burra Mine, 1853.
Source: SLSA C178/2.

**Cornish Mine Management and Employment Systems**

The SAMA employed mainly Cornish miners at the Burra Burra Mine, who not only brought their social customs but also their "traditional mining methods".[82] They also "brought with them their technology, their ways of work, their Cornish culture and their religion".[83] Importantly, "all positions of responsibility at Burra went to Cornishmen, from commencement until closure in 1877".[84] Captain Henry Roach, from Redruth, Cornwall, was employed as the Superintendent at the Mine, or Mine Captain as it was known. There were often underground Mine Captains but also grass or surface Captains. Other "salaried staff included the Purser (Accountant), Assayer, Pitman, Engineer, and Doctor. All staff were provided housing on the mine property".[85]

The Cornish system of working mines was implemented. Vertical shafts and horizontal levels were sunk which divided the mine into "pitches".[86] This work was referred to as Tutwork, and prepared the lode for ore extraction, known as Tribute work.[87] Mine, "operations were organised on typical Cornish lines. Traditional methods of tribute [miners paid according to value of ore] and tutwork [miners paid according to volume of ground dug] were employed".[88] Throughout the latter half on the nineteenth century, "evidence of the application of the Cornish employment systems in South Australian mines is abundant in newspaper reports".[89]

The "richness of ore and compositional similarity to those [mines] found in Cornwall allowed the miners of South Australia to follow traditional Cornish mining practice without the need for adaptation".[90] Deep, hard-rock mining was unprecedented in Australia, prior to the establishment of the Kapunda and Burra Burra Mines. It was well-established in Cornwall and thus the Cornish brought with them the skills and expertise.

Some of the earliest, extant, structures constructed on the mine site included: the Powder Magazine (1847) South Australian Heritage Register Number (SAHR 10045), constructed to store gunpowder for mine blasting. It is renowned for being one of Australia's oldest remaining mine buildings. It was restored by the National Trust in 1976. Other structures include: the SAMA Storeman's Residence, Yard and Walls (1847) (SAHR 10019), built at the mine entrance and used as a depot; and the Mine Manager's Dwelling and Office (1849) (SAHR 10056). One of the earliest plans of the Burra Burra Mine is dated c.1853.

Burra Burra Mine, c.1850, "From S.T. Gill's water colour sketch".
Source: SLSA PRG 631/2/1400

**Cornish Engines in Burra**

It was not only the Cornish people who travelled to Burra. Cornish engines were imported directly from the Perran Foundry in Cornwall. The importation of these steam engines was fundamental to South Australia's, and indeed Australia's, industrialisation. It signalled the beginning of the change from an agrarian society to an industrialised one.[91]

Burra was a "wet" mine, similar to the Cornish mines. In 1847, the first horse-whims were erected at the Mine to not only raise ore but also water in an effort to keep water levels down.[92] However, as greater depths were reached, it soon became necessary to purchase steam powered pumping engines to dewater the mines.

The engines were developed over time, but the "period of greatest development of the Cornish engine ... between 1820 and 1850, ... coincided with the installations in South Australia ... at Burra".[93] Fortunately, South Australia's strong ties with Britain ensured that this revolutionary technology could be imported, which "at the time was protected to prevent transfer to [other] competitor nations".[94] Thus South Australia was in an unique situation; being able to capitalise on both Cornish expertise and engineering.

> *Cornish miners and engineers played a central role in the early development of the State's mining industry and it was therefore natural that Cornish machinery and mining methods should be adopted. The successful mining of copper would not have been possible without Cornish beam engines, which drained mines, raised ore, and powered crushing and concentrating machinery.*[95]

Captain Roach authorised the construction of all:

> *Cornish engine houses at Burra ... Cornish beam engines were brought out from Cornwall for pumping and winding and Cornish roll crushers, stamps and jigs were used for ore dressing. Burra had the first significant collection of Cornish beam engines in Australia with six classic examples from Perran foundry, ranging from 20 in. to 80 in. diameter, erected by 1861.*[96]

There were two types of Cornish engines erected at the Burra Burra Mine: the Beam Pumping Engine; and the Beam Rotative Engine. The Beam rotative engine had various names "according to the application of the rotative engine; winding, hauling, crushing or dressing were common classifications. The rotative engine was ... similar to the pumping engine in its main features ... but ... the continuous rotating motion could operate ... valves".[97]
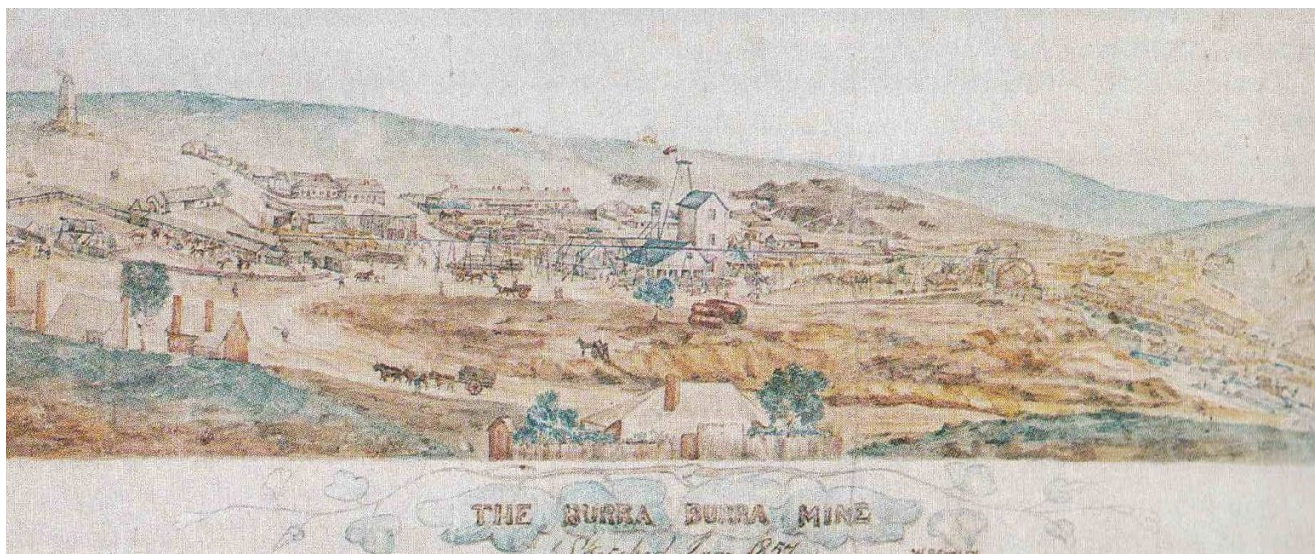
"The Burra Burra Mine, Sketched June 1857" by W. Bentley
Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*,
(Hawthorndene: Investigator Press Pty. Ltd., 1986), p134.

**Cornish Beam Pumping Engines in Burra**

In 1848, the first steam powered Cornish pumping engine was erected in South Australia at the Kapunda Mine, and the last, in 1888, was installed at the Wallaroo Mine.[98] The first engines imported for the Burra Burra Mine were from the Perran Foundry in Cornwall. Thus, the SAMA "pioneered the large-scale importation of Cornish beam engines and experienced enormous difficulties considering the distance and communications".[99]

There were three Cornish Beam Pumping Engines erected in Burra. The first was erected in 1849. It was known as Roachs Engine and was a 50-inch engine. It operated from 1849 to 1852. It took 40 bullocks, a return trip of two months to haul the engine from Port Adelaide to Burra. The transportation of this engine, and the latter two engines, Schneiders and Morphett's, "rank among the great achievements in early land transport" in the colony.[100]

Interestingly, the "plans for the engine house were sent directly from Cornwall".[101] Thus, it was not only the engines which were imported but also the Cornish mining architecture. In general terms, the engine house was erected first and these were standard designs. The "engine house served the purpose of supporting the engine cylinder and beam, sheltering them from the elements and becoming part of the structure".[102]

> *Good stone was plentiful in the hillsides surrounding Burra and easily quarried. It mainly consisted of a hard carbonaceous shale which split easily and weathered well. Like a great number of the domestic and public buildings in the Burra Burra Mine townships, the engine house, stacks and other structures on the mine were constructed of this typical South Australian building stone and stand as monuments to the skill of Burra's Cornish stonemasons.[103]*
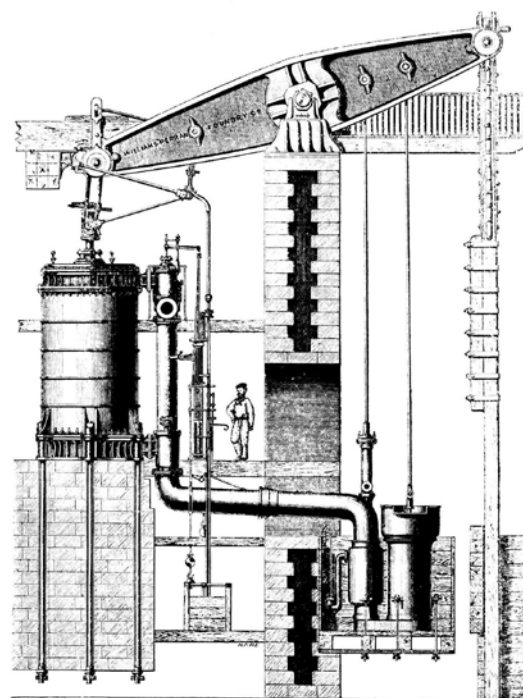


Drawing of a large Cornish Beam Pumping Engine from the 1870 catalogue of Perran Foundry, Cornwall. Source: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p26.

The second Cornish Beam Pumping Engine was known as Schneiders Engine and was an 80-inch engine also imported from Perran Foundry. This engine was larger than Roachs Engine, and it was transported from Port Adelaide to Burra on a huge, purpose-made jinker hauled by 72 bullocks. This jinker also transported the later Morphett's 80-inch engine, and now stands in Market Square, Burra. The Schneiders Engine bedstone is also displayed in Market Square.

The Schneiders Engine operated from 1855 to 1862, although it was installed in 1852. Its commissioning was delayed by the Victorian Gold Rush which had forced the closure of the Burra Burra Mine from 1852 to 1855. Both Roachs and Schneiders engines and their engine houses were demolished in 1853 and 1866 respectively, although Roach's engine was re-erected at the Bon Accord Mine and operated from 1860-1863.

The third Cornish Beam Pumping Engine was Morphett's Engine. Morphett's Pump Engine house (1858) (SAHR 10053) which housed the Cornish beam pumping engine is extant. The 80-inch Cornish Beam Pumping Engine arrived in Port Adelaide in July 1858. It was reportedly transported to Burra using the jinker which had been used for the Schneiders Engine. The journey took two months. When it arrived in the town, "most of the townspeople were there to greet the huge engine as it passed through Market Square in Burra and celebrations in typical Cornish style carried on into the night".[104] In October 1858, the engine house and boiler house was erected by Ambrose Harris and Thomas Paynter. By March 1860, the engine was operational. The engine pumped out two million gallons of water per day. It was in operation until 1877. In 1916 the engine was sold and in 1925 the engine house and upper part of the shaft was gutted by fire. It was reconstructed in 1986.

The fourth engine house constructed for an 80-inch Cornish Beam Pumping Engine was known as Graves Pump House (Engine house) (1868) (SAHR 10054). The engine was ordered from the Perran Foundry in 1867. However, the Burra Burra Mine was converted to an open-cut mine shortly after, thus the order was cancelled. In spite of this, Graves Engine house was already constructed by Thomas Paynter and completed in 1868. "The Cornish beam engine differed from most other major precision machinery in that the masonry of the building was as much a part of the structure of the engine as was the ironwork".[105] Thus, although the engine was never installed, the stonework structure is still instructive of the technology.



Morphett's Engine house, "Engine shaft, Burra Burra Copper Mine, c.1867-1872". Source: State Library of Victoria (SLV), H25811.



Morphett's Pump Engine house, boiler house and Morphett's Winding House, c.1915-30. Source: SLSA PRG 733/507

**Cornish Beam Rotative Engines in Burra**

There were three Cornish beam rotative engines erected in Burra. The first Cornish beam rotative engine was erected in 1851 and was known as Crusher Engine (No.2 Engine). It was a 30-inch engine and operated from 1851 to 1855. It was imported from Perran Foundry and was built near Roachs Engine however it was demolished in 1855.

The second beam rotative engine was also a 30-inch engine and was also imported from Perran Foundry. It was used as a winding engine and was known as Peacocks Engine. It operated from 1858 to 1877. Peacocks Engine House was constructed by Messrs Blackler and Hollow and completed in 1858. In 1916 the engine was sold. In 1972, the engine house and chimney were demolished to make way for the twentieth century open-cut mine. In the same year, the chimney, Peacock's Chimney (c.1857-58) (SAHR 10020), was rebuilt near the entrance of the mine.

The third Cornish beam rotative engine was erected in 1861. It was a 20-inch winding engine, known as Morphett's. In 1861, tenders were called for the construction of the Morphett's Winding Engine house. Tenders were received from Tiver and Cole, and also Harris and Paynter. It is unclear which tender was accepted; "Ayers left the choice to Captain Roach, who probably selected the latter party, as they had erected Morphett's Pumping Engine house several years earlier".[106] The engine operated from 1861 to 1874. Morphett's Winding house (1861) (SAHR 10052) is the "only surviving example of a half house" in South Australia.[107]
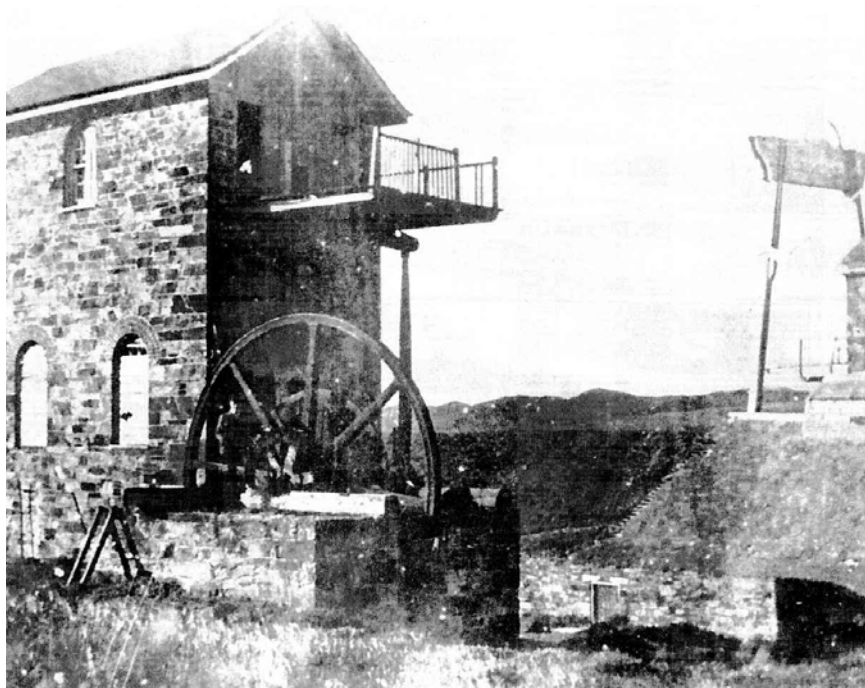


Morphetts Winding house, c.1915.
Source: Drew, Greg, and Connell, J.E., Cornish Beam Engines in South Australian Mines, (Adelaide: Government of South Australia, 2012), p100.

**Structures below ground**

The Burra mining landscape is also formed by the complex structures which remain underground. The three remaining mine shafts include: the Waterhouse Shaft, Morphett's Shaft, and Hector Shaft (Burra Mines Historic Site SAHR 10970) which still connect via horizontal levels. Morphett's Shaft was the deepest reaching 85 Fathoms, Waterhouse Shaft - 70 Fathoms and Hector Shaft - 60 Fathoms. Morphett's shaft was retimbered in 1986 as part of Morphett's Pump Engine house (SAHR 10053) reconstruction. The other former shafts of the Burra Burra Mine including Tinline Shaft, Stock Shaft, Grahams Shaft, Ayers Shaft, Roach Shaft, Peacocks Shaft, and Peacock Air Shaft were destroyed when the twentieth century open-cut mine was opened and operational from 1971-81.[108] However, this was not the first time it had been an open-cut mine.
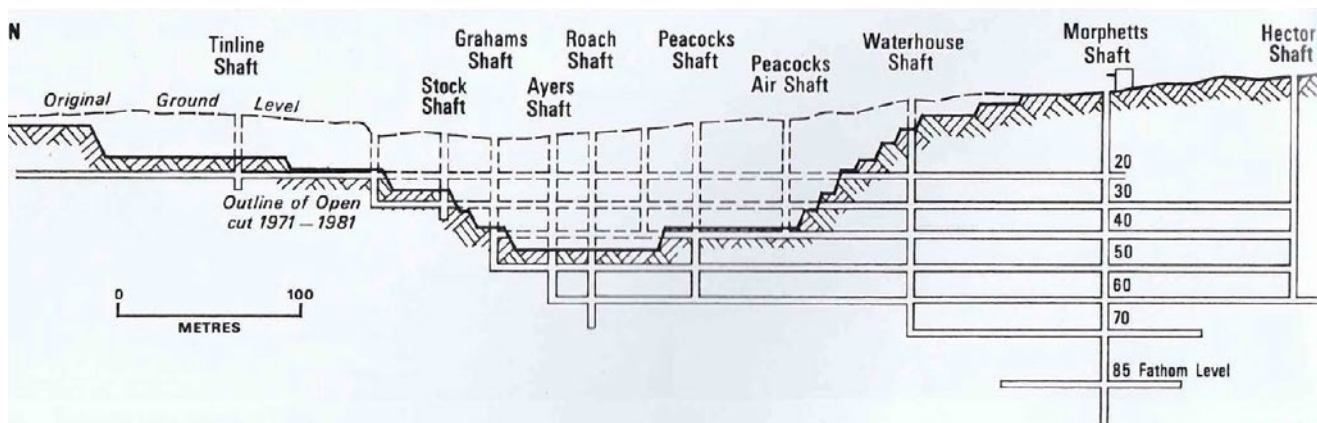


Longitudinal section showing shafts at Burra Burra Mine.
Source: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p82.



Burra Burra Mine, c.1860 - 1867.
Source: SLSA B 4147.

Burra Burra Mine, c.1860 - 1867
Source: SLSA 4149.

**Open-cut mine: 1870-77**

After 1861, ore production declined, and the Burra Burra Mine was overshadowed by the establishment of the mines at Moonta, and the "Wallaroo Mines". This resulted in the Burra Burra Mine closing, for a short time, in 1867. However, the Mine later re-opened and was converted to an open-cut mine, following advice from English mining expert and engineer, John Darlington. Preparations began in 1869, and the open-cut mine officially opened in 1870. This extended the life of the mine for an additional seven years.

Other structures constructed at the Mine in the 1870s include: the Ore Sorting Floor (1870) (SAHR 10055); the Engine/Crusher House (1870) (SAHR 10445); the Cornish Crusher Chimney (1874), a round stone chimney with brick capping on a rectangular base (SAHR 10047); and the Welsh Haulage Engine Chimney (1876), a square stone structure with cement capping (SAHR 10046).



"Section of workings of the Burra Burra Copper Mine, c.1867-1872".
Source: SLV H25812.

### The Burra Smelter: 1849 Patent Copper Company

One of the supporting industries which enabled the Burra Burra Mine to become one of Australia's most successful mines, was the Burra Smelting works.

In the 1840s, the Welsh town of Swansea was smelting the majority of the world's copper ore, including copper mined from Cornwall and Burra. It held a vast monopoly. From 30 June 1848 to 30 June 1849, 7,612 tons of copper ore from the Burra Burra Mine was sold to Swansea smelters. Burra ore was one of the world's richest ores. However, the expensive costs of the cartage of copper ore from the Burra Burra Mine to the South Australian ports, and the export costs, shipping it to Wales, drove the colonists to establish their own local smelters. During "1848, before the Smelter was established at Burra, it is estimated that at least 1 200 bullock carts were on the road, each carrying two-and-a-half tons of ore".[109]

Australia's first copper smelter was constructed at Burra c.1846-47.[110] Its location is debated, some authors believe it was in the vicinity of the mine store, others state that it was situated on the banks of the Burra Burra Creek, across from the Monster Mine itself.[111] It was established by the SAMA however the venture failed. It was not long until another smelter was established.

> *The expertise in smelting which had been lacking – Welsh expertise – was about to come to the rescue of the South Australian Mining Association in particular. Before long … it would have available to it the skills of Welsh smelters, in addition to the mining experience of its Cornish miners.*[112]

In 1848, the next attempt was made by the Adelaide Smelting Company which established the Yatala Smelting Works which begun smelting Burra ores. However, in the same year, an English smelting company named the Patent Copper Company (later the English and Australian Copper Company) "was preparing to send out to South Australia 'the whole materiel [sic] for a smelting establishment, accompanied by practical assistants and ample means of support'".[113] In May 1848, it was reported:

> *The imminent departure from Swansea of the barque The Richardsons of 361 tons, charted especially by the Patent Copper Company of Swansea to transport 'materials, men and staff' sufficient to establish a smelting-works in South Australia. 'Including women and children, the party will number not fewer than 70 souls. A surgeon has been engaged to accompany them'.*[114]

On 3 October 1848, *The Richardsons* arrived in South Australia. The Smelter (Burra Smelts Historic Site SAHR 10989) was established on the SAMA's land, on the eastern side of Burra Burra Creek, which was leased to the Patent Copper Company.

Initially, the intention of the Smelting Works was to concentrate low grade ore that was uneconomical to transport and hence this would improve the SAMA's return on mineral resources. Later, from 1851 for a period of five years, all of the ore raised was smelted.[115]

On 11 December 1848, the foundation stone was laid for the Smelting Works.

> *By mid-January [1849] a furnace-house to contain eight furnaces was under way, thirty feet of the furnace chimney had been erected and a casting-house and assay offices had been completed. The Company was advertising for firewood, slates for roofing, and large numbers of teams and drays. By mid-February it was reported that 'furnaces, stocks, shops, houses, stables, and works of all kinds are progressing rapidly and in about two months' time the copper smelting is expected to begin at the rate of 800 to 1,000 tons of ore per month'.*[116]

In April 1849, the "first furnace was ceremoniously lit",[117] and by 6 May 1849, several furnaces were completed, and they were smelting "day and night".[118] By this time there were five other smelters across South Australia. However, the Burra Smelter is considered "integral to Burra's copper mining past, and one of the earliest major smelting works established in South Australia".[119]

Welshman, Thomas H. Williams was reportedly the Superintendent of the Smelting Works until 1854. He had arrived in South Australia on board *The Richardsons*. In c.1848-1854, Captain Isaac Killicoat was appointed Mine Agent and Williams resigned in 1854.[120] The Smeltsyard and Store (SAHR 10024) were built in 1849 including stables for horses, and a blacksmith's shop. The Smelters Home Hotel (1849) (SAHR 10419) located in Market Street, was built in the same year as the Smelting works commenced operations and provided a place of recreation for workers.

However, it was not only Welsh smelters who worked there, German smelters "were brought in to work the smelting works and added a multicultural mix to Burra's predominantly Cornish mining population".[121] Around 1853 the smelting company also imported mules and their drivers from Chile, adding to the diversity.

There was a large transport network associated with the Smelter, in addition to the transport associated with the Mine. Indeed, in 1851, it was reported that "no fewer than 4,000 bullocks were until lately yoked every day during at least eight months of the year." [122] Many of those who were employed by the smelting company were teamsters.

Until 1861 the smelting works at Burra were "the largest smelting works out of Swansea".[123] After 1861 the majority of Burra ore was taken to the Port Adelaide Smelting Works and by 1869 the Burra Smelts ceased operation.

Painting of dug-outs, c.1850.
Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), p125.

### Australia's largest inland town: The Burra 1851

In as little as six years, the Burra Burra Mine and adjacent Burra Smelts was so successful that it became a major regional, population centre. In 1851, Australia's population was documented and included, as one would expect, some of the country's future capital cities, Sydney, Melbourne and Adelaide with populations of 54,000, 29,000, and 18,000 respectively. However, Australia's largest inland town was "The Burra" with a population of 5,000 inhabitants, larger than Brisbane (2,500) and Perth (1,550).

> In 1851 the explanation for the location and size of this 'town in the wilderness' was common knowledge in Australia. The fame of 'The Burra' and of its Monster Mine, soon to be eclipsed by the discovery of gold in the Eastern States, was widespread even overseas. Reference to South Australian statistics for 1851 reveal only two large centres of population outside of Adelaide – Burra and Kapunda. Both had been fathered by copper in the mid-1840s, and were Australia's earliest metal mining towns. They were also, by 1851, with their own smelting works, Australia's largest industrial towns.[124]

In 1851 there were no other "metal-mining" towns elsewhere in Australia.[125] In fact, the Burra Burra Mine was the largest in Australia for ten years.

### "Creek Dwellers" numbering thousands- 1851

With a rapidly expanding population, the provision of housing was one of the key concerns for emigrating miners. Interestingly, the South Australian census of 1851 illustrates a:

> total population of 4,403 men, women and children living in the townships of the Burra Burra Mine. Women and children accounted for 2,578 of this total. Another 378 were men employed as smelters, sawyers and carriers by the smelting works. The mine employed a work-force of 1,003 men and boys. In the townships, mostly in Kooringa, a further 449 men were listed as shopkeepers, innkeepers, tradesmen or professional men. A scattered population of 63 were engaged as agricultural or pastoral workers in the district of Burra. ... Among the 4,403 inhabitants of 'The Burra Creek Special Survey' and its townships, a total of 1,800 men, women and children are shown as living in 'the portion of the Burra Creek, adjoining Kooringa, Redruth and Aberdeen'. The compiler of the census found it necessary to explain in a footnote, 'There are no houses, the dwellings being excavated in the banks of the Burra creek'.[126]

The thousands of people who lived in the Burra Burra Creek dug-outs were mainly miners and their families. The sheer scale of this housing is notable and unique. In 1851, a visitor to Burra described the dug-outs:

> A picturesque feature struck upon my astonished gaze ... the "creek habitations" which are nothing more or less than excavations of a small size in the banks of a rivulet, at the present time supplied with water from the engines at the mine. As far as the eye can reach down the creek, these human wombat holes are to be seen – one long hole for a door, and a small square or round one for a window; a perfect street with above 1500 residents. Such is the force of habit, that the miner never thought of building a house but mining one, and accordingly the Burra Creek is riddled like a honeycomb.[127]

The inhabitants were often referred to as "creek dwellers"[128] or living on "creek street".[129] The interior of the dug-out was described as follows:

> we descended to the creek, and entered one of the holes; it was very clean and neat, in one part even an attempt at finery; very cool, but very close, as I was informed, at night, there being no ventilation. They are whitewashed inside, and sometimes outside, the most of them having paling verandahs, lean-tos etc. The chimneys are merely holes opening from the footpath above, with a tub on a few clods put around. ... The great secret of their selecting such a place is its being rent-free.[130]

The popularity of this type of housing was due to shortages in conventional housing, high rents charged by the SAMA for company housing and their failure to provide freehold land.[131]

However, living in a creek bed had its perils. In 1851, there was a series of destructive floods which tore through the Burra Burra Creek and devastated the dug-outs. Fortunately, the number of fatalities was low with only one death being recorded. In fact, there were more deaths caused by the unsanitary conditions of the creek including the outbreak of diseases such as typhoid fever, smallpox and typhus. Ayers' reaction to the floods was described as "ruthless",[132] he was only concerned with the impact on the Mine however Captain Roach, the SAMA sole superintendent of the Mine, was noted for his compassion. The floods of 1851 largely discouraged people from continuing to live in the creek however the practice did continue until 1859-60. In addition, SAMA began to refuse to hire those living in the creek.[133] The other major factor for people leaving the dug-outs, was the discovery of gold near Bathurst in June 1851 which led to vacancies in the Burra Burra Mine townships.

**Burra Townships**

**The establishment of the private company township of Kooringa – 1846: Kingston's town plan**

A number of townships developed around the Burra Burra Mine. Earlier, in 1846, shortly after the opening of the Mine, the SAMA laid out its private company town of Kooringa. It was located south of the Mine on the Company's land. The name "Kooringa" is an Aboriginal word meaning the "place of she-oaks".[134] Kooringa became one of the three main towns associated with the Mine (the other two were Redruth and Aberdeen). From 1845 to the mid 1860s Kooringa was the central business centre for the mining townships.

Initially, c.1845, following the establishment of the Mine, the earliest part of the township of Kooringa developed around Market Square. The irregular blocks around Market Square are thought to have formed the nucleus of the town.[135] Around early 1846, the Thames Street alignment appears to have been fixed and the first SAMA cottages were built nearby. This early nucleus may have included Bridge Street and Paxton Square. Paxton Square was named after William Paxton, a Director of the SAMA. It "included walkways leading into ... [the] common reserve where children played and livestock was tethered."[136]
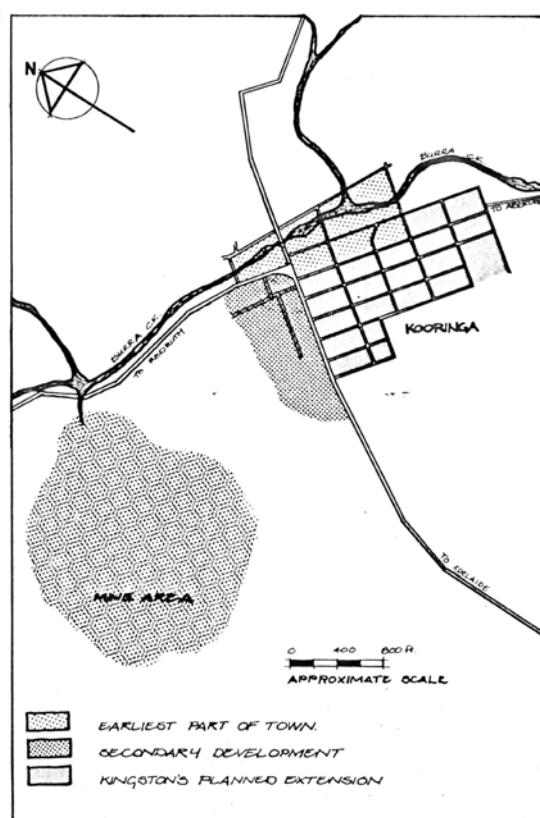


Fig. XX.9 Conjectural map showing early growth of Kooringa, South Australia, 1845-1849.

"Conjectural map showing early growth of Kooringa ... 1845-1849"
Source: Langmead, Donald, *"George Strickland Kingston: Pioneer and Architect"*, May 1983 PhD Thesis, Flinders University of South Australia, Fig XX.9, no page number.

The second stage of growth was thought to be the section of the township, north of Commercial Street. The layout of these streets indicates expediency rather than planning. This section includes the "Paddock" and garden.

The third stage of Kooringa's development took place in 1846 when George Strickland Kingston (1807-1880), surveyor, architect and Director of the SAMA, was "given the task of laying out a [section of] company township ... of Corringa [sic]".[137] SAMA commissioned Kingston to develop an extension to the town of 80 blocks, each half-acre. Kingston's layout gave "Kooringa its wide streets, [and] its collection of bridges".[138] Thus, *"Kooringa was ... a planned township, the first company township in Australia and the forerunner of such mining company towns as Iron Knob, Mount Isa and Mary Kathleen".[139]*

However, there was no freehold in the town, only leasehold. Allotments could be leased for a maximum of 21 years. Thus, there was little investment in maintenance by residents and the Company failed to invest in town infrastructure. From 1869, freehold became available "when mine income was failing and the company saw that selling the land (while retaining the mineral rights) would best serve its interests".[140]



Site plan of Kooringa, 1849. Source: SLSA, https://digital.collections.slsa.sa.gov.au/nodes/view/815 accessed 1 October 2018.

Early photograph of Kooringa, dated c. 1872 - 74.
Source: http://www.burrasa.info/pages/burra1874.html accessed 18 October 2018.

## Kooringa housing: among Australia's earliest company housing

Some of the earliest housing constructed in Kooringa were the Upper Thames Street cottages (1846-47) (SAHR 10040/10041/10028/10029/10030/10031). The cottages located at 2-12 Upper Thames Street were built by the SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[141] Although the cottage at 16 Upper Thames Street (SAHR 10447) is similar to those located at 2-12 Upper Thames Street, it has not been attributed to Kingston.[142] Another early structure is the timber dwelling located at 39 Commercial Street, which was built shortly after (1849) (SAHR 10434). Timber cottages were constructed in large numbers in the early years of the town, however few remain.

The Cornish not only brought with them their mining expertise but also their building traditions. Indeed, Cornwall is known for its stone quarries and stone masonry. The Paxton Square cottages were a significant development in the town (1849-1851) (SAHR 10159).

> This complex of 33 cottages, in three terraces around Paxton Square, is one of Australia's finest examples of company housing. The attached two-, three- and four-roomed cottages were constructed by Cornish masons for the South Australian Mining Association, to encourage the mining families to leave their dugouts along Burra Creek. The first group of 14 cottages was constructed in 1849, with all 33 completed by 1851.[143]

Indeed, "Paxton Square and cottages in Thames Street were among the first company housing in Australia".[144] It is claimed that the Mine Square Cottages at Kapunda, completed by July 1845, are Australia's first company housing.[145]

## Kooringa public buildings

The SAMA's approach to the development of Kooringa was restrictive. Indeed:

> every resident of Kooringa was a tenant of the company township – only leasehold and then only for a limited term. Even when grants of land were made for schools, churches and public buildings, it was for a limited period and mineral rights were reserved to the company. The South Australian government itself was obliged to rent a company building for its first police station and its first courthouse. It was only towards the end of the lifetime of the Burra Burra Mine that ... [SAMA] began to grant freehold in Kooringa. It was not until 1876, one year before the mine closed, that the Burra townships were able to form a Corporation of Burra.[146]

However, the SAMA did permit some public buildings to be constructed on their land and Hotels were well represented. The first hotel in the town was the "Burra Hotel". It was designed by George Strickland Kingston and was completed in 1846. It was well-patronised but eventually closed in 1876 and was converted to the Burra Hospital. There is reportedly no evidence of the original hotel remaining. The Miners Arms Hotel (1847) (SAHR 10404), now known as the Burra Hotel, was built shortly after in c. 1847.[147] Many Cornish social traditions and customs were played out in this hotel.

> Located in the hub of the main road system in Kooringa, the hotel became a focus of after-work celebrations by the miners. Free ginger beer was supplied for miners who competed in regular wrestling matches in the hotel's stable yards, and a whole bullock was often roasted. Many of these contests continued throughout the night and were known to last up to three days during Christmas holiday breaks.[148]

In 1878, the hotel was damaged by fire, but it continued trading while being repaired and rebuilt.

The Cornish brought their Methodist religion to Burra. There were three main branches: the Primitive Methodists; the Bible Christians; and the Wesleyans. The Primitive Methodist Church (1848) (SAHR 10011) was one of Kooringa's earliest churches and was central to the Cornish miners' religious and social life. The church was built on the SAMA's land which was leased for a term of 999 years. The church was rebuilt in 1856.

Another section of the Methodist church was the Bible Christians. The Bible Christian Chapel (1849) (SAHR 10013):

> *opened in December 1849, for Burra's Bible Christian Methodists, it was the first Bible Christian Chapel in the colony (and possibly in Australia). Methodism in England had undergone a series of changes during the early 1800s, including the appearance of Bible Christian Methodists, predominantly in the villages of East Cornwall and North Devon. It is not surprising then, that many of the Cornish miners who came to Burra were of this faith, and that Bible Christian work in South Australia began in Burra.[149]*

The Burra Burra Miners and Mechanics Institute, (Burra Town Hall & Institute) (c.1875) (SAHR 10403), also played an important role in the community. From the late 1850s, institutes had been formed in the colony to provide further education and a public library. Various lodges were associated with the Burra Burra Institute Building. Some of these included the "Freemasons who established themselves shortly after the Mine opened (1845), the Oddfellows (est. 1849), the Foresters (est. 1859) and the Rechabites (est. 1865).[150]

Other important commercial buildings erected in Kooringa, also supported both Cornish miners and the development of the mining town. The National Bank (1862) (SAHR 10007) was one such building.

> *The first bank in Burra was a temporary branch of the National Bank that opened in Kooringa in 1859. Until that time payment at the mine was made by money orders. … [The National Bank] building was completed in 1862 and is one of South Australia's earliest offices for the National Bank of Australasia. Its formal style, with Georgian features, reflects Burra's prosperity as a mining town at that time, and was built at a cost of £1,500,… to a design by Edmund Wright.[151]*

Indeed, during one of the 1850s floods of Burra Burra Creek, it was reported:

> *'The water accumulated so quickly that in many instances large sums of money were forgotten to be removed' … The habit of storing 'large sums of money' in their huts, was not due to imprudence on the part of the miners but the lack of any banking facility in Kooringa. Burra's first bank – a branch of the National Bank of Australasia was opened in April 1859 … One visitor, hearing of the amount of specie stored by miners in their dug-outs, referred to the creek-banks as the 'Savings bank'.[152]*

**The establishment of the government surveyed township of Redruth - 1849**

In response to the SAMA's "monopoly and its refusal to grant freehold in Kooringa",[153] the South Australian Government laid out its own township named Redruth in 1849 in close proximity to the original special survey. Redruth became one of the Mine's most important towns.

> *To the delight of the Cornish miners, the new township was named Redruth and every one of its streets was given the name of a Cornish mining town. Cornishmen who had recently left homes or families in such towns such as Truro, Mevagessey, Illogan, Crowan, St Dye, Ludgvan; or Helston, St Just, Tregony, Trembeth, Morvah, Lelant, Sancreed, Fore or St Agnes, might now build homes in streets of the same name.[154]*

Allotments in the government township of Redruth were auctioned on 29 August 1849. Redruth had been designed to appeal to miners and with low reserve prices for the allotments "it seemed that miners, especially those living in dug-outs in the Burra Creek, could now acquire a piece of land and begin building a house of their own".[155] Unfortunately, the SAMA undermined the Government's plan:

> *Angered by the decision of the Governor to grant the survey of a township adjoining their boundary-line, the Burra Directors deputed their ever-obliging Secretary, Henry Ayers and one Director, the ubiquitous 'Paddy' Kingston, to attend the sale of the township and bid against all-comers. … The result of the sale was a triumph for monopoly and a travesty of justice for the miners. … In all, the S.A.M.A., through Ayers, acquired 77 of the 120 allotments. … Until the mid-1850s, the one ingredient lacking in the South Australian Redruth with its Cornish-named streets, was the presence of Cornishmen.[156]*

**Redruth housing**

Redruth's early housing consisted of attached row housing. James Tiver arrived in South Australia in 1854. He was a mason who worked at the Burra Smelting Works. In 1856, Tiver built six stone cottages known as Tiver's Row (1856) (SAHR 10203/10032/10446/10037/10038/10039), these are located at 8-18 Truro Street, Redruth. In c.1850s, a row of four attached dwellings were also constructed. These are located at 9-13 Truro Street, Redruth (c.1850s) (SAHR 10033/10034/10036).

### Redruth buildings

Shortly after the establishment of the Burra Burra Mine, law and order became an important issue. In February 1846, Ayers called for a Police Station due to the rapidly expanding population, related drinking offences and consequent fighting and disorderly conduct. Indeed, by 1858, there were nine hotels in Burra. Thus, Police presence was required in the town.

Although the SAMA agreed to lease land for a Police Station, it refused to grant it freehold. It is indicative of the SAMA's control that "it was necessary that the town's police station be built on public land, rather than sited in the more heavily populated Kooringa area (owned by the SA Mining Association)".[157] Thus Burra's first police station, cells and stables were erected in 1847 on a Police Reserve, two years before Redruth was laid out in 1849. The government retrospectively assigned some of the Redruth allotments for Burra's extant police station, cells and stables.

In 1851, the police force included three constables and three mounted police for a population of 5,000. In 1872-73 new cells, stables and a stable yard were added to the Police Station. The Police Station was later demolished in 1878 and a new one was built in 1879. Thus, the Redruth Police stables (1847), Police cells, stables and stable yard (1873), and Police Station (1879) (SAHR 10014) formed part of the structure of this mining town.

Similarly, the Redruth Gaol (1856) (SAHR 10042), South Australia's first country gaol, and the Redruth Courthouse (1857) (SAHR 10027), were important in terms of establishing law and order. The Gaol was built in 1856 after the "previous year Thomas Perry, the gaoler at the police cells, had complained to the Presiding Magistrate that he had more prisoners and lunatics than he could accommodate in the lock-up".[158] Shortly after, in 1857, the Courthouse was erected.

The construction of these buildings reflected the importance of the town, its large population, and the associated policing issues. Indeed, there were large numbers of labourers who presumably were employed at the mine, who were charged with offenses.[159]

The townships of Redruth and Kooringa were linked via Mine bridge (1868) (SAHR 10021). The stone bridge "also helped to channel the water produced by the copper mining operations, which entered Burra Creek via Mine Creek".[160] It was constructed by Messrs Tiver and Woollacott.

### Bon Accord Mine and the private townships of Aberdeen – 1849 (Scottish speculators) and New Aberdeen – 1872 (Scottish Association)

In 1846, the Bon Accord Mine was established by Scottish speculators, later known as the Scottish Australian Investment Company. The land on which it was sited adjoined the Burra Burra Mine. The "speculators were a group of Aberdeen capitalists … although there were no visible indications of copper lodes, the purchasers were gambling on the possibility that the adjacent Burra Burra Mine lodes extended into their section".[161] Unfortunately, no ore was discovered, and mining operations ceased in 1849.

> *Perhaps, to help recoup some of their investment, the Bon Accord Mining Company decided in 1849 to lay out a second 'outside' township. Predictably the new township was named Aberdeen. Another township 'New Aberdeen', adjoining 'Old Aberdeen' was subdivided on the company's section in 1872, shortly after completion of the railway to Burra which terminated within the Bon Accord boundaries.[162]*

In 1858, mining recommenced at the Bon Accord Mine, and shortly after, in 1859, mine offices, blacksmith's forge, carpenter's shop, and a manager's residence were built (SAHR10023). A 50-inch Cornish Beam pumping engine (formerly Roachs Engine) was re-erected at the Bon Accord Mine. It operated from 1860 to 1863. However, this second venture failed too, and the mine closed in 1863.[163]

From 1873 to 1876, Aberdeen and Redruth became the central places of business near the Burra Burra Mine. This burst of building activity was driven by Burra's pastoral and agricultural activities. "New buildings, 'substantial and elegant', consisted of banks, flour-mills, sale-yards, wool-stores, hotels, timber yards and general stores".[164] Despite extensive explorations for nearly two decades, the Bon Accord Mine failed to locate an important lode. From 1884 to 1905, the Burra Corporation used one of the mine shafts for the town's water supply. From 1905 to 1966 the South Australian Government used the main shaft to supply Burra with water, building a pump house over the shaft in 1908.

After the failure of the Bon Accord Mine, the Scottish Australian Investment Company - the parent company of the Scottish Australian Mining Company went on to pursue other mining opportunities in New South Wales namely developing the copper mines at Cadia Valley. Newcrest Mining's Cadia Valley Operations still exists today operating two large scale underground mines in the area.[165]

### The establishment of the private township Llwchwr – c.1855-59

There were soon many small townships being established around the prosperous Burra Burra Mine. In 1855 the English and Australian Copper Company acquired Section 2067 and established the Welsh-named village of Llwchwr (sometimes referred to as Llwychr). The Company subdivided the land and sold it to new Celtic-speaking Welsh "families of Jones, Williams, Thomas, Evans and James, from Swansea or Glamorgan"[166] who had recently arrived in 1855, to work in the Burra Smelter.

### The establishment of the private township of Hampton – 1857

Another town which was established was Hampton in 1857. Hampton was laid out by Thomas Powell. It was named after a local assayer who worked at the Smelting Works; Edward Hampton. The town was planned to accommodate returning miners from the gold fields. In 1867, Hampton was described as a "small mining village lying 1½ miles N.E. of Kooringa and inhabited by copper miners and a few small farmers. There are about 30 miners' dwellings in the village, a Bible Christian chapel [different to the Kooringa Chapel] and an excellent stone quarry".[167]

During the 1860s and 1870s the settlement was "bustling" with activity. However, following the closure of the mine, the population decreased. The town was completed abandoned by the mid-1960s. It now comprises:

> street and allotment layout, fences, walls and stone domestic buildings in various stages of decay. There are also numerous introduced trees, such as almond, pine, olive and pepper trees, as well as the remains of quarries that provided stone for the dwellings. One quarry has traces of a house built into the wall, and there is visible evidence of past workings.[168]

Some examples of Hampton's dwellings which remain include: Bertram House and Jacka House. As a settlement, Hampton (SAHR 10359), is considered a "reasonably unique South Australian example of a completely abandoned town, where the original surveyed plan is still intact."[169]

### The establishment of the private townships of Copperhouse and Lostwithiel – 1859

In 1858, speculation about a new railway from Gawler to Kooringa drove the establishment of many other "outside" towns. By August 1858 these included Copperhouse. By 1863, "Copperhouse, named after the Cornish village of Copperhouse near Hayle, had its own hotel, Primitive Methodist Chapel [different to the Kooringa Chapel] and school and its own suburb of Lostwithiel adjoining it".[170]

The development sequence of the Burra townships between 1845 and 1877 is depicted on page 39.

### Burra Cemetery

Burra's first cemetery was established in 1845 shortly after the Mine opened. The SAMA would not allow "graveyards in the church allotments, being mindful of the possibility that the ore deposits might spread into these areas".[171] The Cemetery was located just outside of Kooringa on the western side of Burra Burra Creek. However, the gulley which runs into the creek was prone to flooding and "[r]eports of human remains uncovered by floods prompted the SA Mining Association to relocate the Cemetery to its present position".[172]

The Burra Cemetery (1850) (SAHR 10432) was established in its current location, on the eastern side of Burra Creek, in c.1849-1850. It "provides a valuable record of the diversity of Burra's early mining population".[173] Indeed, the "headstones within the cemetery chronicle the lives and misfortunes of the mining community (up to 1877) and the pastoral and agricultural families who have since used Burra as a commercial, social and religious centre".[174]

### Closure of the Mine 1877

The Burra Burra Mine was an incredibly successful venture and led to the development of the surrounding townships. It was operational until 1877 when it finally closed, and 300 miners lost their jobs. It closed due to "high mining costs and falling copper prices. Between 1845 and 1877, about 50,000 tons of copper were produced. The Mine was auctioned in January 1916 ... for £3000 and the four remaining beam engines were removed for scrap".[175] However, this date is debated, it was reported in *The Register* that SAMA had sold the mine and their property and wound up the Company in a final meeting held on 15 June 1914.[176]

### Post 1877: Burra's post-mining phase

Following the closure of the Burra Burra Mine in 1877, the townships collectively developed as a pastoral and agricultural centre. Land was ideal for sheep farming and the area is known for its surrounding Merino studs; the first being established in 1863. Burra also became a trade and supply centre for the region.

Post-1877 development included not only civil projects such as: Kooringa Bridge (1878-79) (SAHR 10006); and Redruth Bridge (1878-79) (SAHR 10413); but also, one of the largest educational buildings; the Burra Community School (former Model School) (1877 – opened in January 1878) (SAHR 10025).

Residential and commercial building continued with Drew and Crewe's Store and Outbuilding (1880) (SAHR 14426); Barker of Baldina Homes (c.1902) (SAHR 12638); McBride Cottage Homes (1910) (SAHR 12637); Dwelling and Coach house – former home of John & Essington Lewis (pre-1876) (SAHR 12634); Dwelling "Heathmont" (1882) (SAHR 12661); and the former Doctor's Residence (1882) (SAHR 12246).

As a rural service centre, the establishment of hotels in Burra also continued with the construction of the Commercial Hotel (1876) (SAHR 12668); Royal Exchange Hotel (1880) (SAHR 12664); and the Kooringa Hotel (c.1884) (SAHR 10410). Around the same time, the current Burra Railway Station Complex was completed (1883) (SAHR 10009) (although the railway had reached Burra earlier in 1870). Many of Burra's religious buildings were also erected, after the Mine closed, including the Burra Salvation Army Citadel (1885) (SAHR 10160) and St Marys Anglican Church (1879) (SAHR 10018) and Church Hall (1893) (SAHR 10022). Later civic projects included the Market Square Rotunda (1910) (SAHR 10405); and the Burra War Memorial (1922) (SAHR 10409).

**S.A.M.A. Section 4**

Est. **1857**
Hampton

Est. **1872**
New Aberdeen

Est. **1849**
Aberdeen

Est. **1849**
Redruth

Est. **1855**
Llwchwr

**1845**
Burra
Burra Mine

Est. **1849**
The Burra
Smelter

**S.A.M.A. Section 1**

Est. **1846**
Kooringa

# Development Sequence

## 1845 - 1877

0    200         1000m

| | | |
|---|---|---|
| | **1845** | The opening of the Burra Mine |
| ACMS (Burra) & State Heritage Area Boundary | **1846** | The establishment of the private company township of Kooringa |
| | **1849** | The establishment of the Burra Smelting works |
| Burra Creek | **1849** | The establishment of the government surveyed township of Redruth |
| | **1849** | The establishment of the private township of Aberdeen |
| South Australian Mining Association Boundaries | **1855** | The establishment of the private township of Llwchwr |
| | **1859** | The establishment of the private townships of Copperhouse and Lostwithiel occurred outside the greater township boundary (not shown on map) |
| | **1857** | The establishment of the private township of Hampton |
| | **1872** | The establishment of the private township of New Aberdeen |

**Twentieth Century Burra**

From 1971-1981 open-cut mining returned to Burra, however this was the town's last operational mine. Although the population of Burra declined dramatically in the post-1877 period, the town has continued to be an important pastoral and agricultural centre, with a particular focus on cultural heritage tourism.

In 1979, a meeting was held by Australia ICOMOS (International Council of Monuments and Sites) in Burra. At this meeting the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance was adopted. It became known as "The Burra Charter" and defined the principles and procedures of conserving heritage places in Australia. It adopted the premise of "The Venice Charter" but applied this to Australian practice. Importantly, "The Burra Charter" has been described as "Australia's most significant document on the basic principles and procedures for the conservation of heritage places".[177]

Burra was declared a State Heritage Area on 28 January 1993. "The Burra Mines and associated buildings are the earliest examples of Cornish mining and domestic architecture in South Australia".[178] "Burra's built heritage remains largely intact, thanks to a caring community and the efforts of the National Trust. This historic town is now one of South Australia's best-conserved reminders of industry and everyday life in the nineteenth century".[179]

On 9 May 2017, the "Australian Cornish Mining Sites: Burra and Moonta" were included on the National Heritage List, in recognition that Burra is "one of Australia's earliest, largest and best-preserved 19th century mining towns"[180] where "Cornish mining technology, skills and culture is demonstrated to a high degree".[181]

# 3.4. Summary of Significant Events (1836 - 1893)

| Date | Physical | Historical |
|---|---|---|
| 1836 | Founding of the Colony of South Australia | |
| 1841 | Australia's first metal mine – Wheal Gawler (Glen Osmond) | |
| 1842 | | Bagot and Dutton discovered copper carbonate near Kapunda |
| 8 January 1844 | Australia's first commercial copper mine was established by Bagot and Dutton at Kapunda. It was officially opened by Professor Mengé and worked by Cornish miners | |
| Mid 1845 | | Shepherd William Streair discovered outcrops of copper near Burra Burra Creek. Streair's discovery proved to be an unproductive mine. Streair reportedly lived with several Indian shepherds. Henry Ayers "insisted that the word Burra Burra was [a]... Hindustani word... [which translates] a 'Big Big'."[182] |
| | | Shepherd Thomas Pickett discovered a "bubble of copper" which later became the Burra Burra Mine - the "Monster Mine". |
| | | Streair and Pickett told two different mining groups of their discoveries known as the "Nobs" and the "Snobs" |
| July 1845 | | Governor Grey was presented with an application for a Special Survey. The "Nobs" and "Snobs" both wanted possession of the land. Grey confirmed that the survey would be 20,000 acres costing £20,000. Neither side had the money, so they joined together. |
| | | The "Nobs" and "Snobs" bought it and then separated, and the 20,000 acres were halved. Each group drew lots. The "Snobs" (the South Australian Mining Association) drew the northern lode - Pickett's lode. This became the Burra Burra Mine.<br>The "Nobs" (the Princess Royal Mining Association) drew the southern section – Streair's lode – which was unproductive. |
| September 1845 | | "Snobs" South Australian Mining Association and 10 Cornish miners with a Cornish mining overseer Captain Thomas Roberts commenced exploration discovering a large mass of ore. |
| 29 September 1845 | Burra Burra Mine opened | |
| Prior to 1850 | Former Dugout Sites built (Burra Creek) (SAHR 11187) | |
| c.1848-49 | | Copper ore from the Burra Burra Mine shipped to Welsh smelters in Swansea. |
| 1846 | South Australian Mining Association (SAMA) laid out Kooringa | |
| 1846 | Bon Accord Company (Scottish) established mine | |

| Date | Physical | Historical |
|---|---|---|
| c.1846-1847 | Upper Thames Street Cottages built (2,4,6,8,10,12 and 16 Upper Thames Street) (SAHR 10040,10041, 10028,10029,10030,10031,10447) Kooringa | |
| c. January 1847 | | Captain Henry Roach of Cornwall appointed Mine Captain |
| 1847 | | 600 Cornishmen from St Just arrived in SA to work in the Burra Burra Mine |
| 1847 | Powder Magazine built (SAHR 10045) – one of Australia's oldest remaining mine buildings | |
| 1847 | SAMA Store Room, Yard & Walls (SAHR 10019), & SAMA Storeman's Dwelling built (SAHR 10049) | |
| 1847 | Miners Arms Hotel (Burra Hotel) originally built in 1847. Damaged by fire in 1878 and continued trading while it was repaired and rebuilt. (SAHR 10404) | |
| 1848 | | South Australia's first strike by miners due to their wages being cut (2 days long) |
| 1849 | | "South Australian Mining Company gave a lease to the English and Australian Copper Company to bring out Welsh smelters and to treat the ore at the mine-site. By 1849, the Burra Burra Mine had its own smelting works with its eighty-foot chimney-stack belching black smoke, "a welcome sight to the weary teamsters".[183] |
| October 1849 | Roach's Cornish Engine house (50-inch Cornish Beam pumping engine) completed and pumping begins (operated 1849-52) (Demolished 1853) (no evidence of Engine house) (engine re-erected at Bon Accord Mine 1860-63) (Perran Foundry) | |
| 1849-1851 | Paxton Square Cottages built (SAHR 10159) | |
| 1849 | The township of Redruth established by the Government | |
| 1849 | Burra Smeltworks Historic Site (SAHR 10989) including Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office built – Welsh and German smelters brought in to work | |
| 1849 | Mine Manager's Dwelling and Office built (SAHR 10056) | |
| 1849 | Smeltsyard, Store and stables built (SAHR 10024) | |
| 1849 | Former Smelter's Home Hotel built (SAHR 10419) | |
| 1849 | Timber Dwelling built, 39 Commercial Street (SAHR 10434) | |
| c.1850 | Former Miner's Dugouts built (tributary of Burra Creek) (SAHR 10050) | |
| 1850 | Former Bible Christian Chapel built (SAHR 10013) | |

| Date | Physical | Historical |
|------|----------|------------|
| 1850 | | The SAMA dividends reach 800% |
| 1850 | Burra Cemetery established in current location (SAHR 10432) | |
| 1851 | 30-inch Beam rotative engine – Crusher (No.2) (operated 1851-55) (Perran Foundry), demolished no evidence | |
| 1851 | | Population of The Burra – 5000. Mainly miners, smelters, teamsters, woodcutters, and families. |
| 1851 | | Discovery of Gold in Victoria. Workers left en masse. |
| 1852 | | 100 out of 1000 miners remained at Burra. Mine "virtually closed".[184] Pumping engines were stopped, mines filled with water, smelting works allowed furnace fires to die out. |
| 1852-55 | The Burra Burra Mine closed due to the Victorian Gold Rush | |
| 1852 | 80-inch Cornish Beam pumping engine installed at Schneiders Shaft (1852-62) (not commissioned until January 1855 because of Gold Rush) (Perran Foundry) (Cornish Engine house and engine demolished in 1866 no evidence) | |
| July 1853 | | Mules from South America and Spanish-speaking muleteers arrive |
| c.1850s | Attached cottages, 9-13 Truro Street built – (SAHR 10033,10034,10036) Redruth | |
| c.1854-56 | | Full work was resumed at Burra Burra Mine |
| c.1856 | Former Kooringa Primitive Methodist Church built (SAHR 10011) | |
| c.1856 | Tiver's Row, 8-18 Truro Street built – (SAHR 1020 3,10032,10446,10037,10038,10039) Redruth | |
| 1857 | Hampton Township Precinct (SAHR 10359) | |
| 1857-58 | Peacock's Chimney in construction (SAHR 10020) | |
| 1858 | 30-inch Beam rotative engine – Peacocks engine (operated 1858-77) (Perran Foundry) (Engine house and chimney demolished in 1972 however chimney rebuilt in the same year). | |

| Date | Physical | Historical |
|---|---|---|
| 1858 | Morphett's Cornish Engine house built (SAHR 10053) (operated 1858-1877) (reconstructed in 1986). 80-inch Cornish Beam pumping engine installed. The water raised drove waterwheels, powering crushing and dressing works. By 1860 the engine was operational and was used until 1877. | |
| 1859 | Bon Accord Mine Buildings – mine offices, blacksmith's forge, carpenter's shop and manager's residence built (SAHR 10023) (owned by National Trust) | |
| c.1860s-70s | Stone wall located on the east side of Commercial Street and Ware Street, Burra (SAHR 10435) | |
| c.1860s-70s | Stone wall located on the west side of Commercial Street, Burra (SAHR 10436) | |
| 1861 | Morphett's Cornish Winding house built – typical Cornish winder (SAHR 10052) (conserved in 1987). 20-inch Beam rotative engine – Morphett's (operated 1861-74) (Perran Foundry) | |
| 1859-61 | | Moonta Mines and Wallaroo Mines established. These "overshadowed" Burra.[185] |
| 1868 | Graves Pump house built – Cornish enginehouse (SAHR 10054). An 80-inch beam pumping engine was ordered from Cornwall but the order was cancelled. | Pumping engine order, for Graves Pump House cancelled, and Engine house never used due to Mine becoming open-cut |
| 1868 | | John Darlington, mining engineer, suggests open-cut mining |
| 1869 | | Freehold available in Kooringa as decided by SAMA |
| September 1870 | Direct railway from Adelaide to Burra | |
| 1870 | Ore Floor built – represents Cornish mining practice (SAHR 10055) | |
| 1874 | Cornish Crusher Chimney/Dressing Tower Complex built (SAHR 10047) | |
| c.1875 | Burra Town Hall (originally Miners' and Mechanics' Institute) built | |
| 1876 | Haulage Engine Chimney built (Welsh) (SAHR 10046) | |
| 29 September 1877 | | Burra Mine closed and 300 miners lost their jobs |
| Post 1877 | | Burra became a regional centre for the pastoral area |
| 1879 | St Mary's Anglican Church built (SAHR 10018) | |
| 1885 | Former Burra Salvation Army Citadel built (SAHR 10160) | |
| 1893 | St Mary's Anglican Church Hall built as a schoolroom (SAHR 10022) | |

# 4. Thematic History

The Thematic History Chapter provides a detailed history of each Place mentioned in the Government Gazetted National Heritage Values. These individual Places are grouped thematically in the following way: Mining; Smelting; Residential Housing on Company Land; Residential – Private Housing; Ecclesiastical, Civic; and Commercial.

## 4.1. Mining

**Background**

In 1845, copper was discovered at Burra Burra Creek by shepherd Thomas Pickett. His discovery led to the development of one of Australia's, and South Australia's, most important mines - The Burra Burra Mine. It is reputedly said that the Mine saved the young South Australian colony from bankruptcy. The copper lode was so extensive that it became known as the "Monster Mine" both in Australia and overseas, and South Australia soon became known as the Copper Kingdom. Thousands of Cornish miners and their families flocked to Burra joining the already well-established Cornish community in South Australia. They brought with them not only their mining expertise, technological knowledge, and engineering, but also their social and cultural customs, beliefs, and identity.

**Burra Mines Historic Site (SAHR 10970)**

In mid-1845, two shepherds independently discovered separate indications of copper near Burra Burra Creek. Shepherd William Streair discovered outcrops of copper. While shepherd Thomas Pickett discovered a "bubble of copper".[186] Streair and Pickett told two different groups of their discoveries known as the "Nobs" (large capitalists including Bagot and Dutton of the Kapunda Mine) and the "Snobs" (minor capitalists – Hindley and Rundle Street shopkeepers and merchants who later merged with the South Australian Mining Association).[187]

In July 1845, Governor Grey was "presented with applications for a Special Survey and found himself with a battle on his hands, between the two groups, the "Nobs" and the "Snobs", for its possession".[188] The "Nobs" and "Snobs" both wanted possession of the land. Earlier, in 1842, regulations had been established that specified the minimum parcel of unsurveyed land which could be purchased was 20,000 acres, at a cost of one pound per acre. Grey confirmed that the survey would be 20,000 acres costing £20,000. Neither side had adequate funds, so they joined. The "Nobs" and "Snobs" jointly bought the land.

However, soon after, they separated, and the 20,000 acres were halved. Each half incorporated one of the mining discoveries; Pickett's to the north and Streair's to the south. Each group drew lots to determine which parcel of land they were allocated. The "Snobs" (later the South Australian Mining Association) drew the northern lode - Pickett's lode. This became the highly lucrative Burra Burra Mine. The "Nobs" (later the Princess Royal Mining Association) drew the southern section – Streair's lode – which turned out to be an unproductive mine which later closed in 1851.

In September 1845, the "Snobs", the South Australian Mining Association (SAMA) and 10 Cornish miners with a Cornish mining overseer, Captain Thomas Roberts, commenced exploration and discovered a large mass of ore. On 29 September 1845, The Burra Burra Mine, located on Burra Burra Creek, was opened. The first Directors were "Messrs Beck, Graham, Peacock, Neales, Solomon, Stocks, Penny, Paxton, and Bunce".[189]

The Mine rapidly developed into "one of the great copper mines of the world",[190] and earnt its name of the "Monster Mine".[191] From 1845 to 1855, the Burra Burra Mine was the largest in Australia and, together with the Kapunda Mine, signalled the beginning of Australia's prosperous metal mining industry. By 1850, "South Australia was the third largest copper producer in the world, the bulk of this production coming from Burra".[192] Its influence was so great that, Henry Ayers (1821-1897), Secretary of the SAMA stated that "all of South Australia was directly or indirectly employed by the Burra Mine".[193] The success of the Mine is often reported to have saved the young colony from bankruptcy.

In South Australia, with the "discovery of minerals, it became … [local] practice to recruit experienced teams of miners direct from Cornwall to open new mines; this … happened at Kapunda in 1844, and at Reedy Creek (Tungkillo) and Glen Osmond in 1847."[194] Burra "was the first significant concentration of Cornish in Australia".[195] By 1846, the Burra Burra Mine was "known in Cornwall … as 'the eighth wonder of the world'".[196] The SAMA employed mainly Cornish miners at the rapidly expanding Burra Burra Mine, who not only brought their social customs but also their "traditional mining methods".[197]

Vertical shafts and horizontal levels were sunk which divided the mine into "pitches". This work was referred to as Tutwork, and prepared the lode for ore extraction, known as Tribute work.[198] Mine, "operations were organised on typical Cornish lines. … tribute [miners paid according to value of ore] and tutwork [miners paid according to volume of ground dug] were employed".[199] The "richness of ore and compositional similarity to those [mines] found in Cornwall allowed the miners of South Australia to follow traditional Cornish mining practice without the need for adaptation".[200] Deep, hard-rock mining was unprecedented in Australia, prior to the establishment of the Kapunda and Burra Burra Mines. It was well-established in Cornwall and thus the Cornish brought with them the skills and expertise.

In December 1847, a detailed description of the early Mine was published, the "Burra Burra Mines are situated in a kind of basin, and are surrounded by hills of moderate elevation on every side, except the Burra Creek, towards which the ground slopes gradually. … Proceeding from Mr Wren's [Burra] hotel, we passed through a gorge of the northern hill [mine walk], and in a few minutes found ourselves in view of the "eighth wonder of the world" … the mines are chiefly in a basin, about fifty acres in extent … The workings, however, are comprised in the space of little more than six acres, but this space, on a working day, is a most animated and astonishing scene. The first thing that strikes the eye is immense piles of earth, intersected with vast heaps of ore laid out in similar style to the broken stones on a Macadamised road. Over the heaps are placed five or six great horse whims, some of which ply night and day. … During the night it raises ore, and during the day it raises water for cleaning it. No less than thirty shafts have been sunk, most of them to the water, and of course operations downwards must be suspended till a [steam?] engine which has been ordered arrives. The deepest shaft is the Kingston, which is sunk thirty-five [?] fathoms below the surface, and which contains ten fathoms of water. Between the shafts are the sheds for separating and washing the ore. … In the last few weeks, the average quantity taken away has been nearly an hundred tons per day".[201]

The visitor went on to describe a tour underground. It was reported that one "should have a candle, with a piece of soft clay as a candlestick. The first step is a teaser, you have to descend a perpendicular ladder, carrying your candle, ... You descend, and find it is only twenty fathoms; you follow on through galleries dotted with copper, down little shafts, and into great vaults, and chambers, and caverns like vulcan's forge, where men are seen with candles in their hats, or stuck on the rocks, hewing away at the most splendid copper ores that eyes ever behold. Sometimes you go down perilous descents, and creep on your hands and knees, or, like the snakes, wriggle and writhe through holes with your head downward; all the time perspiring most refreshingly. You then come upon men who are working upon a great shaft near the water, and the rocks or earth continually falling down, dashing upon the waters, give you a vivid impression of the disagreeable situation you would be in if you should tumble in. Every now and then [?] we came to the beautiful little malachite arbours, which the miners called their gardens, every side of which being a bright green, formed delightful spots in which to rest. ... In some of the vast caverns, thirty, forty, and fifty feet wide, when surrounded on every side with malachite, red oxide, green and blue carbonates, mingled in rich confusion, the miners asked our experienced friend if he had ever seen or heard of anything like the Burra, and evidently were far from surprised at his most energetic negative. After four or five hours hard travel through this labyrinth, we at last reascended, leaving, for want of time, a great part of the mine unexamined. ... We remarked that the mine is particularly well ventilated and well timbered".[202]

Some of the earliest, extant, structures constructed on the Mine site were from this early period and included: the Powder Magazine (1847) (SAHR 10045), constructed to store gunpowder for mine blasting. It is renowned for being one of Australia's oldest remaining mine buildings. Other structures include: the SAMA Storeman's Residence, Yard and Walls (1847) (SAHR 10019), built at the mine entrance and used as a depot; and the Mine Manager's Dwelling and Office (1849) (SAHR 10056).

It was not only the Cornish people who travelled to Burra. "Cornish beam engines were brought out from Cornwall for pumping and winding and Cornish roll crushers, stamps and jigs for ore dressing".[203] Cornish engines were imported directly from the Perran Foundry in Cornwall. The importation of these steam engines was fundamental to South Australia's, and indeed Australia's, industrialisation. It signalled the beginning of the change from an agrarian society to an industrialised one.[204] Burra was a "wet" mine, like the Cornish mines. In 1847, the first horse-whims had been erected at the mine to not only raise ore but also water in an effort to keep water levels down.[205] However, as greater depths were reached, it soon became necessary to purchase steam powered pumping engines to dewater the mines.

By 1861, "Burra had the first significant collection of Cornish beam engines in Australia with six classic examples from the Perran Foundry, ranging from 20 in. to 80 in. diameter".[206] There were two types of Cornish engines erected at the Burra Burra Mine: the Beam Pumping Engine; and the Beam Rotative Engine.

One of the Cornish Beam Pumping Engines which was erected was Morphetts Engine. Morphetts Pump Enginehouse (1858) (SAHR 10053) housed the 80-inch Cornish beam pumping engine and is still extant. Graves Pump House (Enginehouse) (1868) (SAHR 10054) was also erected for an 80-inch Cornish Beam Pumping Engine however, the Burra Burra Mine was converted to an open-cut mine shortly after, thus the order was cancelled. Despite this, Graves Enginehouse was already constructed and is also extant.

There were several Cornish beam rotative engines erected in Burra. One of which was the Mine's second beam rotative engine which was a 30-inch engine. It was used as a winding engine and was known as Peacocks Engine. Peacocks enginehouse was constructed by Messrs Blackler and Hollow and completed in 1858. In 1972, the enginehouse were demolished to make way for the twentieth century open-cut mine. In the same year, the chimney, Peacock's Chimney (c.1857-58) (SAHR 10020), was dismantled and rebuilt near the entrance of the mine.

Another Cornish beam rotative engine was erected in 1861. It was a 20-inch winding engine, known as Morphetts. In 1861, tenders were called for the construction of the Morphetts Winding Enginehouse. The engine operated from 1861 to 1874. Morphetts Winding House (1861) (SAHR 10052) is the "only surviving example of a half house" in South Australia.[207]

At the time, there were no vehicles large enough to transport these engines from Port Adelaide to the Burra Burra and in 1851 a purpose-built Jinker was constructed for their transportation. In 1851, it was reported that a "carriage is being constructed by Mr. Coulls of Hindley Street, and is now nearly completed ... the gigantic vehicle is in all 40 feet long, built of blue gum and iron bark wood ... the entire weight of the carriage is 4½ tons, and its cost will be something more than £200".[208] In 1852, Schneider's 80-inch pumping engine was transported, it was reported that the "cylinder case of the large engine was taken from the Port on Friday, upon the immense dray we described some time ago. Its weight is 17 tons, and it was drawn by 72 bullocks".[209] In 1858, Morphetts Engine was also transported by Jinker by William Woollacott. The return trip took two months.[210] As early as 1851, the mine had developed significantly, it was reported that "[t]urning from this creek [Burra creek], and looking towards the low but gently rising ground that lies between three hills, you observe an area of from 80 to 100 acres, crowded with stone buildings, covered shafts leading under ground [sic], machinery and engine works, engine houses, store houses, tanks, and dams of water, innumerable sheds of all sizes, and countless piles of copper ore of various assorted qualities, in different stages of dressing, lying almost in every direction".[211]

A visitor to the Mine reported in 1851 that "[o]ur companion descended Kingston's old shaft, which was in full work, and ascended by a new shaft, after winding and wading through various passages in this labyrinth of excavations. We next saw the ore crushed, jigged, and washed and then laid out, to be assayed, weighed, and bagged for smelting. We then ascended the enginehouse and its various stories to view every part of the steam-engine, which is of 53 [sic] horse-power. The water pumped up here at Roach's Shaft is not good, barely drinkable; but from some shafts a flow of very sweet and good water is obtained. The circling whims, with their horses in brisk motion, the buckets alternately racing up and down, the barrows rattling on tramways to deliver the contracted ore, the crushing and jigging, the engine in motion, and the drays at work or arranging in rows and relieving their horses, of which a hundred were often turned loose together in a large yard, and all looking well fed; the busy employment of the individuals in front of the various houses and scattered dwellings, among others that of Captain Roach at the end of a row with its neat green palings; the Company's offices, where all seemed in a bustle, and the continual passing of men and boys among the piles of ore; altogether formed a scene new and striking to us on this our first visit to the "Great Burra Burra". ... and we returned, wondering as well at all these things as at the employment given to 900 persons in these works".[212] In 1855, it was noted that the "stables are substantial buildings, with stalls for about 50 horses; the sheds round the yards will accommodate 200 more. At present 85 horses are working on the mine".[213]

The Burra mining landscape is also formed by the complex structures which remain underground. The three remaining mine shafts include: the Waterhouse Shaft, Morphetts Shaft, and Hector Shaft which still connect via horizontal levels. Morphetts Shaft was the deepest reaching 85 Fathoms, Waterhouse Shaft - 70 Fathoms and Hector Shaft - 60 Fathoms. Morphetts shaft was retimbered in 1986 as part of Morphetts Pump Enginehouse (SAHR 10053) reconstruction. The other former shafts of the Burra Burra Mine including Tinline Shaft, Stock Shaft, Grahams Shaft, Ayers Shaft, Roach Shaft, Peacocks Shaft, and Peacock Air Shaft were destroyed when the twentieth century open-cut mine was opened and operational from 1971-81.[214] However, this was not the first time the Burra Burra Mine had been open-cut.

After 1861, ore production declined, and the Burra Burra Mine was overshadowed by the establishment of the mines at Moonta and the "Wallaroo Mines" at Kadina. This resulted in the Burra Burra Mine closing, for a short time, in 1867. However, the Mine later re-opened and was converted to an open-cut mine, following advice from English mining expert and engineer, John Darlington. Preparations began in 1869, and the open cut mine officially opened in 1870. This extended the life of the Mine by an additional seven years. Other structures constructed at the Mine in the 1870s during the open-cut phase included: the Ore Sorting Floor (1870) (SAHR 10055); the Engine/Crusher House (1870) (SAHR 10445); the Cornish Crusher Chimney (1874), a round stone chimney with brick capping on a rectangular base (SAHR 10047); and the Welsh Haulage Engine Chimney (1876), a square stone structure with cement capping (SAHR 10046).

The Burra Burra Mine was an incredibly successful venture. It was operational until 1877 when it finally closed, and 300 miners lost their jobs. It closed due to "high mining costs and falling copper prices. Between 1845 and 1877, about 50 000 tons of copper were produced. The mine was auctioned in January 1916 ... for £3000 and the four remaining beam engines were removed for scrap".[215] However, this date is debated, it was reported in *The Register* that SAMA had sold the mine and their property and wound up the company in a final meeting held on 15 June 1914.[216]

Following the closure of the Burra Burra Mine in 1877, the townships collectively developed as a pastoral and agricultural centre. Land was ideal for sheep farming and the area is known for its surrounding Merino studs; the first being established in 1863. Burra also became a trade and supply centre for the region. From 1971-1981 open-cut mining returned to Burra, however this was the town's last operational mine. Although the population of Burra declined dramatically in the post-1877 period, the town continues to be an important pastoral and agricultural centre, with a focus on cultural heritage tourism.

On 9 May 2017, the "Australian Cornish Mining Sites: Burra and Moonta" were included on the National Heritage List, in recognition that Burra is "one of Australia's earliest, largest and best-preserved 19th century mining towns"[217] where "Cornish mining technology, skills and culture is demonstrated to a high degree".[218]



'The Burra Burra Mine, 1847 ST Gill' Source: State Library of NSW



Penny's Stopes, Burra Burra Mine, April 12th, 1847. Source: Art Gallery of South Australia

Neale's Stopes, Burra Burra Mine, April 12th 1847. Source: National Library of Australia


B4149. Source: State Library of South Australia


B4147. Source: State Library of South Australia


Burra Burra Mine, 1869. Source: The Burra History Group Inc.


Burra Mines Historic Site by S.T. Gill, 1850. Source: Art Gallery of South Australia


Jinker c.1933. Source: State Library of South Australia B 8637

Plan of Burra Burra Mine, 1852. Source: SLSA C178
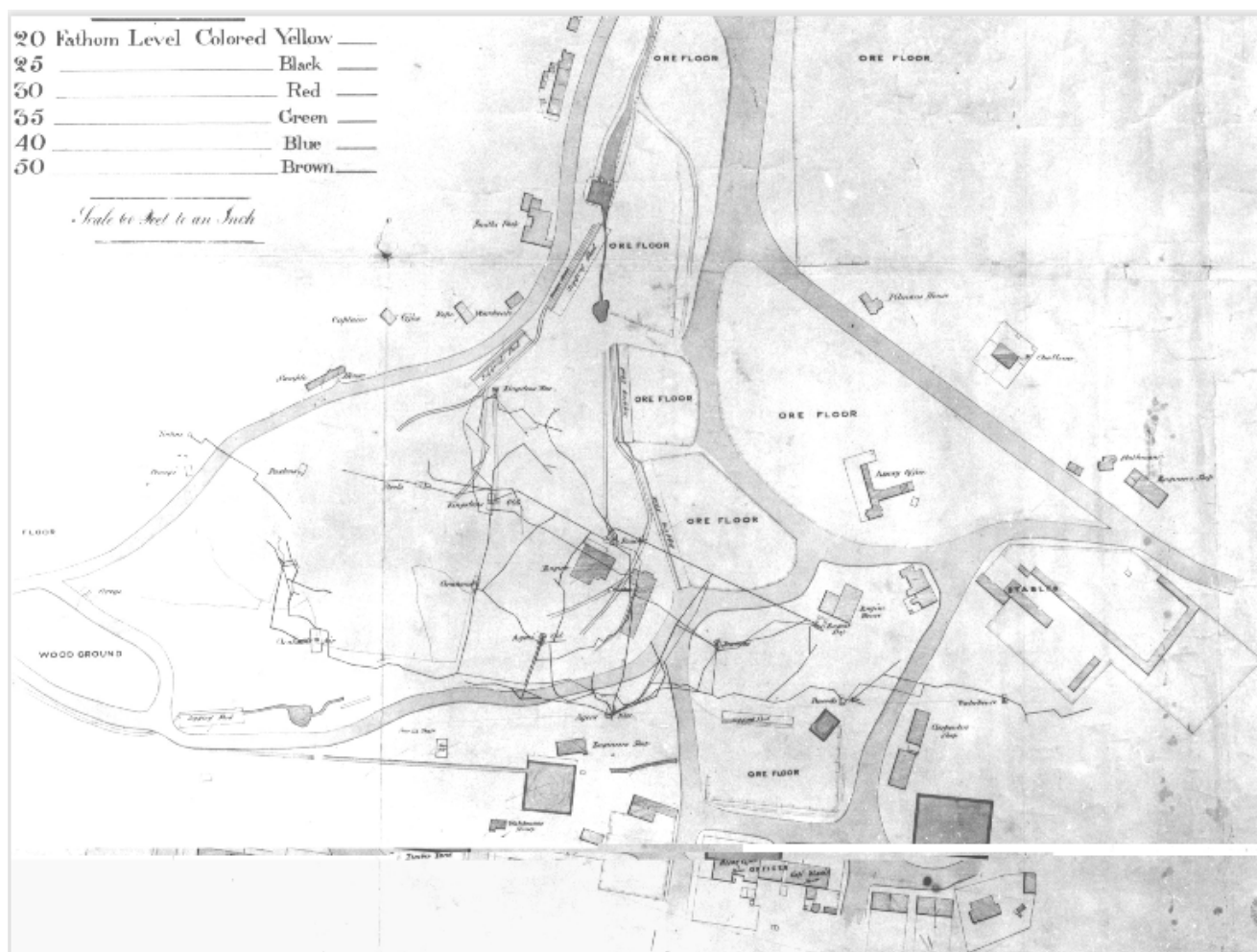
Burra Burra Mines, c.1867. SAMA Surface Plan
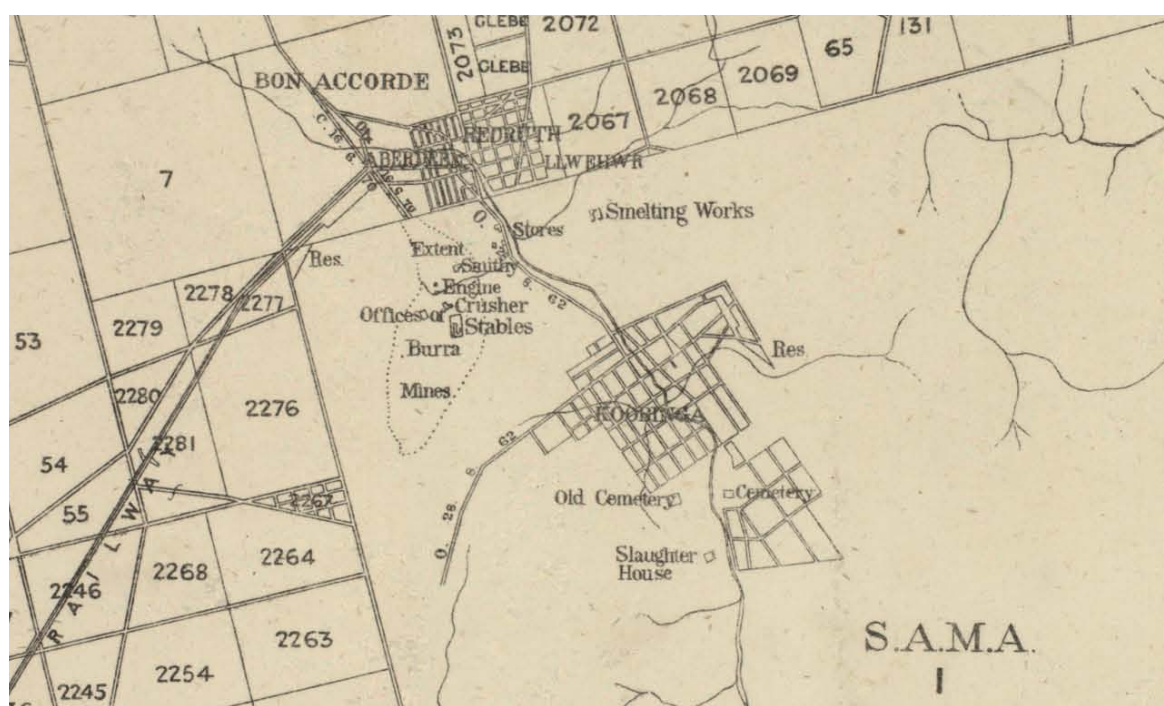


Kooringa, c.1873. Source: SLSA Map zsmp 830 bje.

### Former Powder Magazine (SAHR 10045)

The Burra Burra Mine used gunpowder "from its very beginnings. It was used to blast away the first cartloads of copper oxide from the Monster Lode outcropping on the low hillside and was extensively used in following the lode down. By February 1846, Ayers was obliged to send up 100 barrels of gunpowder to the mine and was suggesting to the Superintendent, Samuel Stocks, the need for a powder magazine".[219] By 1847, "plans for a properly designed powder magazine to replace a temporary hillside dug-out were forwarded to Superintendent Chipman. The building was to have an arched roof and to measure twelve feet by twenty feet with stone walls two feet thick. As it was meant to hold some five or six tons of powder it was to be sited at some distance from any mine buildings. 'The site chosen by me', reported Superintendent Chipman, 'is the tip of a hill … when from its commanding position it will be a good landmark'. A second safety wall was later built around the magazine".[220] Safety was paramount and detailed instructions were provided to Chipman including the type of footwear to be worn in the magazine. "Ayers also advised Chipman to shift the powder into the new magazine on a rainy day 'before the height of summer'. The shift was made early in December 1847. With his usual thoroughness and caution, Ayers arranged for the floor and walls of the magazine to be completely lined with sheepskins. One spark, struck by metal striking stone, was all that was needed to blow the building sky high".[221]

The Powder Magazine is one of the earliest, extant, structures constructed on the Mine site and dates from 1847. In 1851, it was reported that at the "summit of this same hill, also, you observe a large well-finished stone warehouse, used as a powder magazine".[222] In 1855, it was observed that the magazine contained "usually five or six tons of powder".[223] The Powder Magazine was restored by the National Trust in 1976. It is renowned for being one of Australia's oldest remaining mine buildings, although it is sometimes claimed to be the nation's oldest mine building, the Mine Square Cottages at Kapunda, completed in July 1845, predate this building by a couple of years and are also believed to be Australia's first mine company housing.[224]
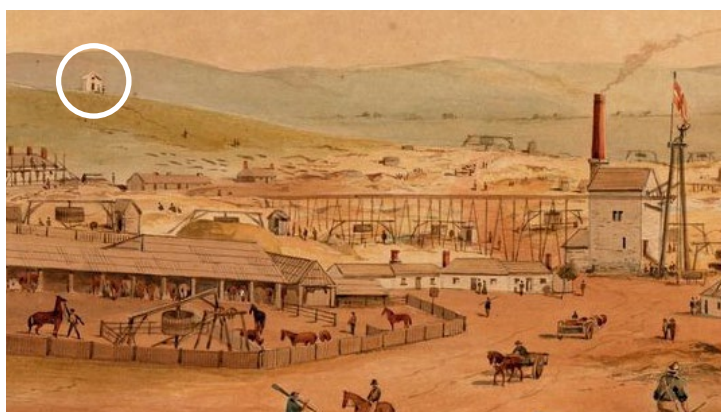


Part of Burra Mines Historic Site by S.T. Gill, 1850. Source: Art Gallery of South Australia

### Former South Australian Mining Association Store Room, Yard and Walls (SAHR 10019) and Former South Australian Mining Association Storeman's Dwelling (SAHR 10049)

In 1847, the SAMA Storeroom, Yard and Walls were built at the mine entrance and used as a depot for mining machinery, tools, timber (firewood for fuel) and iron. The high wall aimed to discourage theft of these valuable materials. The Yard contains remnants of several buildings dating from 1846 to 1852 including "ruins of a workshop (which was possibly the first – but unsuccessful – smelter, built around 1846 or 1847), and a weighbridge, along with evidence of other structures which served as offices, stabling and storage".[225] SAMA's surveyor, town planner and architect, George Strickland Kingston was involved in the design and construction of SAMA's first smelter.[226] It is believed to be Australia's first copper smelter but the venture failed.[227] However, the location of this smelter is debated and investigations remain inconclusive.[228]

Indeed, in December 1847, it was reported that "near the creek is the smelting house and charcoal stores. The former, a large substantial building of stone, is at present occupied by a number of miners, with their families".[229] In 1851, it was reported that "[a]scending the road you pass the weigh-bridge, and an extensive square of stone-built offices and stores adjoining a spacious yard, enclosed by a stone wall. These premises are used as depots for building, timber, iron, workmen's tools, and various engineering stores".[230]

The Storeman's Dwelling, also built in 1847, may have also been designed by Kingston, given its early date which coincides with when Kingston was SAMA's surveyor, town planner and architect. However, it "cannot be confidently attributed to Kingston".[231] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that there were fourteen houses on the Mine site associated with Mine operations. It is believed that the "Storeroom, Residence and Weighbridge may be the oldest surviving building in Burra, pre-dating the erection of the powder magazine. Plans for the powder magazine were being drawn up after the Storeroom's completion (BRG 22 Series 7, 18.9.1847)".[232]



Mine stores, c.1867.
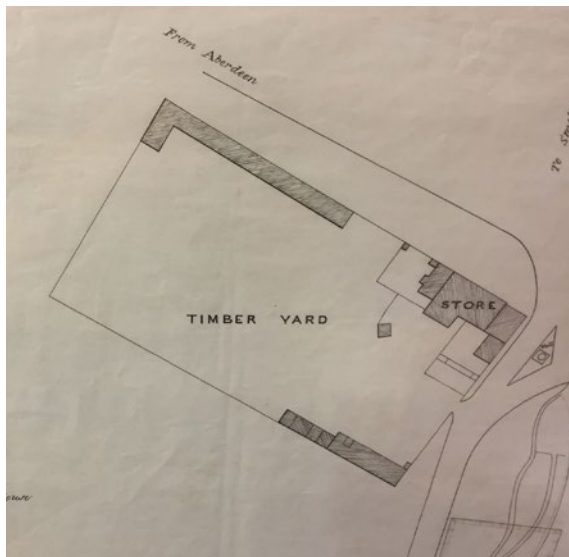
Store and Timber Yard, c.1852. Source: SLSA Map C 178
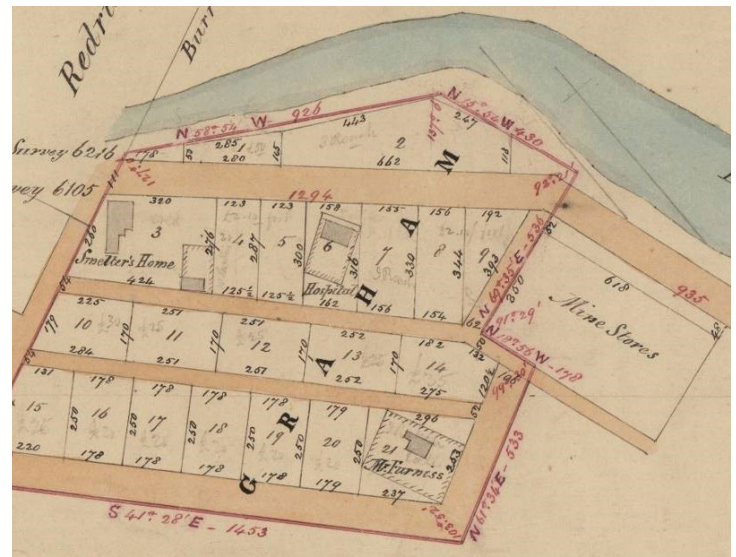


Part of "The Township of Graham" map showing the Former Mine Stores, 1875. Source: State Library of South Australia Map C41



Former SAMA Storeman's Residence, Yard & Walls, undated. Source: The Burra History Group Inc.

### Mine Hospital

The SAMA provided the miners at Burra with a cottage hospital as part of the infrastructure associated with the mine. As in Cornwall, the system of medical and welfare relief was adopted, with the men each contributing 6d a week to support doctors and a sick-club for those requiring extended convalescence.[233] The Miners' contributions funded the salaries of two resident doctors.[234] However, the provision of a dedicated hospital building was generally viewed with suspicion by the miners. The first miners' hospital in Cornwall was not constructed until 1864.[235] It is curious then that the South Australian Mining Association elected to construct a mine hospital at Burra. The motivation for the venture may have been prompted by rising criticism of the mine proprietors concerning the welfare of mine workers,[236] or indeed the remote location of the Burra Burra. The arrangement however was used as a model for those calling for a similar arrangement to be adopted at the Yorke Peninsula mines.[237]

In 1847, SAMA ordered Superintendent Samuel Stocks to find a suitable site for a cottage hospital. Construction started in the same year and the cottage was completed in early 1848.[238] Although it was initially leased as a residence, in 1850 the cottage reverted to its intended use as a hospital and run by the mine doctor, Dr Henry Chambers.[239] On a c.1860-1870 map of Kooringa, and an 1875 map of the township of Graham, the mine "Hospital" is clearly shown.[240] There is only limited evidence about its operation as Burra was considered a safe mine, with only 15 fatal accidents in 32 years of operation.[241] According to historian Ian Auhl, the "hospital was little used except as an immediate place of reception for men injured on the mine and as a morgue for victims of fatal mine accidents. Cornish miners had a strong aversion to using the mine hospital. They preferred the security of their own homes and of traditional remedies".[242]

By 1869, the hospital was deserted and children of the Opie family rummaging around found the body of a newly-born infant under the floor-boards.[243] As Auhl commented, "It was hardly to be wondered that the isolated cottage hospital built on the side of a bare hill became known as 'Bleak House'".[244] It was used as one of the many places of refuge for families living in the dugouts made homeless by the floods in the Burra Burra Creek in May 1851.[245] In 1871, it was again rented as a residence, but in 1875 SAMA donated it to the community with the adjoining land for its conversion into a new general hospital for the public.[246] Although this gift was initially accepted and alterations commenced, it was returned in exchange for the purchase from SAMA of the original Burra Hotel which was considered a better building and site. The former hotel was then converted into the Burra Hospital and opened on 27 February 1877, and while the hospital remains on that site, the original building was demolished and replaced in the 1960s.[247] From 1887 to 1907, the former Mine Hospital was used as the Burra High School. The building is now privately owned.



Former mine hospital (Bleak House School), c.1905. Source: The Burra History Group Inc.



Part of The Township of Graham map, showing Mine Hospital, c.1860-70. Source: SLSA Map C 316.

**Former Mine Manager's Dwelling and Office (SAHR 10056)**

The Mine Manager's Dwelling and Office was the administrative heart of the mine. Constructed in 1849, the long building was located on the west side of the mine site and included the offices at the north end with the residence of mine manager to the south end. Captain Henry Roach, from Redruth, Cornwall, was appointed Mine Captain in January 1847 (although some reports stated 18 January 1846)[248] and subsequently was appointed Superintendent of the Mine.

In 1851, it was reported that in "the background, on the brow of the hill, is a row of well built stone cottages, two of them the residences of Captain Roach and another mine captain, and the third, comprising the consultation room, the changing rooms, and the office of the Company's accountant and his clerk. On the right of these cottages is another similar range, the residences of the other captains of the mine and their families. Still further to the right is a pretty detached cottage and neat … offices, occupied by Dr Chambers, the principal surgeon of the mine".[249] Also in 1851, it was reported that there was "the busy employment of the individuals in front of the various houses and scattered dwellings, among others that of Captain Roach at the end of a row with its neat green palings; the Company's offices, where all seemed in a bustle".[250] "Captain Roach's House" is denoted to the southern portion of the building on the earliest plan of the Burra Burra Mine dated c.1852. The structures to the north were identified as "Offices" and the "Assay Office and House".

Several years later, in 1855, it was reported that near the "engine-houses are the mine offices and the residences of the principal officers. Captain Roach, who is at the head of the entire establishment, has a good substantial stone house, containing four rooms, adjoining which are the offices, comprising the Board-room, captain's consulting and changing rooms, pay office, accountant's office, assay office, and draughtsman's room. Next to them is the house of Mr. Elphick, the Assay-Master, in front of which and of Captain Roach's are carefully-tended gardens. There are also residences for Dr. Mayne, the surgeon of the mine; the second, third, and fourth captains (Messrs. Bryant, Goldsworthy, and Mitchell); for Mr. Congdon, the Chief Engineer; and for some other officers in the Company's employ".[251] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that there were fourteen houses on the Mine site associated with Mine operations. The buildings were constructed in "Georgian domestic architectural styles that represented the elevated status of the mine captains".[252]



Burra Burra Mine Site Plan, c.1852. Source: SLSA C178



Former Mine Manager's Residence and Office, c.1870. Source: State Library of South Australia B4151.

### Former Foreman's Residence

The Former Foreman's Residence is located on the original mine site. On the c.1852 mine site plan, the residence is denoted as the "Foreman's House".[253] However, on the 1867 mine site plan, the building is denoted as a "dwelling"[254] and on the later 1875 plan of the Township of Graham, which occupied the northeast corner of the mine site and was surveyed and sold by the SAMA, the building is denoted as "Mr Furniss".[255]

Matthew Henry Furniss (1825-1895) arrived in South Australia in 1851 from England. In his obituary, it was reported that he was employed by the SAMA as an accountant for the Burra mine "a position he held for twenty-four years".[256] He left Burra in 1874 to move to Adelaide. However, at his farewell dinner in 1874, it was reported that Furniss had resided in Burra for 23 years and was "employed as Clerk of the Burra Mines".[257] In Auhl's key text, *The Story of the 'Monster Mine'*, he identified Matthew Furniss as "second assayer"[258] who worked as early as 1854.[259] The mine assayer, assayed that part of rock which was mineral, in this case, examined the ore in order to determine the quantity of copper in it. Auhl later stated that "Matthew Furniss, who had been appointed mine storekeeper in 1869, was asked to take over as Accountant in place of Challoner".[260] Further to this, Auhl stated that "Challoner's place was taken by William H. Furniss, previously chief storekeeper and Mine Assayer. Furniss resigned in 1874",[261] however it appears he was referring to Matthew Furniss and the identity of William H. Furniss is unclear.

Auhl went on to write that: "In July of 1874, Ayers wrote to Sanders asking him to arrange with the mine surveyor to lay out a new township on Section 1 adjoining the mine. The new township of some six acres, divided into twenty-one allotments was named Graham ... after 'Sammie's' wealthiest shareholder, J.B. Graham. Buildings already within Graham were the Smelters Arms Hotel, the mine hospital and the home of the mine assayer, Mr Furniss. Allotments in the new township were ready for sale by April 1875 but there was little demand, either for land in Graham, or in Graham East, subsequently laid out on the flats east of the Burra Creek by the S.A.M.A. in 1905".[262]

The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, recorded that Matthew H. Furniss occupied a stone house with 6 rooms on the mine site and it was valued £26. It also recorded that there were fourteen houses on the mine site associated with mine operations. Other important individuals also resided on the mine site such as the Mine Captain, Mine Accountant, and the Watchman.[263]

Thus, the building was once occupied by Furniss however it is unclear which position he held when residing in the dwelling, and it appears that his position at the Mine changed over time. It is clear though that, as denoted on the c.1852 plan of the Mine, the early use of the house was the Foreman's Residence.
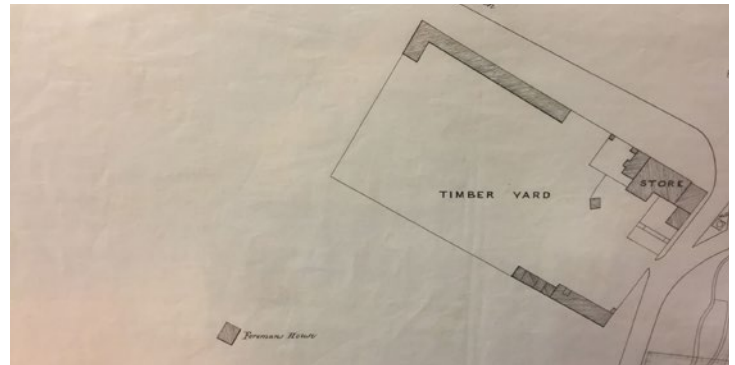

"Burra Burra Mine Plan", c. 1852, Plan shows "Foreman's House". Source: SLSA C178.
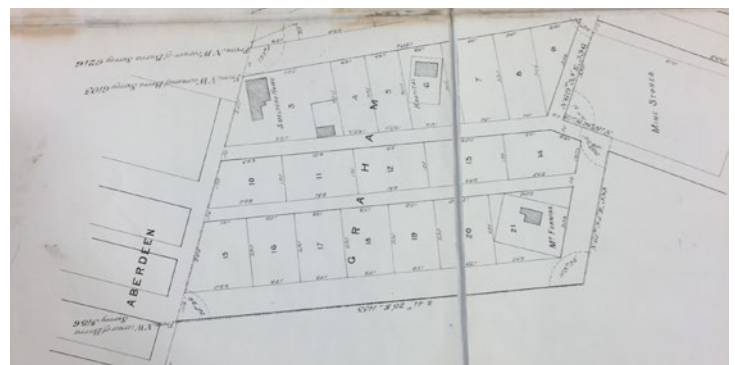

Part of The Township of Graham map, showing "Mr Furniss", c.1860-70. Source: SLSA Map C 316.
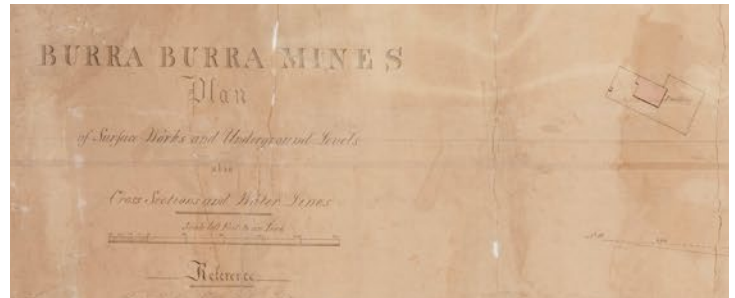

Part of 1867 SAMA "Burra Burra Mines" map showing the "Dwelling". Source: SLSA.


Part of "The Township of Graham" map showing the Mr Furniss Dwelling, 1875. Source: State Library of South Australia Map C41.

**Peacock's Chimney [Cornish] (SAHR 10020)**

In August 1849, Henry Ayers ordered the Mine's second beam rotative engine, a 30-inch engine from the Perran Foundry in Cornwall. The engine "arrived in September 1850 and the foundation for the enginehouse began later that year. The enginehouse for the 35 hp winding engine was reported as under construction in June 1851, but work apparently did not progress far, perhaps because the masons were required for the erection of Schneiders Enginehouse in 1852".[264]

Works recommenced almost six years later and in January 1857, Messrs Blackler and Hollow were awarded the tender for the construction of Peacocks Enginehouse. It was completed early 1858 and the engine began operating in April 1858. Used as a winding engine, it was also known as Peacocks Engine, Peacocks Fire Whims, or Peacocks winderhouses, named after William Peacock, a SAMA Director. The engine "was intended to haul from Peacocks Shaft".[265] In fact, Peacocks Engine hauled from "four shafts; Peacocks Main and Roachs shafts in line with the winding drum and Peacocks Air and Waterhouse shafts at an angle to the drum. Flat rope and chain used for hauling were wound on a drum against the flywheel. Posts carrying pulleys for the rope or chain ran to the various shafts".[266]

In 1870, "Peacocks Engine was adapted to power an endless chain, which hauled ore trucks up an incline [sic] tramway from the open cut to the ore dressing plant. At this time, a second boiler was added to the Boilerhouse. After the erection of a small horizontal winding engine on the hill to the south of the mine in 1876, Peacocks Engine was converted to pump water to relieve the load on Morphetts Engine".[267]

Peacocks "Cornish-style"[268] chimney served the Boilerhouse associated with the Peacocks Winding House. Peacocks Engine operated from 1858 to 1877 when the Mine closed. It "was the longest serving engine at the mine".[269] In 1916, the engine was sold. In c.1971-72, the enginehouse was demolished to make way for the twentieth century open-cut mine. In 1972, the chimney was dismantled and rebuilt near the entrance of the mine.[270]



Burra Burra Mine showing Peacock's Chimney with adjoining enginehouse before it was re-sited, undated. Source: The Burra History Group Inc.
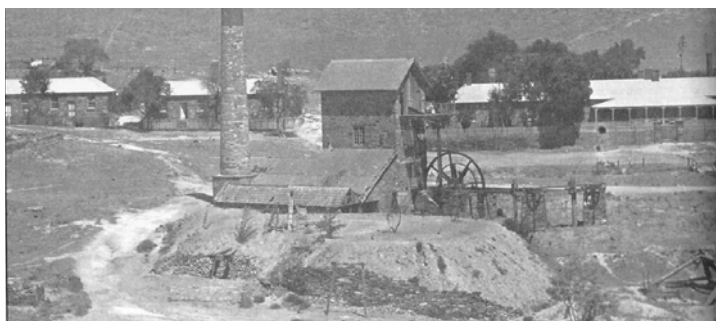


"Peacocks Enginehouse, c.1890". Source: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p.90.

## Former Morphett's Pump House (SAHR 10053)

By 1857, mining "below the 60 fathom level was impossible … due to the increased quantity of water, which Schneiders Engine was unable to control".[271] In response, Henry Ayers ordered a second 80-inch engine from Perran Foundry in Cornwall which arrived in Port Adelaide in July 1858 "but, due to winter, was not brought to the mine until later that year. The return journey from Burra, using the Jinker which had carried Schneiders Engine, took two months and the 15 ton cylinder finally arrived in January 1859. Most of the townspeople were there to greet the huge engine as it passed through Market Square in Burra and celebrations in typical Cornish style carried on into the night".[272] William Woollacott was the Jinker teamster. It was the Mine's third Cornish Beam Pumping Engine known as Morphett's Engine named after John Morphett, a director of the SAMA. Plans for the enginehouse had been sent from Cornwall. In October 1858, Morphett's enginehouse and boilerhouse were erected at Morphetts Shaft by Cornish stonemasons, Ambrose Harris and Thomas Paynter. By March 1860, the engine was operational and pumped out two million gallons of water per day. It was used until the mine closed in 1877.

In c.1916-20, the engine was sold and removed for scrap, while in c.1925-26 the enginehouse and upper part of the shaft was gutted by fire. The timber components were reconstructed in 1986 as part of South Australia's sesquicentenary celebrations. The original bell was reinstated in 1988, and the slate roof installed in 1986 was replaced with galvanised steel in 2012.[273] Morphett's Shaft "reached a depth of 183 metres in 1877 [but] is now blocked 46 metres below the surface. The water table is just below this level".[274]



Morphett's Pump House, c.1875. Source: SLSA B46014



Morphett's Pump House, c.1906. Source: Art Gallery of South Australia

### Former Winding House (SAHR 10052)

Morphett's winding enginehouse was constructed in 1861 to house the Mine's third Cornish beam rotative engine, it being a 20-inch winding engine imported from Perran Foundry in Cornwall. Tenders were received from Tiver and Cole, and Cornish stonemasons, Ambrose Harris, and Thomas Paynter for the enginehouse but it is unclear which tender was accepted. The winding house took the form of a 'half house' where the cylinder was internal, but the crank and flywheel were external with the beam supported on an external wall. It was powered from the adjacent Morphett's pumping engine boilerhouse to which an additional two boilers were added for this new engine. The engine operated from 1861 to 1874 and initially hauled rock from Hector's shaft about 120m to the south. Hector's Shaft was "110 metres deep and connected to Morphetts Shaft at several levels. In the 1870s, [after the conversion of the mine to open cut] the engine was used to power machinery in the ore dressing tower, 100 metres to the east, by an endless wire rope".[275] There is still evidence of this process.[276] "This system continued until 1874, when a new horizontal steam engine was erected near the dressing tower to drive the dressing machinery"[277]. Morphetts winding engine consequently ceased operation and is believed to have been scrapped in 1916. It was a "typical Cornish winder identical to those in Cornwall during the same period".[278] It is believed to be the only extant "half house" or "winding house" in South Australia.[279]

### Mine Bridge [Stone Arch] (SAHR 10021)

In December 1867, it was reported that the Central Road Board had failed to "complete the road near the Mine Store and making the bridge ... very dangerous ... for anyone passing in a cart on a dark night".[280] In 1868, the Central Road Board contracted Messrs J. Tiver and W. Woollacott to construct the bridge. It was designed by their "Superintending Surveyor Mr A. Macauley",[281] who had been a pupil of Isambard Kingdom Brunel and had worked on the Great Western Railway until his arrival in South Australia in 1850 to work on the Adelaide to Port Adelaide Railway.[282] On the 8 May 1868, the bridge was "progressing favourably".[283] It was reported on 3 July 1868, that the bridge was complete. It was a single 15 feet wide stone arch bridge supporting a 24 foot roadway and was built of stone from Hampton with the exception of the coping of Mintaro slate.[284] It linked the mining townships of Kooringa and Redruth and Aberdeen. The bridge "helped to channel the water produced by the copper mining operations, which entered Burra Creek via Mine Creek".[285] "Plans to widen and straighten the road were drawn up in the late 1930's and this has resulted in the removal of the western parapet."[286]
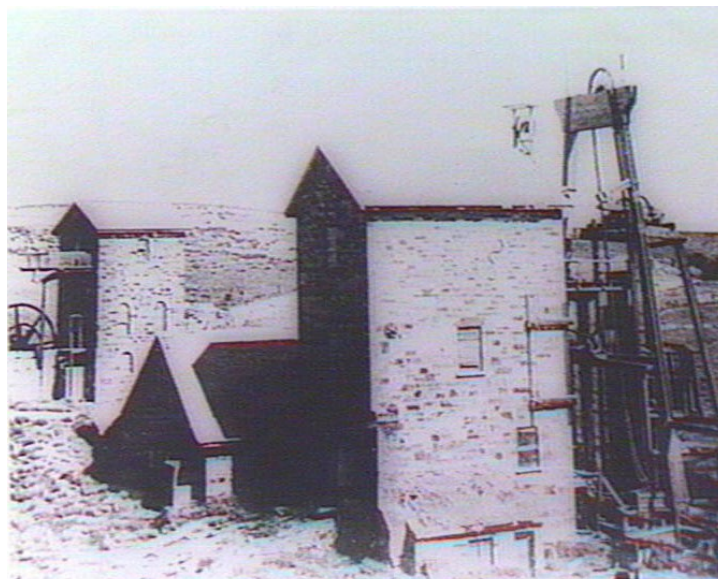


Winding House (left), 1870. Source: State Library of South Australia B 46010
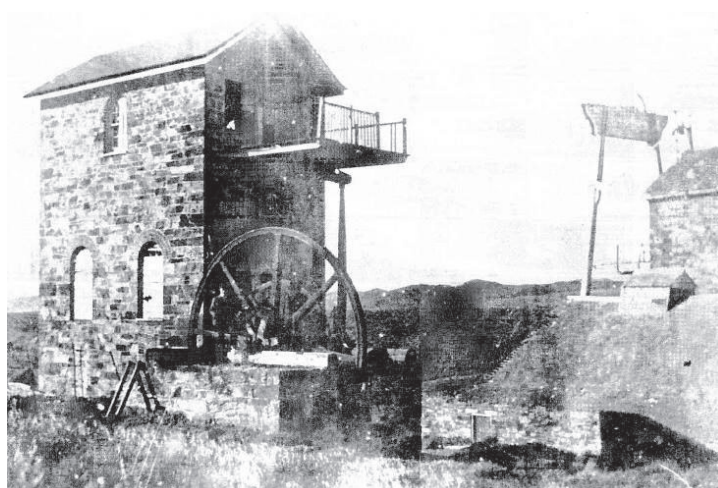


Morphetts winding house, c.1915. Source: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p100.



Bridge with two parapets, c. 1920's. Source: Courtesy of the Burra History Group.

### Former Graves Pump House (SAHR 10054)

Completed in October 1868, Graves Enginehouse was intended to house the Mine's fourth Cornish Beam pumping engine. It was erected by Thomas Paynter and named after Thomas Graves, one of the Directors of the SAMA.[287] In 1867, an 80-inch Cornish Beam pumping engine was ordered from the Perran Foundry in Cornwall. However, the Burra Burra Mine was converted to an open cut mine shortly after and the order was cancelled. "Instead, another 80 inch engine (Schneiders) lying idle on site, was to be erected in the enginehouse. The engine bedstones were hauled to the enginehouse but the plan to erect Schneiders Engine was suddenly abandoned in early 1869 and the engine was never erected nor a Boilerhouse constructed. One of the huge bedstones, complete with bolt holes, stands in Market Square, Burra".[288] The mine shaft was 91 metres deep and was infilled in the 1970s. Graves Enginehouse is still extant but was never operational.

### Former Ore Sorting Floor (SAHR 10055)

Separating mineral ores from waste rock is known as ore dressing. This process was initially done by hand, breaking apart the rock and then hand picking. It was carried out on "dressing floors" located at the surface of the mine. "After some initial sorting underground, lumps of ore from shafts was hand-picked at the surface into high grade (prills), low grade (drage or halvans) or waste (attle). The prills were reduced by hand with bucking hammers to walnut size and sent for smelting. The attle was sent to waste dumps or back into the mine as fill in worked out areas. Drage was reduced to sand size and sent for concentration or by jigging which involved gravity separation in water".[289] The Cornish jigger was central to ore processing and "originally consisted of a sieve hung from the end of a lever and immersed in a trough of water. The sieve was filled with crushed ore and continually shaken by hand in the trough using the lever. This action caused the lighter waste particles to rise to the top which were periodically scraped off by hand. Up to the 1860s, about 150 men were employed operating individual jiggers on the Burra Mine ore floors".[290]

This Ore Sorting Floor reportedly dates from 1870, after the Burra Burra Mine became open cut. Most of the ore floors at the Mine have either been destroyed by the historic and modern open cuts or have been buried by the modern open cut overburden. There is some debate whether this particular Ore Sorting Floor was used to sort Ore as described above or as others have suggested it was "not used for sorting but for laying out piles of individual tribute groups dressed ore prior to sampling".[291] Sampling Day was held every two months, and each pare (group of tributers) placed their ore in a pile on the ore floor. The SAMA sampler then bagged a shovel of ore as a sample which was weighed with portable scales and was sent for assay. The assay value determined how much the tributer was paid.[292] Either way, it is "one of the few surviving ore floors in Australia".[293]



"Graves Engine-house", c.1890. Source: The Burra History Group Inc.



"Burra Mine ore dressing floors, 1858 from a painting by William Bentley. ... The group of men in the foreground are sampling and weighing an ore pile". Source: Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p10.

**Former Engine/Crusher House (SAHR 10445)**

The Crusher House and Dressing Tower was constructed in 1870 to replace the earlier crusher house due to the reconfiguration of the Mine site for the conversion to an open cut operation. Its purpose was to "treat low grade ore from the open cut [and] housed modern ore dressing machinery".[294] It commenced operations in 1871. It "contained dressing (concentrating) machinery brought from England and [was] installed under the supervision of English mining engineer Swansborough. Ore trucks were hauled up an inclined tramway and emptied into a hopper at the top of the tower. The ore was firstly crushed by a set of Cornish crushing rolls and then passed through a series of revolving cylindrical screens or 'trommels'. These separated the crushed ore into a range of different sizes which were then ready for the 'jigging' or concentration process. Each trommel discharged a sized product into a 'jigging machine' which concentrated the ore particles. The fine waste or 'slimes' then passed into a 'buddle' which concentrated the finest ore particles. This method of ore dressing was universal until the development of the flotation process at Broken Hill in the 1890s".[295]

The Crusher House and Dressing Tower "treated about 20 000 tonnes of ore a year producing concentrate containing up to 35 per cent copper. The machinery was powered initially by an endless wire rope from Morphetts Winding Engine but [this was replaced by a smaller steam engine powered by an adjoining boiler house in 1874] and drive shaft from the nearby Crusher Engine. The timber tunnel, through the rear wall, took the wire rope drive and water from Morphetts Pool".[296] Indeed, "[t]wo storey Cornish crusherhouses were a distinctive feature of 19th century copper mining landscapes along with beam enginehouses. More than 20 were erected throughout South Australia including five at Moonta and Burra".[297]



'The Burra Burra Mines, 1875, The Tower Dressing Floors'. Source: State Library of SA B 46011.
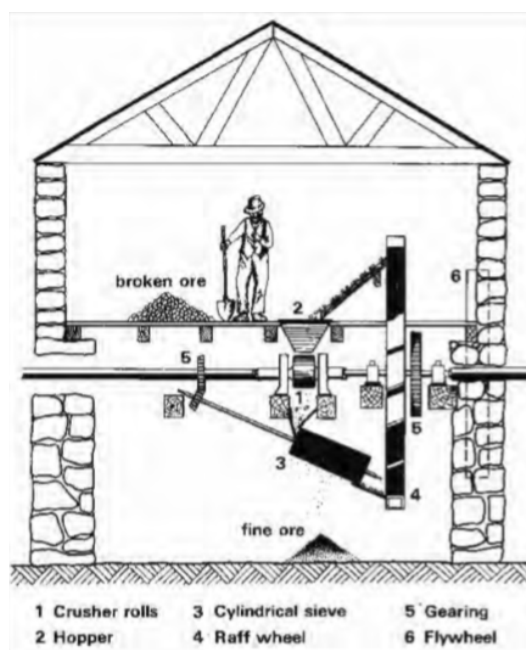


Cross section of a Cornish Crusherhouse c.1860. Source: Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p7.
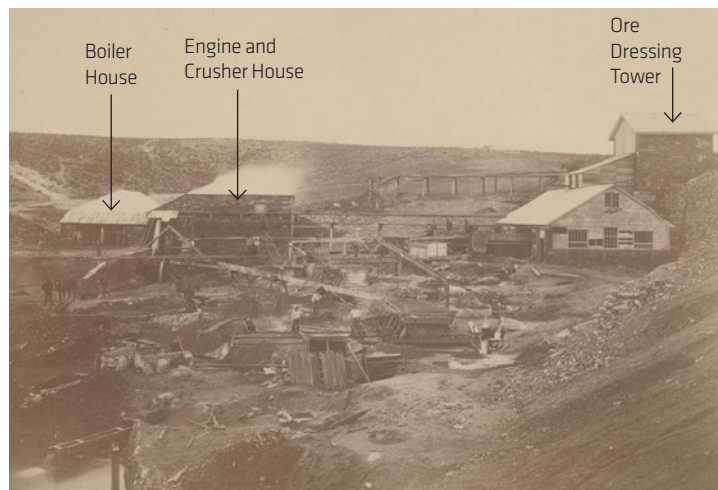
### Former Crusher Chimney [Cornish] (SAHR 10047)

The Cornish Crusher Chimney was constructed in 1874 and was part of the ore processing complex installed as part of the conversion of the mine to an open cut operation in 1870. The ruins below the chimney down the slope to the west are of the "boiler house connected to the chimney which supplied steam to an adjacent steam engine which powered dressing machinery in the nearby dressing tower".[298] Prior to the installation of this engine, power was provided to the dressing tower from Morphett's winding engine by an endless wire rope. The engine house ceased operation in 1877 with the closure of the Mine. It is a "notable example that demonstrates the transition from older Cornish dressing technology in the 1870s. It is one of the few surviving places of its type in Australia".[299]

### Former Haulage Engine Chimney [Welsh] (SAHR 10046)

The Haulage Engine Chimney and the associated enginehouse lower down the slope to the north was constructed in 1876. The small horizontal steam engines hauled the ore carts up to an inclined tramway out of the open cut to the dressing house. A single Cornish boiler was located adjacent the engine to provide steam, with this connected to the chimney. The engine ceased operation in 1877 with the closure of the mines.

### Former Bon Accord Mine Site (SAHR 10023)

In November 1840, with a projected capital of £100,000, the Scottish Australian Investment Company was founded in Aberdeen, Scotland. On a surety of £5000 and the condition that he took 1000 shares in the company, Robert Archibald Alison Morehead was appointed the company's Australian manager. Morehead arrived in Australia in 1841. Amongst other investments, predominantly in New South Wales mortgages and property, the company invested in wool, coal, and copper mining. [300]

Conjointly with the North British Australian Company, the Scottish Australian Investment Company purchased a block of 347 acres immediately north of the Burra Burra Mine in April 1846.[301] In 1848, it was reported that, the proprietors "who reside in New South Wales or parts more distant",[302] were represented by Mr Morehead and Mr Belcher, and German, Captain Ey. The "speculators were a group of Aberdeen capitalists ... although there were no visible indications of copper lodes, the purchasers were gambling on the possibility that the adjacent Burra Burra Mine lodes extended into their section".[303] The mine was known as the 'Bon Accord Mine' apparently after the motto of the Aberdeen coat of arms. No ore body of substance was discovered, and mining operations ceased in 1849. Although, some reports stated, as early as December 1847, that the "Bon Accord mine ... has hitherto been a failure, and, at the time we visited, the workings were abandoned".[304]

To "help recoup some of their investment, the joint company decided in 1849 to lay out a second 'outside' township. Predictably the new township was named Aberdeen".[305] In 1857, the Scottish Australian and North British Australian Company sold their shares in the mine, reserving a 5% royalty on any ore raised, and it was made over to a new company.[306]

Despite advice to the contrary,[307] mining recommenced at the Bon Accord Mine, and shortly after, in 1859, mine offices, blacksmith's forge, carpenter's shop, and a manager's residence were built. In 1859, it was reported that "Mr. Brown (of the firm of English & Brown) is rapidly bringing the building at the Bon Accord Mine to a completion. The offices are being covered in. The enginehouse is ready for the reception of the engine, and the chimney is up 38 feet of the 60 which is to be the height".[308]

A 50-inch Cornish Beam pumping engine (formerly Roach's Engine from the Burra Burra Mine) was re-erected at the Bon Accord Mine. It operated from 1860 to 1863. However, this second venture failed too, and the mine closed in 1863.[309] Despite extensive explorations for over nearly two decades, the mine failed to locate an important lode.

A second township "'New Aberdeen', adjoining 'Old Aberdeen' was subdivided on the company's section in 1872, shortly after completion of the railway to Burra [in 1870] which terminated within the Bon Accord boundaries".[310] From 1884 to 1905, the Burra Corporation used one of the mine shafts for the town's water supply. From 1905 to 1966 the South Australian Government used the main shaft to supply Burra with water, building a pump house over the shaft in 1908. In 1966, Burra was connected to the Murray pipeline. The site is operated by the National Trust (SA) as a museum and interpretive centre.

# 4.2. Smelting

**Former Burra Smelts Historic Site (SAHR 10989)**

Following the establishment of the Burra Burra Mine, copper ore was initially transported to Swansea in Wales for processing and later to the Yatala Smelting Works. Both necessitated the carting of ore using bullock carts on unmarked, dirt tracks and roads. In the summer of 1848, it was estimated that there were 1,200 bullock carts, each carrying 2½ tonnes of ore, on the road to Adelaide.[311] Thus, it was desirable for further concentration of the ore to minimise transport and the construction of a local smelter was investigated. After SAMA's failed attempt at smelting, SAMA leased land on the east side of Burra Creek to the English smelting firm, the Patent Copper Company (later the English and Australian Copper Company).

In 1848, the Company "was preparing to send out to South Australia 'the whole materiel [sic] for a smelting establishment, accompanied by practical assistants and ample means of support'".[312] In May 1848, it was reported the "imminent departure from Swansea of the barque *The Richardsons* of 361 tons, charted especially by the Patent Copper Company of Swansea to transport 'materials, men and staff' sufficient to establish a smelting-works in South Australia. 'Including women and children, the party will number not fewer than 70 souls. A surgeon has been engaged to accompany them'".[313] On 3 October 1848, *The Richardsons* arrived in South Australia.

On 11 December 1848, the foundation stone of the "First Smelting Works of the Patent Copper Company erected in South Australia was laid by William Giles, Esq., J.P., Manager of the South Australian Company".[314] By mid-January a "furnace-house to contain eight furnaces was under way, thirty feet of the furnace chimney had been erected and a casting-house and assay offices had been completed. The Company was advertising for firewood, slates for roofing, and large numbers of teams and drays. By mid-February it was reported that 'furnaces, stocks, shops, houses, stables, and works of all kinds are progressing rapidly and in about two months' time the copper smelting is expected to begin at the rate of 800 to 1,000 tons of ore per month'".[315] In April 1849, the "first furnace was ceremoniously lit",[316] and by 6 May 1849, several furnaces were completed, and they were smelting "day and night".[317]

While there were five other smelters operating across South Australia by this time, the Burra Smelter is considered "integral to Burra's copper mining past, and one of the earliest major smelting works established in South Australia".[318] Indeed, when "completed in late 1849, it was the largest building in South Australia and consisted of a single row of eight smelting furnaces each with its own nine-metre-high brick chimney. The second smelting house was completed in 1851, but the furnaces were not lit until 1854. This house contained nine smelting furnaces in two rows connected by a large underground flue to the south".[319]

In 1851, a visitor to the smelter reported that "we set out to-day to inspect the Smelting Works of the Patent Copper Company, and a clerk handed us over to a Mr. Jones, a good-looking, as well as good-humoured Welshman, from Glamorgan ... Jones showed us everything worth notice in this remarkable place. ... We ... entered the pandemonium of refinement: there are three large refining furnaces; from whence we saw the pure copper extracted in red hot ladles; we then saw the moulds receive each ladleful, forming one cake, which, before hardening, was stamped P.C.Co., by a boy with a brand ... From this place we were conducted to a large shed, where the several cakes, forming the contents of a mould, were separated with a hammer by another boy. This separation produced a number of flakes, or laminae, which strewed the ground, and which, we were told, were collected and smelted again. We were now shown into the smelting department, of 16 furnaces, in three ranges, in two of which ranges the flues run underground, and have one common vent in a beautiful brick chimney of excellent workmanship. ... we traversed all the ranges of this second pandemonium; saw furnaces roaring, ores roasting, copper and slag cooling, and men stoking and poking every side, while out of doors wood was being delivered to the mouths of the devouring monsters, ready at hand to feed the fires; while drays, loaded with wood, were arriving every instant, and were seen from every distance, to replenish the forest of cut logs and long wood piled up, circling the whole area of the works and filling up every available space. We understood the consumption to average 150 tons daily, a load being two tons; but there were instances in which drays (very large and strong, we conclude) brought five tons for a load, and we pity the bullocks. All this wood comes from the Murray Scrub, seven miles east of Kooringa. ... The number of persons employed in these works is several hundreds, but we could not learn how many".[320]

By 1851, the sixteen furnaces in operation used timber from crown land but the Land Commissioner later stopped this practice.[321] Coal therefore had to be carted from Port Adelaide or Port Wakefield. In c.1853-54, the Company imported mules and their drivers from Chile to aid in carting. With the opening of the company's Port Adelaide smelter in 1862, smelting operations at Burra declined and in late 1863 some of the older smelters were dismantled. The works closed in early 1869. The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records on the site; offices, cottages, stone house – "9 rooms, stables, yards, & sheds, smelting works & workshops, 80 acres open pasture @ 1/6 £6".[322]

Until the early twentieth century, the smelting buildings remained intact but gradually components of the buildings were dismantled and salvaged for building materials. The tall brick smelter chimney stack (c.1853) was demolished by dynamite in 1956 when it was considered to be dangerous. The Former Smelts Historic Site includes the Smelts Manager's Residence and Office. It was reportedly built c. 1849 and "originally housed the offices of the English and Australian Smelting Co. and [was] the residence of its manager".[323] In 1881, the offices "were converted to residential use".[324] The residences were leased until 1917 when the Smelting Company sold the property including the entire smelting site. Miss E.M. McBride purchased the site and, in 1920, subdivided it.[325] There has been several private owners since that time.

The Former Smelts Historic Site was one of the earliest Smelting Works of a significant size in Australia and one of the earliest major smelters in South Australia.[326] The English and Australian Copper Company was one of the earliest major foreign investors in the State.[327]
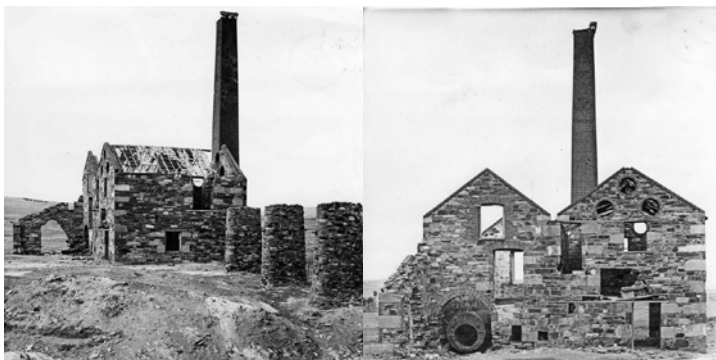
Former Burra Smelts Historic Site by S.T. Gill, 1850. Source: Art Gallery of South Australia



Ruins of the Burra Smelting Works 1890s. Source: The Burra History Group Inc.



"Old Burra Smelting Works", 1890s.
Source: Art Gallery of South Australia



Ruins of the boiler-house at the Burra Smelter 1890s.
Source: The Burra History Group Inc.

## Former Burra Smeltsyard and Storehouse (SAHR 10024)

The Smeltsyard and Store was built in 1849. According to some sources, it included stables for up to 100 horses, and a blacksmith's shop.[328] They were built using slag blocks from the Smelter. The Smeltsyard was the "main service centre for … [the Chilean] mule teams and wagons they hauled".[329] In 1855, it was reported that the "establishment is in every way complete, comprising all within itself. There is a 35-stall stable, but the beasts of burden now principally used are mules, of which the Smelting Company has at present a stud of 470 [?]. These are chiefly worked in shift [sic?], and 10 of them are able in eight days to carry three tons of ore or copper to Port Wakefield, and to return with a similar quantity of coal. … Two hundred of the mules arrived lately by the Malacca [?], from South America, and all are in perfect working order … Sixteen Chilian [sic] labourers have lately arrived, making in all twenty-two. … The establishment includes a general store, a weighbridge, smiths', wheelwrights', and saddlers' shops &c. ".[330]

In 1863, it was described as "stables for 30 horses, besides loose boxes for half a dozen more; there are also commodious yards and paddocks for the mules, and every appliance and convenience necessary for repairing the wagons, and shoeing the animals".[331] Following the closure of the smelter in 1869, the Smeltsyard was first used for Burra's Agricultural Show in 1877 continuing until 1885.

## Former Smelts Superintendent's Residence and Wall (SAHR 10204)

The building located at 9 St Just Street, Burra, is reportedly the Former Smelts Superintendent's Residence & Wall. It is unclear where this assertion originated. The following information relates to this building.

On 3 October 1848, Welshman, Thomas Henry Williams arrived in South Australia on board *The Richardsons.* The Smelter (Burra Smelts Historic Site SAHR 10989) was established on the SAMA's land, on the eastern side of Burra Burra Creek, which was leased to the Patent Copper Company. On 11 December 1848, the foundation stone was laid for the Smelting Works.

On 29 August 1849, in the *South Australian Register,* Thomas Henry Williams was identified as the Superintendent (not Manager) of the Patent Copper Company.[332] On 20 June 1850, Thomas Williams residence was described as "opposite the Copper- works" near Welsh Creek.[333] On 12 July 1851, it was reported by a correspondent who was visiting Burra, that "Mr. Williams, the Superintendent, was absent [from the Smelting Works], not to return till evening; and as these [Smelting] works are not shown without an order, we left our credentials in the office, and appointed to call on the morrow. Mr. Williams's residence had a very light and villa-like appearance as contrasted with the dark works; and, viewed in front from a distance, bore no bad resemblance, in its arched upper storey, to a pigeon-house on a large scale".[334] In another newspaper report, on the same day, Williams is also clearly identified as the Superintendent of the Patent Copper Company works.[335] However, the description of the arched upper storey of the residence is inconsistent with the extant residence (SAHR 10204). On 14 September 1854, it was reported that Thomas Henry Williams resigned from the now English and Australian Copper Company.[336] Indeed, the site of Auburn was originally granted to Thomas Williams who then subdivided it.[337]

However, there are contradictory newspaper reports. On 21 March 1855, "Williams" is described as the Manager (not Superintendent), who "has a commodious residence, with tastefully-arranged garden, adjoining the Company's offices. There are several houses for the Company's agents, and at a short distance is springing up a little township called Llwchwr, where allotments have been sold to the workmen at the rate of [?] per acre".[338] It is unclear whether this refers to Thomas Henry Williams as he would have resigned by this date. But this may suggest that Williams lived in the "Smelts Manager's Residence & Offices" (SAHR part of 10989). The proposition that Thomas Williams was a manager who lives in the manager's residence is also supported by other authors, such as Auhl, who have stated that "[t]he Superintendent's house [sic], [was] originally built in 1849 for Thomas Williams, and the offices and stores adjoining, now converted into private residences, are still occupied and externally maintain much of their original appearance".[339] This reference is clearly for the Manager's Residence.

The 1860 plan of the Smelts shows a "cottage" in the approximate location of the Superintendent's Residence in the north-west corner of the site. However, it is unlikely that the Residence would be described as a cottage. There was a lease agreement for this land effective from 30 November 1848 (registered in 1854). The agreement was between Thomas Henry Williams and George Ewbank (on behalf of the Patent Copper Company), and a "smelter", David Williams. In 1857, "David Williams sold to John Dunstan the lease of 'land and premises'. The property was [later] sold to William West by Dunstan's executors in 1914".[340] Dunstan may have constructed the Residence after 1857. In 1886, the Superintendent's Residence (SAHR 10204) was reportedly still owned by John Dunstan which concurs with the above information.[341] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that John Dunstone [sic] occupied a stone house with four rooms. It was leased from the English and Australian Copper Company and the owner of the land was the SAMA.[342] It is possible that this refers to the same house.

It can be concluded that Thomas Henry Williams was likely to have been the Smelts Superintendent, but it is not clear where he lived. The Residence (SAHR 10204) was later owned by John Dunstan but it is unclear when it was built and who constructed it. The historical evidence is contradictory. It is therefore recommended that further research should be conducted on this building.



"John Dunstan's residence at Redruth, Burra, in 1886." Source: Martin Dunstan Collection, Courtesy of the Burra History Group.



"Cottage" shown in NW corner of the site may reference the Residence. Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p142.



"Plan of waste lands belonging to S.A. Mining Association Ltd. near Kooringa", c.1901-1914. Source: SLSA C176.
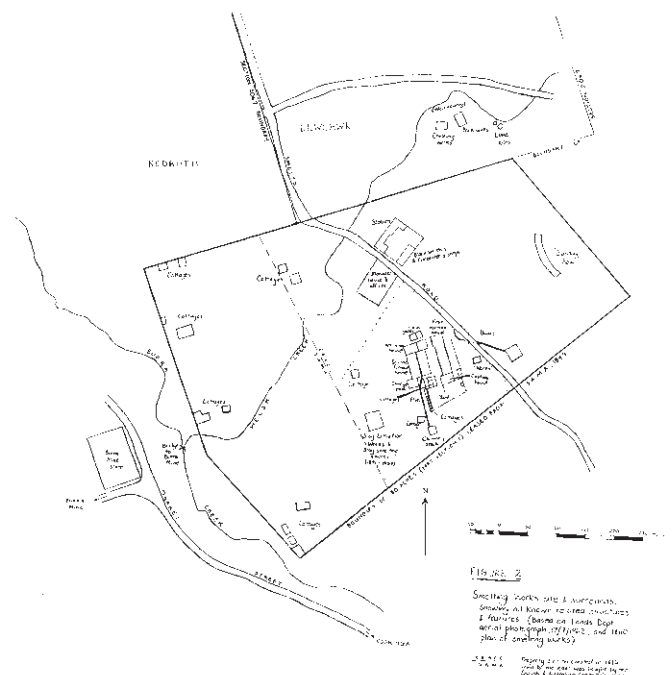


Land marked "A" may reference the Residence.
Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p124.



"Cottage" shown in NW corner of the site may reference the Residence, c.1860. Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p144.

# 4.3. Residential Housing on Company Land

**Background**

Following the establishment of the Burra Burra Mine, housing became a critical issue. With the Mine in full production and rapidly developing, SAMA realised the immediate need to provide housing for its miners and their families. Several townships developed to support the mining workforce. Interestingly, rather than one township developing, multiple townships were established by various groups namely "Kooringa (Company town), Redruth (Government surveyed town), Aberdeen (Scottish speculators), New Aberdeen (Scottish association), Llwwchwr [sic] (Welsh Smelter workers) and Hampton (new mining settlement named after the assayer at the smelting works)".[343] Each township was defined by those who established it. The townships, most importantly, provided housing for the miners, but also as some townships grew, they also provided ecclesiastical, civic, and commercial amenities.

Shortly after the opening of the Mine, the SAMA laid out its private company town of Kooringa. It was located south of the Mine on the Company's land. The name "Kooringa" is an Aboriginal word meaning the "place of she-oaks".[344] Kooringa became one of the three main towns associated with the Mine (the other two being Redruth and Aberdeen). From 1845 to the mid-1860s Kooringa was the business centre for the mining townships.

Initially, c.1845, following the establishment of the Mine, the earliest part of the township of Kooringa developed around Market Square. The irregular blocks around Market Square are thought to have formed the nucleus of the town.[345] "By 29 October 1845 the *Register* was able to report 'one street of the township laid out' and 'the sites of twelve cottages ... marked out'".[346] Around early 1846, the Thames Street alignment appears to have been fixed and the first SAMA cottages were built nearby.[347] This early nucleus may have included Bridge Street and Paxton Square; named after William Paxton, a Director of the SAMA. The second stage of growth was thought to be the section of the township, north of Commercial Street. The layout of these streets indicates expediency rather than planning. This section includes the "Paddock" and garden.

The third stage of Kooringa's development took place in 1846 when George Strickland Kingston (1807-1880), surveyor, town planner, architect and Director of the SAMA, was "given the task of laying out a [section of] company township ... of Corringa [sic]".[348] SAMA commissioned Kingston to develop an extension to the town of 80 blocks, each half-acre. Kingston's layout gave "Kooringa its wide streets, [and] its collection of bridges".[349] Thus, "Kooringa was ... a planned township, the first company township in Australia and the forerunner of such mining company towns as Iron Knob, Mount Isa and Mary Kathleen".[350]

In 1846, it was reported that the "township of Kooringa is principally composed of substantially-built houses, constructed of stone, quarried within the township, and flagged with an excellent material, raised (we believe) upon the property of the Association, although at a distance of some few miles. Altogether, the local adaptation and facilities for the formation of a township are all but of first order; and that Kooringa will be a very thriving place there can be little doubt. At first sight, the paucity of wood and the lack of visible supply of water appeared to militate against domestic comfort, but when we learned that the employees of the Association were supplied with water at sixpence per week, and wood at the like easy rate, we became convinced that in these, as well as other respects, there was more than met the eye ... Good stonemasons or wallers are much in request at 7s per day, or 4s 6d per cubic yard, finding their own materials and masons' labourers at 5s".[351]

In June 1847, it was reported that a "number of stores and well-constructed, roomy, and lofty cottages form the Mining Association's township of Cooringa".[352] In December 1847, it was noted that "twenty or thirty good stone cottages have been built at Kooringa, by the Mining Association, and that they intend building an indefinite number more in sets of ten [?], until the whole demand shall be supplied".[353] Miners were initially "allowed to occupy timber-paling cottages on the hillsides around the mine ... [but] [a]fter the strike of 1848, they were ordered to demolish these cottages and live within the confines of the company town".[354]

As is evident in the numerous newspaper reports, the Cornish not only brought with them their mining expertise but also their building traditions. Indeed, Cornwall is known for its stone quarries and stone masonry. In 1850, it was reported that the "town consists of several streets; the houses generally well built. In some places there are rows of substantial stone cottages built by "the Company"; the chimneys of one of them having as much masonry in it as would suffice for two of the flimsy building-society cottages with which the streets of Adelaide are being disgraced. There seems to be an abundance of fine stone at Kooringa and the inhabitants certainly are putting it to good use".[355] It is likely that this newspaper report is referencing the Upper Thames Street Cottages with their large diagonal chimneys.

Kooringa continued to develop and in the following year, 1851, it was reported that the "town itself contains one main and several transverse streets, and abounds with good shops and stores. A great number of small rows of houses had painted numbers on the doors; we observed these higher than 100; we were told they belonged to the Company. The total number of houses is about 430, exclusive of those living in the creek".[356] Also in 1851, it was noted that the "population of Kooringa, Aberdeen, and Redruth is about 4,300 persons, of whom, it appears 2,600 inhabit the creek – an immense majority".[357]

As a company town, there was no freehold land, only leasehold. Allotments could be leased for a maximum of 21 years. Thus, there was little investment in maintenance by residents and the Company failed to invest in town infrastructure. From 1869, freehold became available "when mine income was failing and the company saw that selling the land (while retaining the mineral rights) would best serve its interests".[358]

Some of the earliest housing constructed by SAMA in Kooringa were the cottages located at 2-12 Upper Thames Street (1846-47) (SAHR 10040/10041/10028/10029/10030/10031). They were designed by architect George Strickland Kingston (1807-1880).[359] Although the cottage at 16 Upper Thames Street (SAHR 10447) is similar to those located at 2-12 Upper Thames Street, it has not been attributed to Kingston.[360] Another early structure in the town is the timber dwelling located at 39 Commercial Street, which was built shortly after (1849) (SAHR 10434). The Paxton Square cottages were another significant early development in the town (1849-1851) (SAHR 10159). Indeed, "Paxton Square and cottages in Thames Street were among the first company housing in Australia".[361] However, it is claimed that the Mine Square Cottages at Kapunda, completed by July 1845, are Australia's first company housing.[362]



Site plan of Kooringa, 1849. Source: SLSA, https://digital.collections.slsa.sa.gov.au/nodes/view/815 accessed 1 October 2018.
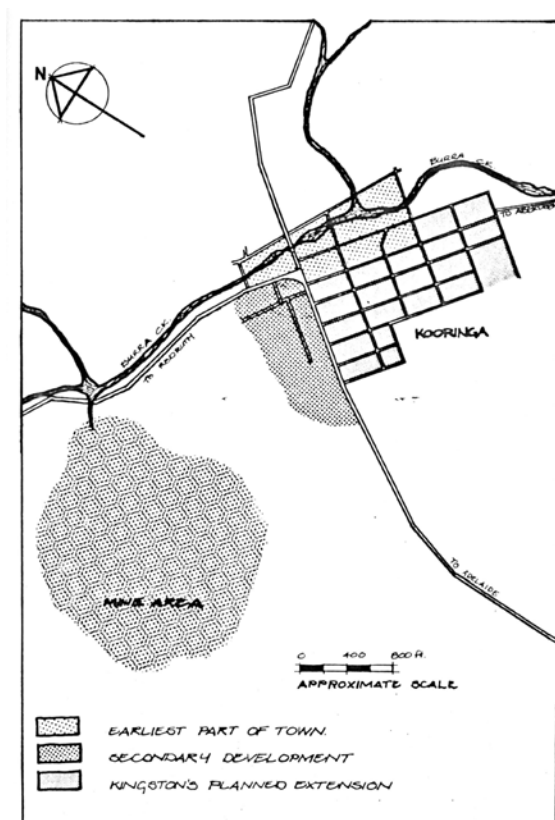


"'Kooringa - the Burra Burra township', one of four scenes engraved for a newspaper page for the "Illustrated London News", 2 December 1848, and later hand-coloured, about the Burra Burra Copper Mine, and based on the 1847 watercolour by S.T. Gill". Source: SLSA B 69728/1.



Fig. XX.9 Conjectural map showing early growth of Kooringa, South Australia, 1845-1849.

"Conjectural map showing early growth of Kooringa … 1845-1849" Source: Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, Fig XX.9, no page number.
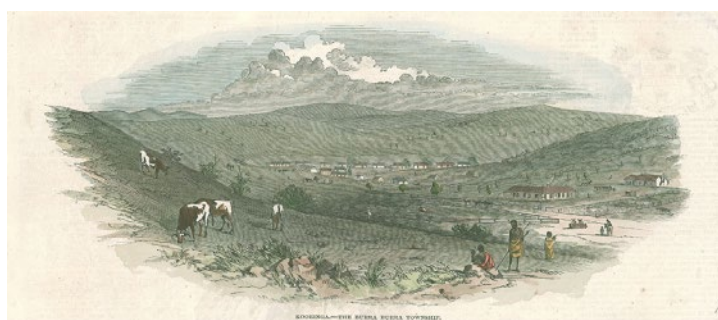
## 2-12 Upper Thames Street, Burra (SAHR 10040/10041/10028/10029/100030/10031)

The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by architect George Strickland Kingston (1807-1880).[363] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings ... they have remained standing long after similar buildings in the town ... have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[364] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves).

Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[365] Indeed, it was recorded that in April 1846, "Wallace [the mason] finished his first cottage in the township, which is now ready to roof".[366] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed.

Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages. In 1872, galvanised iron rooves replaced the wooden shingles. "Later each pair of two roomed cottages was converted to a four roomed cottage. Lean-to additions were added at the rear and later, verandahs on the northern side".[367]

The cottages are both the "oldest residential buildings in the town",[368] and one of earliest collections of residential buildings in Australia which are still occupied.[369] These "cottages in Thames Street were among the first company housing in Australia".[370]

## 16 Upper Thames Street, Burra (SAHR 10447)

This cottage was built by SAMA on its land in their company town of Kooringa and was rented to its miners. The cottage was constructed before 1849, as it appears on the 1849 Map of the Township of Kooringa. Although, it is similar to those located at 2-12 Upper Thames Street, it is not attributed to Kingston.[371] However, it is part of one of earliest collections of residential buildings in Australia which are still occupied.[372]



Thames Street Cottages. "'Kooringa - the Burra Burra township', one of four scenes engraved for a newspaper page for the "Illustrated London News", 2 December 1848, and later hand-coloured, about the Burra Burra Copper Mine, and based on the 1847 watercolour by S.T. Gill". Source: SLSA B 69728/1.



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

**Timber Dwelling of the 1840's (SAHR 10434)**

Timber cottages were constructed in large numbers in the early years of the town; however, few remain. It is believed that the Timber Dwelling of the 1840's (SAHR 10434) was originally only two rooms. It was built by SAMA around 1849.[373] The other two masonry rooms at the rear were added at a later date. The dwelling was built on Allotment 104 and rented by SAMA to P. Woodberry in September 1849 for £3 per year. The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that although the majority of houses in the township were stone, there were also 11 paling houses, as well as "Wattle and dab" houses, "Board" houses, "Pug" houses and brick houses.[374] Thus, timber dwellings were still evident in the town even into the 1870s.

In 1914, when the cottage was offered for sale by SAMA, it was described as a weatherboard and stone cottage of four rooms.[375] Thus the extension to the side of the lean-to was added after 1914. The cottage is believed to be an early example of the use of imported, sawn softwoods in South Australia applied to cladding and framing, which is not prefabricated. It is also reportedly an early example of timber dwelling construction based on English tradition.[376]



Dwelling [1840s timber] Allotment 104, shown on Kooringa Map, 1849. Source: State Library of South Australia Map C 42.
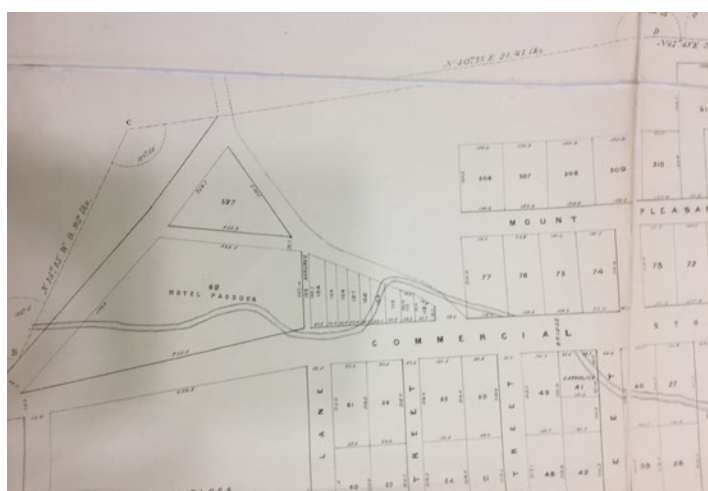


Allotment 104, c.1860-70. Source: SLSA Map C 316.



Allotment 104 shown in colour for sale. Source: SLSA Map C40, 1914.

**Dwellings (Paxton Square Cottages) (SAHR 10159)**

The Paxton Square cottages were built for William Paxton, Hindley Street chemist and SAMA shareholder and Director. They were constructed on SAMA land in the company town of Kooringa and were built by "Cornish masons for Cornish Miners".[377] Once completed, the cottages were rented to the miners and their families working at the Burra Mine. The Paxton Square cottages were a significant development in the town.

The "complex of 33 cottages, in three terraces around Paxton Square, is one of Australia's finest examples of company housing. The attached two-, three- and four-roomed cottages were constructed by Cornish masons for the South Australian Mining Association, to encourage the mining families to leave their dugouts along Burra Creek. In 1849, the first row of 14 cottages, facing Burra Creek, were constructed by builder William Henderson, with all 33 completed by 1851".[378] By 1850, SAMA had "built hundreds of two and sometimes three-roomed cottages in Kooringa, as well as the cottages of Paxton Square, for leasing to men employed in the Burra Mine. Rental of the cottages was 3 shillings ... a week out of an average weekly pay of £1.5 shillings ... Many miners, however, left Kooringa to live in the townships just outside the company section".[379]

In 1873, the wooden shingles were covered with corrugated iron. "Hon. John Lewis bought the rows in 1913 as housing for the deserving ... poor".[380] The verandahs to the street frontages were added in 1940, while timber framed bathrooms were added to the rear in the 1980s when they were converted to tourist accommodation. The Paxton Square Cottages were "among the first company housing in Australia" in one of Australia's first mining towns.[381]


Part of S.T.Gill's "Kooringa, the Burra Burra Township, from the Quarry at the rear of the P.C.C. Smelting Works", showing Paxton square cottages and Upper Thames Street cottages, c.1850. Source: AGSA.


First stage of Paxton Square Cottages, undated. Source: State Library of South Australia Map C 14.


Paxton Square Cottages c.1933. Source: State Library of South Australia (SLSA) B 8630

# 4.4. Residential - Private Housing

**Background**

The critical demand for housing was also evident in privately developed housing as opposed to the SAMA company housing. Privately developed housing was established in townships other than Kooringa, namely Redruth, Aberdeen, New Aberdeen, Llwchwr, and Hampton. However, the desperate need for housing is perhaps best illustrated by the unusual Miners' Dugouts located in the creek beds close to the Burra Burra Mine.

**Dugouts**

The dugouts were some of the earliest housing associated with the Mine. In 1847, it was reported that "on all sides around the mine are huts likewise occupied by miners. The miners have also, for want of houses, excavated little caverns, divided into apartments, in the steep banks of the creek. Many of these, which we visited, are fitted up in the neatest style imaginable, and form cool and comfortable habitations. They extend for about three miles on both sides of the creek, and contain a population of 400 or 500 persons".[382]

Interestingly, the South Australian census of 1851 illustrates a "total population of 4,403 men, women and children living in the townships of the Burra Burra Mine. Women and children accounted for 2,578 of this total. Another 378 were men employed as smelters, sawyers and carriers by the smelting works. The mine employed a work-force of 1,003 men and boys. In the townships, mostly in Kooringa, a further 449 men were listed as shopkeepers, innkeepers, tradesmen or professional men. A scattered population of 63 were engaged as agricultural or pastoral workers in the district of Burra. ... Among the 4,403 inhabitants of 'The Burra Creek Special Survey' and its townships, a total of 1,800 men, women and children are shown as living in 'the portion of the Burra Creek, adjoining Kooringa, Redruth and Aberdeen'. The compiler of the census found it necessary to explain in a footnote, 'There are no houses, the dwellings being excavated in the banks of the Burra creek'".[383]

The thousands of people who lived in the Burra Burra Creek dugouts were mainly miners and their families. In 1851, a visitor to Burra described the dugouts; "[a] picturesque feature struck upon my astonished gaze ... the "creek habitations" which are nothing more or less than excavations of a small size in the banks of a rivulet, at the present time supplied with water from the engines at the mine. As far as the eye can reach down the creek, these human wombat holes are to be seen – one long hole for a door, and a small square or round one for a window; a perfect street with above 1500 residents. Such is the force of habit, that the miner never thought of building a house but mining one, and accordingly the Burra Creek is riddled like a honeycomb".[384]

The inhabitants were often referred to as "creek dwellers"[385] or living on "creek street".[386] The interior of the dugout was described as follows: "we descended to the creek, and entered one of the holes; it was very clean and neat, in one part even an attempt at finery; very cool, but very close, as I was informed, at night, there being no ventilation. They are whitewashed inside, and sometimes outside, the most of them having paling verandahs, lean-tos etc. The chimneys are merely holes opening from the footpath above, with a tub on a few clods put around. ... The great secret of their selecting such a place is its being rent-free".[387] The popularity of this type of housing was due to shortages in conventional housing, high rents charged by the SAMA for company housing and their failure to provide freehold land.[388]

However, reports on the numbers of creek-dwellers varied. Also, in 1851, it was noted that the "population of Kooringa, Aberdeen, and Redruth is about 4,300 persons, of whom, it appears 2,600 inhabit the creek – an immense majority ... The closely packed portion of the inhabitants occupying the creek is, according to medical authority of experience, unhealthy, as infantile diseases are greatly prevalent ... The rise of a heavy flood in the creek, from winter rains, would submerge this whole subterranean city".[389]

There were many descriptions published of the dugout settlement, each providing an insight into the construction and appearance. In 1851, it was reported as follows: "[a]long the channel of the creek runs a thin stream of water, and on each bank is a line of little detached cottages or sheds, each of which has been excavated out of the sides of the creek, and faced with weather boards. The inside of each house has a fire-place and a chimney or flue, which, making its exit out of the surface ground, is then capped either by a small beer barrel or mound of earth with a hole in the centre, as a substitute for the ordinary chimney pot. In these strange dwelling-places, which take up two miles of the creek on each side, the great bulk of the miners and their families reside, being permitted by the Burra Company to do so rent free. A busy hum pervades the creek, and swarms of children are at every door; here and there a knot of gossips is collected, and every now and then the scene is diversified by the chatter of a tame magpie, the barking of quarrelsome curs, the grunting of swine, the neighing of horses stabled alongside the huts, or the fluttering of red shirts and other apparel drying in the open air. Two minutes walk brings you to the mine".[390]

These creek habitations drew much interest from the public during the time and is reflected in the numerous newspaper reports. In 1851, it was also reported that "[t]wo other villages, or rather collections of dwellings, called Aberdeen and Redruth, also extend along the creek in question. This creek, with its habitations in, not on, the banks both sides, forms one of the singular spectacles ever beheld. The miners, in the true spirit of burrowing, to which their habits incline them, have excavated dwellings like rabbit-holes, in lines, as thickly under the banks of the creek as they could be placed; a foot or two only intervening between the several habitations, sometimes merely a mud bank as division wall. Some have one room, others more; all have one or more chimneys, formed on the bank top, and in most cases of barrels cemented in mud; some are of mud only, a few of wood formed square, and a very few of brick. All these chimneys rise up at intervals like tree stumps in a roadway, and the public path runs along the banks and over the housetops. Sometimes these chimneys protrude before you only just in time to be avoided as you step aside, while their reeking smoke rises into your nostrils. These rabbit-burrows are also variously constructed; some have mere holes for doors or windows; some have substantial doors and glazed sashes; a few have shingled verandahs, and many are whitewashed outside; while some, in addition, are papered and carpeted within. ... The sight of the busy industry of the inhabitants of the creek. On each side of the saffron-coloured stream from the mine constantly pouring down, is very curious; washing and hanging out clothes, scouring pots, and other domestic occupations being visible at every frontage".[391]

However, living in a creek bed had its perils. In 1851, there was a series of destructive floods which tore through the Burra Burra Creek and devastated the dugouts. Fortunately, the number of fatalities was low with only one death being recorded. In fact, there were more deaths caused by the unsanitary conditions of the creek including the outbreak of diseases such as typhoid fever, smallpox, and typhus resulting in 153 fatalities in 1851.[392] SAMA's Henry Ayers' reaction to the floods was described as "ruthless",[393] he was only concerned with the impact on the Mine however Captain Roach, the SAMA sole superintendent of the Mine, was noted for his compassion. The floods of 1851 largely discouraged people from continuing to live in the creek. In addition, SAMA began to refuse to hire those living in the creek.[394] On 9 June 1851, Henry Ayers gave notice that "from and after the first day of December next, no person residing in the caverns of the Burra Creek will be employed by the South Australian Mining Association".[395] The other major factor for people leaving the dugouts, was the discovery of gold near Bathurst in June 1851 which led to vacancies in the Burra Burra Mine townships. However, the practice of living in dugouts did continue until c.1859-60. By 1860, the "dugouts were virtually deserted".[396]

### Former Miner's Dugouts (SAHR 10050)

Two of the remaining dugouts in a gully on the east side of the creek then owned by Charles Grow who had been in one of them in 1858 and who had maintained them for sentimental reasons, became an important part of the 'Back to Burra' celebrations of 1925.[397] They subsequently were frequently inspected by visitors to the town. The National Trust took over the management of the site in 1969 and took ownership of them. They were apparently largely reconstructed in 1971 by Burra Council and the National Trust.[398]

### Former Dugout Sites (SAHR 11187)

By 1925, the only largely intact dugouts were those in the gully east of the creek on the property of Charles Grow. Reports of that time did suggest that others were likely still present but that due to the collapse of their fronts, they were difficult to identify.



"Burra Creek" 1850 by W.A. Cawthorne. Source: Auhl, Ian, The Story of the 'Monster Mine': *The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), p125.



Dugouts, 1925. Source: The Burra History Group Inc.

### Redruth

In response to the SAMA's "monopoly and its refusal to grant freehold in Kooringa",[399] the South Australian Government laid out its our township named Redruth in 1849 near the original special survey. The town was named after Redruth in Cornwall. Redruth became one of the Mine's most important towns. "To the delight of the Cornish miners, the new township was named Redruth and every one of its streets was given the name of a Cornish mining town. Cornishmen who had recently left homes or families in such towns such as Truro, Mevagessey, Illogan, Crowan, St Dye, Ludgvan; or Helston, St Just, Tregony, Trembeth, Morvah, Lelant, Sancreed, Fore or St Agnes, might now build homes in streets of the same name".[400]

The first allotments were auctioned on 29 August 1849.[401] Redruth had been designed to appeal to miners and with low reserve prices for the allotments "it seemed that miners, especially those living in dug-outs in the Burra Creek, could now acquire a piece of land and begin building a house of their own".[402] Unfortunately, the SAMA undermined the Government's plan: "[a]ngered by the decision of the Governor to grant the survey of a township adjoining their boundary-line, the Burra Directors deputed their ever-obliging Secretary, Henry Ayers and one Director, the ubiquitous 'Paddy' Kingston, to attend the sale of the township and bid against all-comers. ... The result of the sale was a triumph for monopoly and a travesty of justice for the miners. ... Until the mid-1850s, the one ingredient lacking in the South Australian Redruth with its Cornish-named streets, was the presence of Cornishmen".[403] SAMA's Secretary Henry Ayers tried to monopolise the sales and purchased many of the allotments. Indeed, the SAMA bought 77 out of a total of 120 allotments and "left but few for private individuals to bid for".[404]

### Attached Dwellings, 8 - 18 Truro Street ('Tiver's Row') (formerly Redruth) (SAHR 10203/10032/10446/10037/10038/10039)

Redruth's early privately built housing consisted of attached row housing. James Tiver (1829-1909) arrived in South Australia in 1854 from Bristol (not Cornwall).[405] He was a mason who worked at the Burra Smelting Works. In 1856, Tiver built six stone, double fronted, row cottages in Redruth. He constructed the first (middle house) for his family and the others for Redruth miners.

They were designed with four interconnected rooms with no passage and are stepped to follow the gradient of the street and are built on-the-street. "Following the traditional pattern of Cornish villages, the front wall was set on the footpath and the building was without a verandah. Its siting and internal layout offered utmost economy in the use of land and utilisation of floor space ... Without apparent site limitations, the size of the dwellings must have been determined either by the cost of building or traditional Cornish space standards".[406]

In 1987, the row of cottages was bought by Barry and Maureen Wright[407] with a vision to restore and adapt them for tourist accommodation. Work commenced in 1991 under the guidance of Flightpath Architects and included the addition of an amenities block to the rear of each cottage.[408] The row of cottages was contained on a single land title until 2009 when 7 allotments were created under a community title such that each row house was on its own allotment and the balance of land to the rear and to the eastern end owned by the community.[409]

### 9-13 Truro Street (formerly Redruth) (SAHR 10033/10034/10036)

In c.1850s, a row of three attached "early Cornish-style dwellings"[410] were constructed at 9-13 Truro Street, Redruth. They are stepped to follow the gradient of the street and are built on-the-street boundary. The cottages were constructed at different times, although the dates of completion of each stage are unknown. The staging is evident in the change of masonry detailing from stone (11, 13) to brick quoins. 9 Truro Street appears to be the last in the group. In 1960, 9 Truro Street was brought under the Real Property Act and the resulting new title included Part Lot 90 (on which the dwelling sits) and a larger Part Lot 89 to the west. This configuration of land ownership continues today.[411]

In 1960, 11 Truro Street was brought under the Real Property Act and the resulting title included Part Lot 90 (on which the dwelling sits) and a larger Part Lot 89 to the rear through to the street behind.[412] This configuration of land ownership continues today.

The two attached cottages at 13 Truro Street appear to be the earliest in the group. In 1949 the land was brought under the Real Property Act and the resulting title was Part Lot 90.[413]

**Hampton Township Precinct (SAHR 10359)**

In 1857, the township of Hampton was surveyed and laid out by Thomas William Powell; a "gentleman" of, and "postmaster"[414] at, Kooringa. Named after a local assayer who worked at the Smelting Works; Edward Hampton a Township Plan (No. 293) was deposited at the General Registry Office in 1857 with this having approximately 56 allotments.[415] In 1858, Powell began selling allotments in Hampton.

In the "Bailliere's S.A. Gazetteer and Road Guide of 1866", Hampton was described as a "small mining village lying 1½ miles N.E. of Kooringa and inhabited by copper miners and a few small farmers. There are about 30 miners' dwellings in the village, a Bible Christian chapel and an excellent stone quarry".[416] During the 1860s and 1870s the settlement was "bustling" with activity. The first assessment book, 1 July 1872 to 30 June 1873, records that Hampton had 22 buildings, mainly stone houses consisting of 2-4 rooms. This "perhaps indicates that Hampton reached its peak as a mining settlement in the 1860s … [and] as the production of the Burra Mine itself declined during the 1870s, … Hampton … slowly declined".[417] In 1875, Hampton had 24 houses in comparison to Redruth and Aberdeen which had 63 houses and 39 houses respectively.[418] However, the average value of these houses was much lower than those in Redruth and Aberdeen suggesting that the "majority of dwellings in Hampton were of 2-3 rooms, in other words, simple miners cottages".[419]

Following the closure of the mine, in 1877, the population which had "reached its peak",[420] soon decreased. "By 1885, no one in the township earned a living from mining, the majority of landowners describing themselves either as tradesmen or widows".[421] By 1892, some of the houses were recorded as uninhabitable or were ruins. The town was completed abandoned by the mid-1960s.
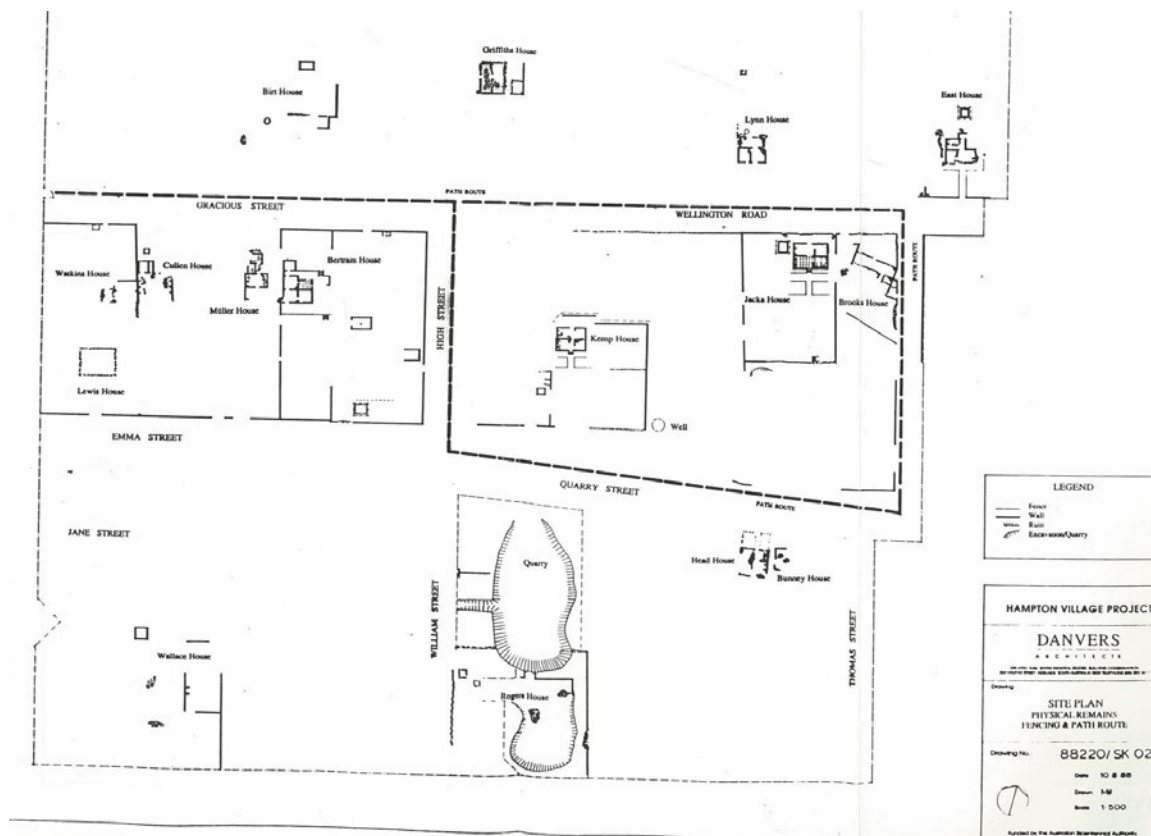


Hampton Village Conservation Study, Danvers Architects (1988)

# 4.5. Ecclesiastical

### Background

Following the establishment of the Mine, the population swelled, and the need for places of worship soon became a priority. The Cornish brought their Methodist religion to Burra. It was the predominant Christian denomination in Cornwall and few areas of the United Kingdom were so overwhelmingly identified with the Methodist movement.[422] In Burra, the "building of so many churches and chapels imposed a heavy burden upon the new mining community. It was a burden, however, which was willingly enough met, especially by Burra Cornishmen. The South Australian Mining Association, wishing to retain the main churches within their township of Kooringa, was generous in making grants of land available to any denomination but, often on leasehold only and always retaining mineral rights".[423]

The "churches with their day-schools and Sunday-schools, their tea meetings and temperance meetings and their annual picnics, undoubtedly provided the first civilizing influences for the isolated mining community. The buildings soon became the main social venues for families of similar race and creed – where Cornish could find Cornish, often from the same mining village; where Welshmen, speaking no English, could meet other Welshmen and be preached to on Sundays in their own Celtic language; and where German families could find comfort in meeting other families of their fatherland".[424] In December 1850, a visitor to Kooringa commented that "it was gratifying to see the strict manner in which the Sabbath was observed; there are, besides the church, chapels belonging to the Wesleyans, Independents, and Primitive Methodists; ... the Roman Catholics have Divine service in a private house".[425] "Sunday observance was more noticeable and apparent in the main townships themselves than it often was on their outskirts. Certainly, nothing on the mine itself moved on Sundays. The only sound came from the regular hiss of steam and thud of the rocker-beam of the pumping-engines controlling the level of water underground".[426]

There were three main branches of Methodism including: the Primitive Methodists; the Bible Christians; and the Wesleyans. The Primitive Methodist Church (1848) (SAHR 10011) was one of Kooringa's earliest churches and was central to the Cornish miners' religious and social life. The church was built on the SAMA's land. The church was rebuilt in 1856. The Bible Christian Chapel (1849) (SAHR 10013) opened in December 1849, for Burra's Bible Christian Methodists, was the first Bible Christian Chapel in the colony (and possibly in Australia). The Kooringa Wesleyan Chapel in Chapel Street was opened in December 1847. Indeed, it was Burra's first church, but it was demolished in 1914 with another built in its place. Other Wesleyan Churches built in Burra included the Redruth Wesleyan Church which was rebuilt in 1874.

There were other religions represented in Burra during the period including the Church of England, Salvation Army, Baptist, Lutheran, and Congregational/Presbyterian. By 1851 "the Burra townships had nine hotels and ten churches, chapels or religious congregations".[427] These included: the "Wesleyan Chapel in Kooringa and another in Redruth; a Church of England in Kooringa and the beginnings of another in Redruth; a Bible Christian Chapel in Kooringa; a Primitive Methodist Chapel and a new Baptist and Congregational 'Union Church' in Kooringa; the beginnings of a German Chapel in Redruth, as well as cottages in use by Roman Catholics and Presbyterians for divine service".[428] Following the exodus to the Victorian goldfields, the Congregationalists and Baptists ceased services.[429] The Church of England began services as early as c.1847, however it wasn't until 1879 when the St Mary's Anglican Church was completed and 1893 when the Church Hall was opened (SAHR 10018 & 10022). The Burra Salvation Army Citadel (SAHR 10160) was opened in 1885.



| Denomination | Allotment No. | Purchase |
|---|---|---|
| Wesleyans | 23, 4 | Donated |
| Church of England | 52, 53 | Donated |
| Bible Christians | Cnr. Paxton Square | Donated |
| | 511 | Donated |
| Sisters of St Joseph | 41 | Donated |
| Baptists | 295 | Leased |
| Independents | 301 | Leased |
| Primitive Methodists | 84, 287 | Donated |
| Wesleyans | 47, 43 | Sold |
| Salvation Army | 386 | Sold |
| Roman Catholic | | Donated |
| Church of England | | Donated |

"Allotments leased, sold or donated to various church bodies by the S.A.M.A. in its private township of Kooringa between 1845 and 1904". Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p296.

### Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) 9 Upper Thames Street (SAHR 10011)

The Primitive Methodists belonged "to a breakaway movement 'originating in Staffordshire in 1811 as a revivalist movement which incurred the displeasure of the Wesleyans'".[430] The "birthplace of Australian Primitive Methodism was the city of Adelaide. Mr. John Wiltshire, the father of Primitive Methodism in Australia … preached the first sermon ever delivered in connection with the Primitive Methodist Church in these southern lands. This was in the open air, at Light Square, Adelaide, on Sunday, July 26, 1840. It was also at his house that the first Primitive Methodist Society was formed this side of the equator".[431] Wiltshire had arrived in South Australia in June 1840 from England. "In 1848, … [the] young Adelaide saddler and lay preacher, John Wiltshire, removed to Burra to seek out those of the Primitive Methodist faith".[432]

The Primitive Methodist Church is one of Kooringa's earliest churches. In 1847, Allotments 84 and 287 were leased to the Primitive Methodist Church by SAMA for a term of 999 years. However, some sources stated that these allotments were donated by SAMA.[433] In October 1849, Wiltshire wrote that "'[w]e formed a society … and, as soon as possible, erected the standard of the cross in the open air which we followed up by prayer meetings etc. in a private house.' Within a year of his arrival, 'a stone chapel, twenty feet by thirty feet, walls twelve feet high to the ceiling, eighteen inches thick, having two good bold sash windows back and front' had been completed by the twenty members at a cost 'including an excellent cedar pulpit and sufficient forms', of £88".[434] Thus, by c.1849-50, the Primitive Methodist Church was completed on Allotment 84 in Upper Thames Street, Kooringa.[435]

However, the church was "abandoned when almost all the men went to the Victorian Goldrush. Upon their return it was re-opened".[436] It was reported that the "Primitive Methodist Church had been closed for some time when the Rev. J.G. Wright came from England to resuscitate the cause".[437]

In 1855, Primitive Methodist Reverend John Gibbon Wright had been "chosen by the London Mission Committee of the [Primitive Methodist] church for work in South Australia".[438] He arrived in South Australia on 4 January 1856. "His first circuit here was the Burra, where he spent three successful years … He [purportedly] found no members belonging to the Primitive Methodist Church in the Burra circuit; but when he left he was able to hand over 166 to the care of his successor".[439] Later he had a second circuit in Kooringa. In 1855, Wright, wrote "[w]e are still going on in the work of enlightening, raising and evangelizing poor fallen humanity. Of late, we have had many brought to the Cross who have found redemption … and some of them were the most deeply sunk; dark and revolting was their character".[440]

Wright "arrived in Burra in January of 1856 to re-open the derelict Primitive Methodist Chapel".[441] In May 1856, the Primitive Methodists resolved to rebuild the chapel due to it being too small to hold its congregation.[442] The rebuilt chapel was opened on Sunday 24 August 1856.[443] It was reported that the "chapel is neat in appearance, capable of seating 300 persons. A magnificent Bible has been presented to the chapel by Captain Roach".[444] Although, "Wright's magnificent voice was, itself, the main contribution to the 'revival'. In Wright's time the size of the chapel was doubled and a new chapel opened at Redruth. Much of the labour was donated by Burra miners and draymen".[445] Wright left in c.1858.[446] Church services were well attended. In 1858, at the Chapel's second anniversary service, 400 people were present.[447]

In c.1879-80, extensive modifications to remodel the building including the front facade were carried out by Sara & Dunstan for £400.[448] It was re-opened on 27 June 1880.[449] In 1883, it was intended that the rear be extended by 15 feet by the contractor I.W. Goss.[450] The chapel was re-opened on 20 January 1884 with 18 feet having been added to its length.[451]

In 1900, the Wesleyans, the Bible Christians, and the Primitive Methodists, joined to form the Methodist Union. "With the last day, which was the last Sunday, in the year 1899 the Wesleyan, Bible Christian, and Primitive Methodist bodies ceased to exist as separate churches, having united to form what will for the future be known as the Methodist Church of South Australia".[452] The final Kooringa church service was held on 25 February 1900, "after which they were transferred to the former Wesleyan Church in Chapel Street".[453] In the same year, the Primitive Methodist Chapel and Allotment 84 were sold to Kooringa Masonic Lodge No. 6.[454] In 1904, it was reported that there "were some years ago no less than four Methodist churches in the town, but since the Methodist union all but two, one at Kooringa and one at Redruth, have been closed, while the old Primitive Methodist Church in Kooringa has been bought, and is now used, by the Masonic Order as a Masonic Hall, and is often well filled with members from all parts of the district".[455] The "extension on the south side was added by the lodge in 1935 as a supper room".[456] In 1935, a banquet was held in the Kooringa Lodge's supper room after their annual installation of their Masonic officers.[457] In 2003, the "building was sold to become a private dwelling".[458]
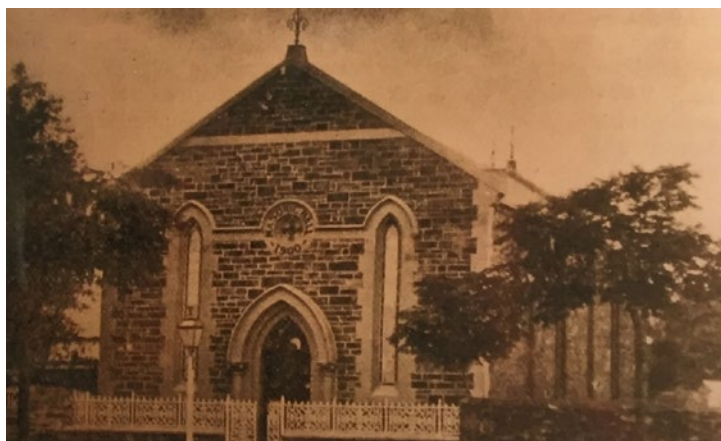
Kooringa Primitive Methodist Church, undated: Source: The Burra History Group Inc.



Extract from 'Rough plan and sketch of the township of Kooringa [cartographic material]: the property of the South Australian Mining Association' with the site of the original chapel (now demolished) indicated, 1849. SLSA B-1930386.

## Office (former Burra Bible Christian Chapel) (SAHR 10013)

In England, Methodism had "undergone a series of changes during the early 1800s, including the appearance of Bible Christian Methodists, predominantly in the villages of East Cornwall and North Devon. It is not surprising then, that many of the Cornish miners who came to Burra were of this faith, and that Bible Christian work in South Australia began in Burra".[459] The "Bible Christian Church had begun in England in 1815 as a breakaway movement from the Wesleyan Church. In Cornwall, members had been known as Bryanites after their Cornish founder, William O'Bryan".[460]

The "Bible Christian Church had its Australian beginnings in Burra with the arrival of James Blatchford, a Cornish miner and lay preacher".[461] Blatchford arrived in South Australia in September 1847 and travelled to the Burra Burra Mine. "Prayer meetings were held in his dugout in Welsh Creek and services held under the gum trees which lined Burra Creek. By 1849, the zealous Blatchford and three other lay preachers – John Halse and John and Thomas Pellew – had formed a society of forty-nine members and had raised £50. The group of Bible Christians applied to the Mining Association for a piece of land and in November 1849, Burslem, the surveyor at the mine"[462] surveyed the land for a Chapel.

By March 1850, the Bible Christian Chapel was completed on the south-west corner of Paxton Square on land set aside by the SAMA. It was the first Bible Christian Chapel built in South Australia and perhaps the first of "more than 500 Bible Christian chapels in Australia".[463] In 1850, two missionaries, James Way (father of Samuel Way) and James Rowe, were sent to South Australia from England. Rowe travelled to Burra and became the Reverend at the Bible Christian Chapel. In 1852, a ""manse" was attached to the Chapel for Rowe and his family".[464] This was later demolished in 1971.

During the c.1851-52 Victorian gold rush, the congregation was diminished, however, when the miners returned from Victoria, the congregation prospered. In 1853, it was reported that the chapel and mission were no longer in debt following a successful anniversary celebration which raised £27 3s 5d.[465] In 1853, the Bible Christians' Missionary held their meeting at the "Bible Christian Chapel, Burra Burra", where it was noted that Rowe preached one of the sermons alongside other visiting preachers.[466] In June 1855, the Bible Christians at Kooringa held their Sunday School anniversary. It was reported that the "number of scholars in the school is 146 and the number of teachers 26".[467] In c. 1856, the chapel was enlarged.[468]

In 1859, Reverend James Way became the Superintendent and "a religious revival resulted in 300 converts and over 500 children attending Sunday School".[469] It was long remembered that when "Rev. Way took charge ... a most extraordinary revival took place, bringing nearly 300 members into the church: it was then decided to build ... [a new] church".[470] In 1859, it was reported that the "new Bible Christian Chapel, which has been begun to be built to accommodate the large number who crowd the old chapel, is progressing rapidly under the superintendence of Mr. Burgoyne, the contractor".[471] On 24 June 1860, the new Bible Christian Chapel at Kooringa was opened. It was reported that the "building is exceedingly handsome, and may be termed a magnificent fabric. It is capable of accommodating 600 or 700 people conveniently, without gallery. There were three sermons preached. Those in the morning and afternoon by the Rev. Mr. Allen; that in the evening by the minister of the chapel – Rev. Mr. Way".[472] Indeed, by the "1860s, following the revival meetings of the Rev. James Way, the Bible Christians in Kooringa could boast of having the largest congregation and the largest Sunday School in the Burra townships".[473]

In 1860, the "Presbyterians were using the original Bible Christian Chapel in Paxton Square".[474] However, other reports claim that the original Chapel was also used for meetings and as a Sunday School. Following the formation of the Methodist Union in 1900, the Chapel was closed, and the building was used as a shop and later as a saddlery, mechanics shop and storehouse.

Following the establishment of the Methodist Union, the second Bible Christian Church was "practically abandoned".[475] In January 1909, it was reported that the second church was in the process of being demolished due to its poor condition. The gallery and the floor of the church had been sold off several years earlier.[476] Dynamite was used to explode the building and "[o]ne wall fell and the heavy slate roof collapsed. The rest of the building, however, remained almost intact and it was not until 1930 that the building was finally demolished by hand".[477] The original Bible Christian Chapel still stands today at Paxton Square.
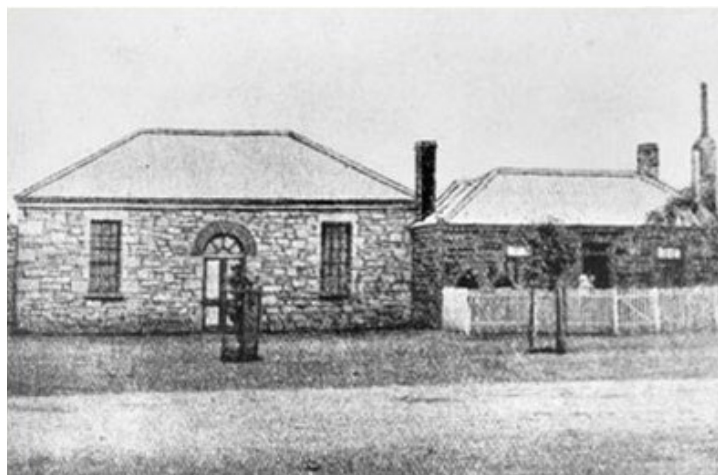


Bible Christian Chapel, undated. Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p298.



Bible Christian Chapel. Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p298.



Kooringa, 1872, showing the Bible Christian Chapel enlarged. Source: Courtesy of the Burra History Group.

**Redruth Wesleyan Church**

In 1838, the Wesleyan Society of South Australia was formed and its first chapel was opened in March 1838 in Hindley Street.[478] The "first religious service"[479] was held in Burra by the Wesleyans in 1846 at the home of a local preacher, John Chapman. Reverend Daniel Draper "arrived to lay the foundation stone of the first Wesleyan Chapel in Kooringa early in 1847".[480] The Wesleyans were one of the main religious groups in Burra, as demonstrated by the 1855 census, which records that the "greatest number of Wesleyans returned in any one district [in South Australia was] ... 795, in the District of Burra".[481]

In c. 1852, construction commenced on the Wesleyan Chapel in the newly established town of Redruth.[482] However, some sources state that the Wesleyans opened their first chapel in Redruth as early as 1851.[483] This building had an inauspicious start due to the loss of population caused by the Victorian gold rushes, and although it appears to have been completed, its roof and fittings were removed in 1854 to construct another church near Clare. It was later rebuilt and was apparently in use by 1857.[484] "A Quarterly Meeting Minute Book shows that by June 1851 the church had no members left and its income was five shillings and four pence. Three years later the church was dismantled and 'the roof, floor, windows, pulpit and seats were used in the Spring Farm Church'".[485] By 1860, "the dismantled Redruth Wesleyan Chapel [had been] restored".[486]

This early Church was completely replaced in c.1873-74 by the current church constructed at a cost of £600, for which the construction of the masonry and plastering was the responsibility of James Tiver. It was designed by the Adelaide architect Rowland Rees, who at that time was also the local Member of Parliament in the South Australian House of Assembly.[487]

The completed building, which internally was 42 x 24 feet and could seat 200, was opened on 20 September 1874.[488] An important part of Wesleyan Church was the Sunday School, and for this purpose an addition was soon erected to the rear of the building soon after its completion. Due however to a growing congregation a decision was made in 1879 to remove the wall separating these sections to provide an additional 100 seats.[489] The importance of the Sunday School can be seen in the substantial adjoining building erected fifty years after the completion of the church in 1924.[490]

The Redruth church was closed as a centre for regular worship in 1970 and the building lay vacant until 2011 when it was bought for conversion to bed and breakfast style accommodation.[491] The adaptation to a dwelling included the installation of a kitchen to the eastern end of the transept and the conversion of the former vestry to amenities.
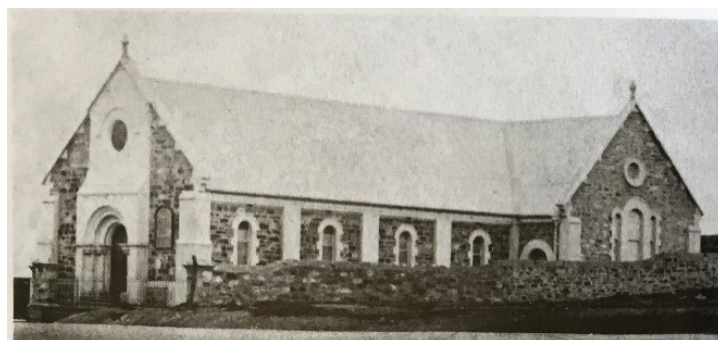


Redruth Wesleyan Church, undated. Source: The Burra History Group Inc
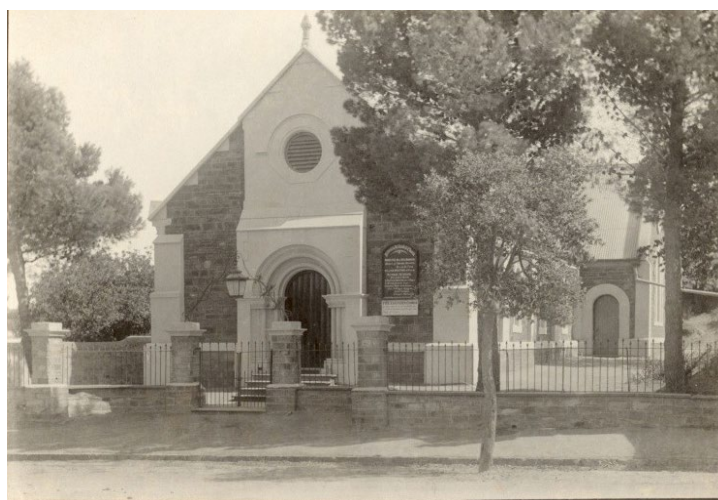


Redruth Wesleyan Church. Source: Courtesy of Burra History Group

**St Mary's Anglican Church & Hall (SAHR 10018 & 10022)**
The first Church of England services were held in Kangaroo Street in c.1847. Indeed, "[w]hen the Rev. John Charles Bagshaw ... arrived in Kooringa in February of 1848, he found himself the incumbent of a wooden slab building in Kangaroo Street built to serve as both schoolroom and church. His parishioners had also provided the rector with a parsonage constructed of brick and slab".[492] "Bagshaw's salary (and that of his successor, Pollitt) was largely met by the Patent Copper Company which had engaged Bagshaw in England to act as chaplain at their smelting works in Burra".[493]

In February 1848, the SAMA donated a site on the corner of Ware and Church Streets (Allotment No. 52 and 53) to the Church of England for the purposes of a school. The SAMA donated various sites in Kooringa to many different denominations. The building, which became known as the first Church of St Mary, was completed mid-1849 and was used both as a school and temporarily as a church, being reported as being able to hold 250 parishioners. The building was funded by subscription (mainly subscribers in Adelaide) and a Government Grant. In 1849, W. Paxton donated a clock to the building.[494]

In 1879, a new St Mary's Church was constructed as by that time the original church had become badly dilapidated, poorly sited, and too small for the congregation. The SAMA donated the site, which was one acre, for the new church.[495] The memorial stone was laid on 3 July 1879 by the Lord Bishop of Adelaide, Reverend Short and the Church was opened on 18 January 1880. The new Church was built by the Burra firm Sara and Dunstan at a cost of £4000 and designed to seat 350 by architect William McLagan, who came to live in Burra from Melbourne. Two coloured glass windows crafted by Edward Brooks, one of South Australia's early stained-glass makers, were relocated into the new building from the earlier church.[496] The building also contains a stained glass window installed in 1895 which depicts the Burra Mine in the background of a religious scene.[497] The first St Marys building was demolished in the later 1880s.

The importance of the congregation can be seen in the election of G.S. Kingston, who was an adherent of the Church of England and "was supported in Kooringa by Rev. James Pollitt and practically voted in [as the member for the District of Burra] by Pollitt's parishioners".[498] One of the Trustees of the Church was Captain Isaac Killicoat.[499] Killicoat was a Cornish mine manager who worked at the renowned Tresavean copper mine in Cornwall.[500] In c.1848-54, he was appointed Mine Agent at Burra for the English and Australian Copper Company (formerly the Patent Copper Company).[501] Killicoat worked at the Burra Smelts and superintended the purchase of ore from the SAMA for twenty years.[502]

The Church Hall was originally built as a schoolroom, the foundation stone being laid on 12 July 1893 and was officially opened on 24 September of the same year.[503]
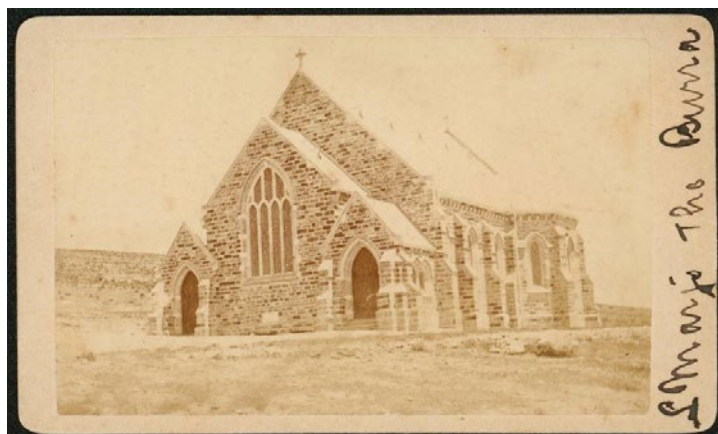

St Mary's Church, c.1880. Source: State Library of South Australia (SLSA) B18896
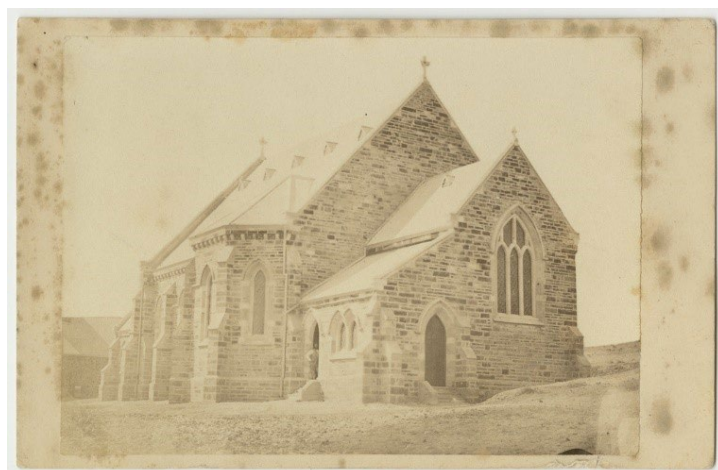

St Mary's Church, c.1880. Source: SLSA SRG 94/10/18/105

### Former Burra Salvation Army Citadel (SAHR 10160)

The Christian Revival Association (later the Christian Mission, then the Salvation Army) was founded in 1865 in London by William Booth. In 1880, the first Salvation Army Corps in Australia was founded in Adelaide. On 19 February 1884, the "War Cry" of the Salvation Army was heard for the first time in Burra.[504] Large crowds gathered at the square nightly to attend their open-air meetings. On 22 February 1884, it was reported that the Salvation Army had secured land in Burra on which they intended to build a barracks.[505] On 9 January 1885, tenders were invited for the building of the Salvation Army Barracks at Kooringa.[506]

Local builders Sara and Dunstan were awarded the contract. On Wednesday 11 February 1885, the foundation stone for the new barracks was laid by J. Dunstan, Mayor of Burra.[507] A large barracks, known as the Burra Salvation Army Citadel, was opened on Wednesday 15 April 1885.[508]

The contract for Messrs. Sara and Dunstan for the new barracks was £582 0s 9d and the "land having been the gift of the Wesleyans".[509] It was reported that the "barrack is situated in Kingston-street in a commanding position, and is a large and substantial if plain building. The room is 60ft. by 45ft. inside and 18ft. high, the whole of the work inside and out including the plastering and ceiling appears to be thoroughly good. No money has been wasted in ornament but the effort evidently has been to secure as much accommodation as possible for the money. The acoustic properties seem good and ventilation is sufficient. One matter should, however, be at once attended to, and that is the doors. With such a crowd as was in place on Wednesday [opening day], the bursting of a lamp or any other accident would produce a panic the consequence of which would be terrible. There are three doors, and all open the people would soon get out, but the doors slide, and if there were any pressure against them would become quite immovable".[510] Currently, the Hall is used as a private residence.
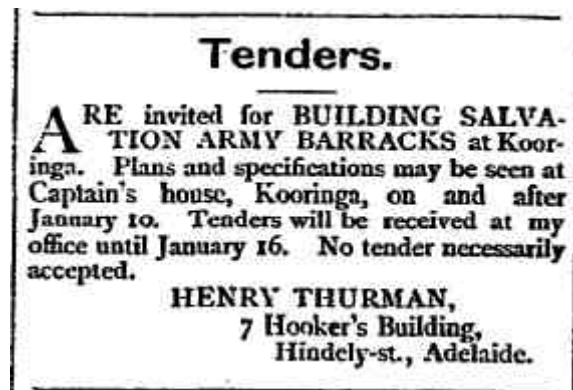


"Advertising", *Burra Record*, 9 January 1885, p2.



Salvation Army Citadel, 1975. Source: https://collections.slsa.sa.gov.au/resource/B+31609
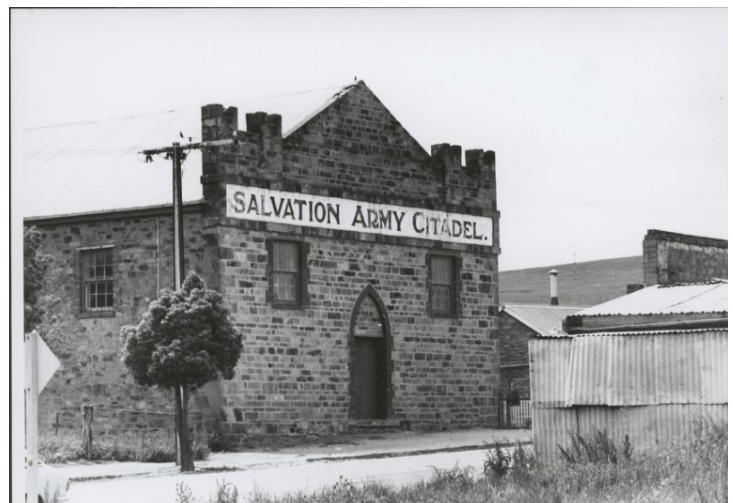
## 4.6. Civic

The SAMA's approach to the civic and commercial development of Kooringa was restrictive. Indeed, "every resident of Kooringa was a tenant of the company, paying rent. No freehold was given to any householder or shopkeeper in the company township – only leasehold and then only for a limited term. Even when grants of land were made for schools, churches, and public buildings, it was for a limited period and mineral rights were reserved to the company. The South Australian government itself was obliged to rent a company building for its first police station and its first courthouse. It was only towards the end of the lifetime of the Burra Burra Mine that … [SAMA] began to grant freehold in Kooringa. It was not until 1876, one year before the mine closed, that the Burra townships were able to form a Corporation of Burra".[511]

Kooringa's early civic development is defined by several key buildings including the Burra Burra Miners' and Mechanics' Institute (1874) (SAHR 10403), the Commercial Street Stone Walls which are likely to be the early Commercial Street stone bridge (1863) (SAHR 10435 and SAHR 10436), and the Cemetery (c.1850) (SAHR 10432) which sits outside of town. Civic development also occurred in the neighbouring town of Redruth and was defined by government buildings such as the Police Stables (1847), Police Cells, Stables and Stable Yard (c.1872-73), and Police Station (1879) (SAHR 10014), Gaol (1856) (SAHR 10042), and Courthouse (1857) (SAHR 10027).

**Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) (SAHR 10403)**

Institutes had been formed in the colony from the late 1850s to provide further education and a local public library to communities. The Burra Burra Miners and Mechanics Institute was built in 1857 on Allotment 83, owned by the SAMA. Comprised of a single room it opened on 27 August 1857.[512]

In 1857, it was reported that in the "short space of sixteen months from the date of the first meeting sufficient funds have been raised to warrant the erection of the building in which we are this evening assembled and in which your Committee hope to see large numbers of the inhabitants daily assembled for the purpose of improving their minds and advancing their social position, by the acquirement of that information which shall prove most useful to them, and which, by the help of such institutes, is brought within reach of every man".[513] The "contractors for the building will have to be paid the sum of £920, leaving the sum of £480 to pay for a few extras, to furnish the rooms with tables and seats, to increase the stock of books, to maintain the supply of periodicals, and to meet a portion of the cost of lighting, firing, and attendance for the first year . … The services of Mr. W.H. Birbeck have been secured as librarian of the Institute. … There were about 250 persons present at the meeting".[514]

In 1874, Adelaide architect, and member for Burra in the House of Assembly, Rowland Rees (1840-1904) redesigned the Institute building. The foundation stone was laid on the 15 December 1874. The Contractor was local builder, John Pearce,[515] and it was built "on the same site, [and] consisted of a main building with two wings".[516] In 1874, SAMA officially transferred the land to "Alexander McCulloch of Princess Royal, Gentleman; Isaac Killicoat of Abberton Park near Kooringa, a Gentleman; Thomas Bath, a storekeeper; Philip Lane, a saddler; August Bartholomaeus of Redruth, a storekeeper".[517] On 4 January 1875, a declaration of Trust was made by them with the objective of "the promotion of useful knowledge and rational mental recreation amongst its members".[518]
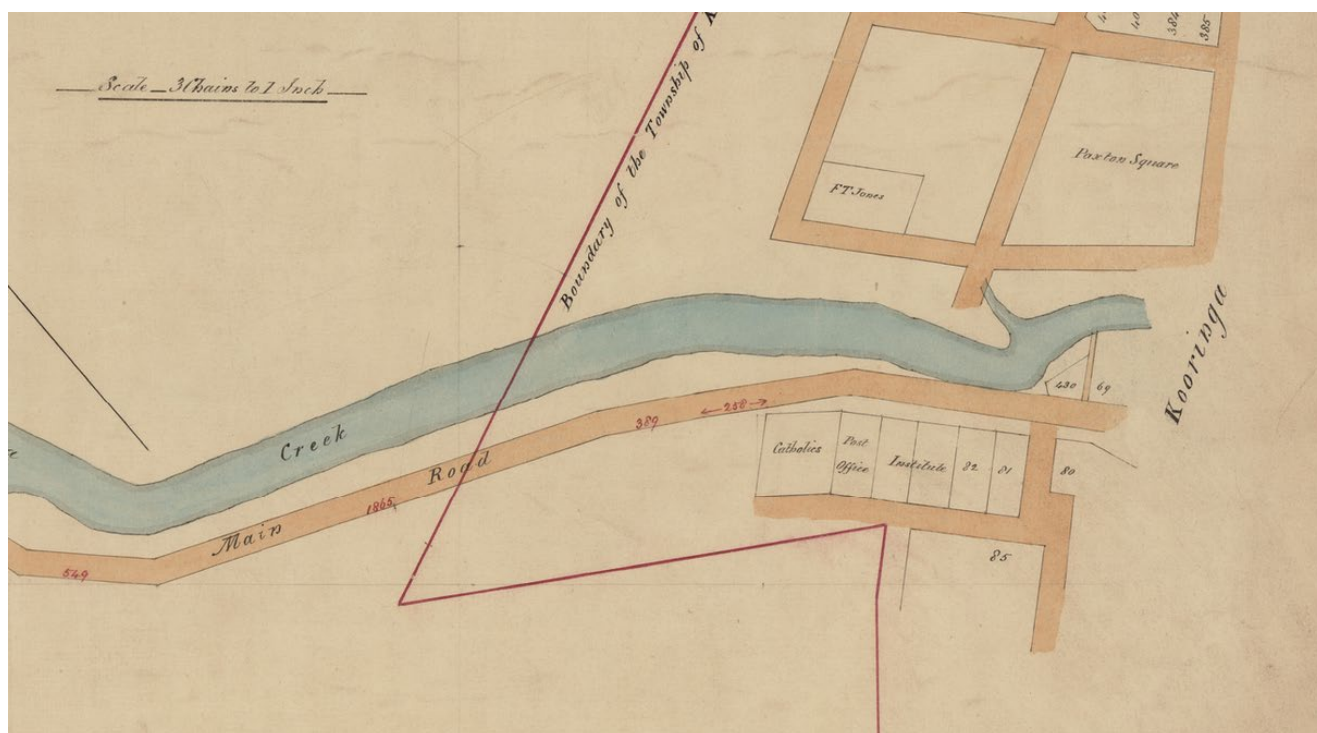


Part of "The Township of Graham" map showing the Institute, 1875. Source: State Library of South Australia Map C41.

On 14 October 1875, the new Burra Institute building was opened. "The Institute covers about 5,000 superficial feet of ground, and consists of a main building with two wings. The entrance is by 11 steps of Mintaro slate, with a terrace 10 feet x 30 feet, covered with very large Mintaro slates. The entrance-hall, which is also intended for a Museum, is 20 feet x 35 feet, and 20 feet high. The lecture-hall is 54 feet x 34 feet x 20 feet high, and is entered by sliding doors 12 feet x 12 feet, so as to throw the entrance-hall into the lecture-hall if it should be crowded at any time. To the right of the entrance-hall are two doors opening into rooms set apart for Committee and class rooms – one 24 feet x 16 feet and the other 24 feet x 13 feet, and 14 feet in height. To the left is one door leading to the reading-room and library, which are of the same size as those on the right wing. The lecture-hall is lighted with four chandeliers, the entrance with two, and the other rooms with one each. The doors of the rooms are grained oak colour, with the exception of the reading-room, which is painted. The land is a gift from the South Australian Mining Association, and has been conveyed to trustees. The frontage is 204 feet by a depth of 219 feet, and the value is estimated at over £800. ... Let it be their aim to make it the first in general usefulness by having a well stored library, an instructive museum, educational classes, popular lectures, and agencies in every direction, whereby the mind might be cultivated and the feelings refined".[519] By 1876, it had 135 subscribers and 1,300 volumes in the library. Various lodges were also associated with, and met at, the Burra Institute Building.

In 1891, the original dressing rooms, stage and proscenium were added while in 1921 the dress circle was built. New dressing rooms were constructed in 1926 and the stage was enlarged. The "town's library was housed here till 1978 and the Town Council met here and had its offices here 1876-1969 ... The building was acquired by the Town Council in 1945 and has since been known as the Burra Town Hall".[520]



Town Hall, c.1874. Source: The Burra History Group Inc.
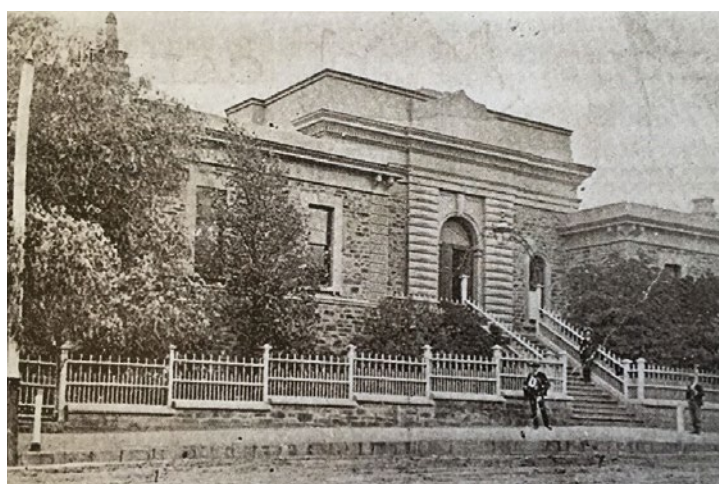


Town Hall, c.1905. Source: The Burra History Group Inc.



Town Hall, 1937. Source: SLSA B 23609

**Stone Wall located on South Side of Commercial Street and Ware Street (SAHR 10435) (denoted in white)**

The current Heritage SA information states the "wall on Commercial Street's east side is an L-shaped one, on the corner of Ware Street. It stands near the remains of Burra's first Roman Catholic chapel and school (late 1840s)."[521] However, the wall in question is longer than this description, extending along Commercial Street and returning along Kangaroo Street following the alignment of the gully which has cut off the corner of the allotment. A c.1860-70 map of Kooringa shows that Allotment 41 was indeed occupied by the Catholic Church in this early period. By "1860, a Roman Catholic chapel-school at the corner of Commercial and Kangaroo Streets [was built], although it was not until 1874 that Burra Roman Catholics could afford to build their church (St Joseph's), presbytery and convent".[522] The section at the corner of Ware Street is lower than the other portions and is backed by a hedge, this being the front garden of the house occupying this site which faces Ware Street. It has not been possible to establish exactly when this wall was constructed. It is sited near the location of the early Commercial Street stone bridge (now demolished) which was reportedly constructed in 1863[523] and is evident on the c.1860-70 map, and a c.1872 photograph. This bridge was replaced with a steel beam bridge in 1879.

**Stone Wall located on North Side of Commercial Street (SAHR 10436) (denoted in red)**

The current Heritage SA information states, the "wall on the west side of Commercial Street stands near 'The Paddock', where the bullock teams were pastured, opposite the original Burra Hotel and by the main southern entrance to the town".[524] This information is incorrect, the wall is located opposite the wall on Commercial and Ware Streets (SAHR 10435). It is not located near 'The Paddock'. Due to its location, there is no connection between this place and 'The Paddock' as it is separated from this area by a public road which has existed from the earliest period of the town. It has not been possible to establish exactly when this wall was constructed. It is sited near the location of the early Commercial Street stone bridge (now demolished) which was reportedly constructed in 1863[525] and is evident on the c.1860-70 map, and a c.1872 photograph. This bridge was replaced with a steel beam bridge in 1879.



Site plan of Kooringa, 1849. North side is shown in Red and South side is shown in White. Source: SLSA, https://digital.collections.slsa.sa.gov.au/nodes/view/815 accessed 1 October 2018.
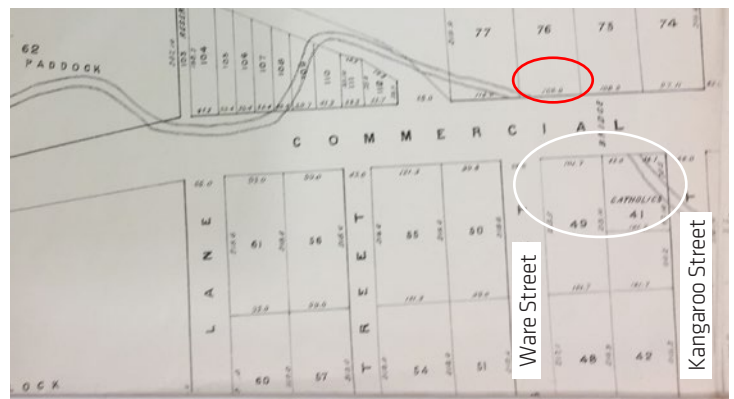


Commercial Street and Ware Street corner, c.1860-70 showing "Bridge". Source: SLSA Map C 316.
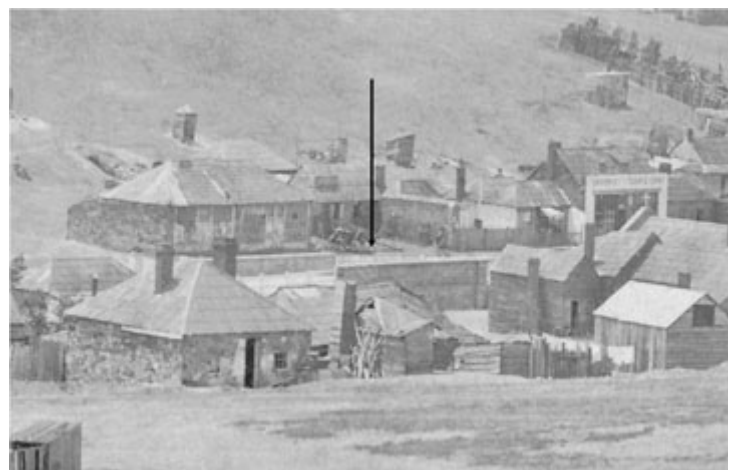


Commercial Street bridge, c.1872. Source: BurraSA, https://www.burrasa.info/pages/bridges.html, accessed 23 July 2020.

**Burra Cemetery (SAHR 10432)**

Burra's first cemetery was established in 1845 shortly after the Mine opened. The SAMA would not allow the cemetery to be in Kooringa, nor would it allow "graveyards in the church allotments, being mindful of the possibility that the ore deposits might spread into these areas".[526] Thus, it was located just outside of Kooringa on the western side of Burra Burra Creek. However, the gully which ran through the site was prone to flooding and "[r]eports of human remains uncovered by floods prompted the SA Mining Association to relocate the cemetery to its present position".[527] The 1845 cemetery reportedly contains only one headstone and plaque.[528]

In 1850, the Burra Cemetery was established in its current location, on the eastern side of Burra Creek with the site donated by SAMA. In 1854, a stone wall was erected by public subscription around the site to protect the graves from marauding animals. The cemetery "provides a valuable record of the diversity of Burra's early mining population".[529] Indeed, the "headstones within the cemetery chronicle the lives and misfortunes of the mining community (up to 1877) and the pastoral and agricultural families who have since used Burra as a commercial, social and religious centre".[530] The earliest grave is dated 1851. Significant individuals buried at the cemetery include: Isaac Killicoat, January 1886 (Smelting Works); Thomas Perry, May 1879 (Head jailer of Redruth Gaol 1853-78); Richard Reed, April 1930 (Ore picker at the mine, whim driver and a tributer miner, then pioneer pastoralist); and Robert James Martin McBride, October 1921 (Miner, bullock driver, fencer, sheep farmer).[531] The cemetery also records accidental deaths at the Mine, and represents ethnic groups such as Cornish miners, Welsh and German smelters, Irish carters and Spanish muleteers. There are a range of headstones from different periods including: 1860s – headstones by Thompson Priest of Mintaro using Mintaro slate; 1870s marble headstones by Fraser of Adelaide; 1880s marble headstones by monumental masons E.H. Herring of Waymouth St, Adelaide; and some granite headstones imported from Scotland including the Killicoat monument.

The earliest section of the cemetery dating from 1850-1892 has undergone many changes. In the late 1960s, the central area of the site was cleared, and the western section was partially cleared of headstones by the Council. Perhaps one quarter of this section remains unaltered.[532] Thus, much of the current cemetery dates from the later period and the post-1960s.



1849 Map of Kooringa showing original cemetery (left) and current cemetery (right). Source: SLSA C42



Cemetery, c.1860-70. Source: SLSA Map C 316.



1876 Map of Kooringa. Source: SLSA Cartographic Material
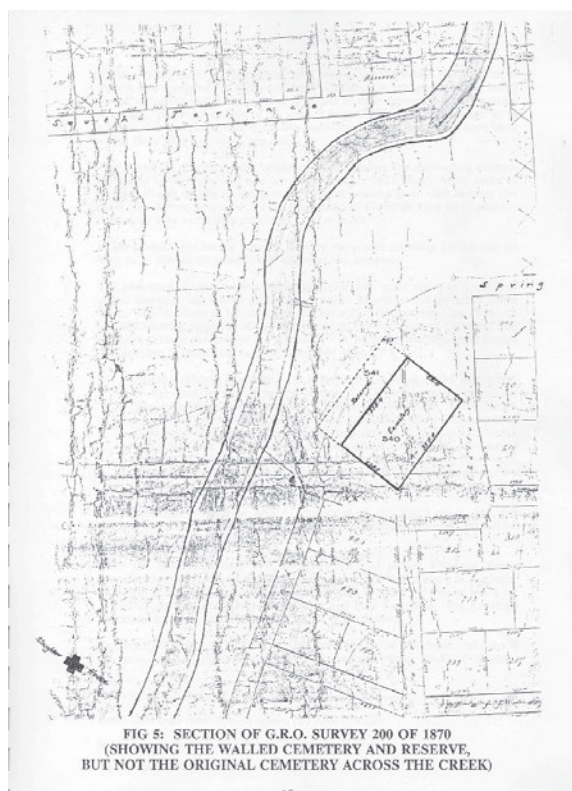
FIG 5: SECTION OF G.R.O. SURVEY 200 OF 1870
(SHOWING THE WALLED CEMETERY AND RESERVE,
BUT NOT THE ORIGINAL CEMETERY ACROSS THE CREEK)

Source: McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991, p15.



FIG 2: L.T.O. CERTIFICATES OF TITLE FOR THE CEMETERY AREAS
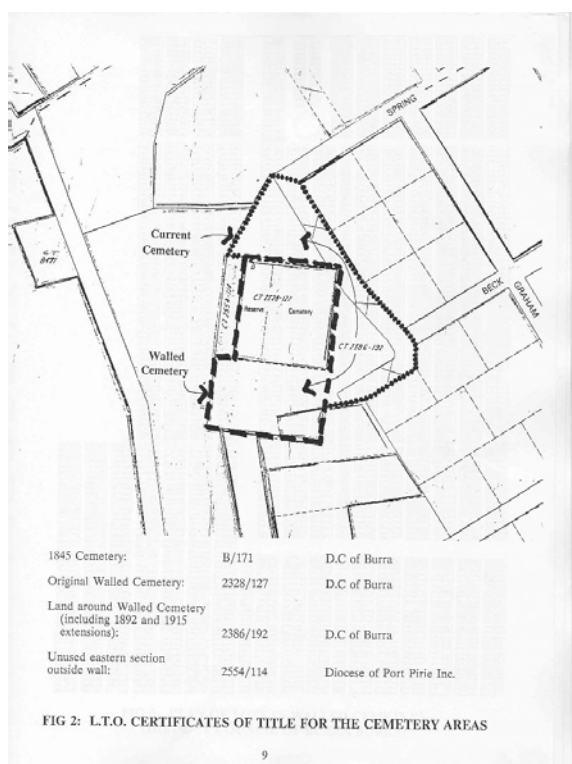
Source: McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991, p9.

### Former Redruth Police Stables (1847), Police Cells, stables and stable yard (c.1872-73), and Police Station (1879) (SAHR 10014)

Shortly after the establishment of the Mine, law and order became an important issue. In February 1846, Ayers called for a Police Station due to the rapidly expanding population, related drinking offences, low legal drinking age, long opening hours at the town's hotels, and consequent fighting and disorderly conduct. In April 1846, Captain Finniss, the Commissioner of Police travelled to Burra and approved the establishment of a police station for two mounted and two dismounted policemen.[533] In September, there were 400 miners working at the mine and 300 draymen travelling to the mines each day.[534] On 18 September 1846, Ayers temporarily housed the four constables in a rent-free cottage in Kooringa. Although SAMA agreed to lease land for a Police Station in Kooringa, it refused to grant it freehold. It is indicative of SAMA's control that "it was necessary that the town's police station be built on public land, rather than sited in the more heavily populated Kooringa".[535]

In October 1846, tenders were called for the "erection of a Police Station-house and Stable at the Burra Creek".[536] The tender of a North Adelaide builder, R.S. Breeze, for £385 was accepted. Burra's first police station, cells and stables were erected in 1847 on a Police Reserve in what became the township of Redruth (two years before Redruth was laid out in 1849). The government retrospectively assigned some of the Redruth allotments for Burra's extant police station, cells, and stables. The new police station and stables including cells were completed in mid-1847.[537] In June 1847, a visitor reported that a "large and substantial police-station, and the requisite stables, have just been completed by the Government of the province, with every regard for the present and future requirements of such an important district as that of the Burra Burra".[538] In December 1847, once the police station was established, tenders were called for a well for the station.[539]

In 1851, the police force included three constables and three mounted police "under the command of Sergeant-Major McCulloch"[540] for a population of 5,000, while in the same year the police station was also declared a gaol and was used as such until the new gaol was completed in 1856.[541] From 1861 to 1877, the Redruth Courthouse and Gaol were well utilised. Approximately 450 labourers, 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, were imprisoned, at different times over this period, in the new Redruth Gaol.[542] As evidenced from the records of convictions issued from the Redruth Courthouse and those sentenced to the Redruth Gaol, the police had an active role in maintaining law and order within the mining community.

In 1872-73, new cells, stables and a stable yard were added to the Police Station. Indeed, in January 1873, it was reported that the "Redruth Police Station has received its quota of support from the Government exchequer, in the shape of additional cells and increased accommodation for the police".[543] In 1878, the original Police Station was demolished and a new one was completed in 1879 in the approximate position of the earlier building. Indeed, on 30 November 1878, it was reported that the Architect-in-Chief's Department had accepted a tender for the "erection of a Police Station at Redruth, [from] G. & W. Sara & Dunstan, £797 4s".[544] The result of these changes is that only part of the stables and yard walls date from the 1847 construction phase.

Source: "Tenders", *Adelaide Observer*, 10 October 1846, p6.

Source: "Colonial Secretary's Office, Adelaide, Dec.14.1847", *South Australian Register*, 18 December 1847, p4.

Source: "Tenders Accepted", *Adelaide Observer*, 30 November 1878, p7.



Police Station, 1878. Elevation. Source: LLSAM
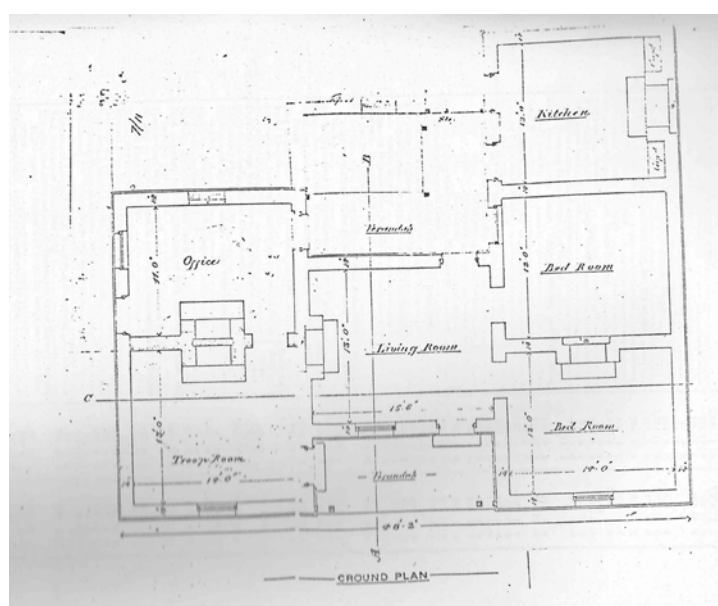


Police Station, 1878. Ground Floor. Source: LLSAM

**Former Redruth Gaol (1856) (SAHR 10042)**

From 1851, the existing police lockup at Redruth Police Station was officially designated as a gaol due to the problem of transporting those convicted of minor offences to the Adelaide Gaol. In 1853, £2,300 was placed on the government estimates for the construction of a new purpose built gaol.[545] In 1855, "Thomas Perry, the gaoler at the police cells, had complained to the Presiding Magistrate that he had more prisoners and lunatics than he could accommodate in the lock-up".[546]

On 17 November 1855, it was reported by the Surveyor-General that "regarding the Gaol at Redruth, the plans were now all prepared, a site had been fixed upon, and tenders for the building would shortly be called for – probably by next Thursday".[547] In fact, tenders were called on 13 December 1855 by Colonial Architect Edward A. Hamilton.[548] On 16 August 1856, it was reported that the "gaol at Redruth is now finished. It has a substantial appearance, is extremely well built, and certainly does credit to all engaged in its erection".[549] Constructed by Watson and Morris, the new Gaol costed £3,198.[550] The Redruth Gaol was the first gaol built outside of Adelaide; thus, it was South Australia's first country gaol, demonstrating the importance of the mine at Burra.

The "Register of all persons brought to Her Majesty's Gaol at Redruth in the Province of South Australia" details the prisoner's name, offence, the court they were committed, and court convicted, religion, and trade amongst other information from 1861 to 1880.[551] The majority of offenders were labourers. From 1861 to 1877, there were approximately 450 labourers who were committed and/or convicted at Redruth Court. Presumably, these labourers lived locally and worked at the mine where SAMA employed "men labourers" as their lowest paid, unskilled labour.[552] Miners were also represented in Redruth Gaol. From 1861 to 1877, there were approximately 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, who were imprisoned, at different times over the period, in the Redruth Gaol. Most of them described themselves as belonging to the Church of England. Sailors, shoemakers, and housewives were also frequently imprisoned. Of these imprisoned miners, most of them where committed and convicted by the Redruth Court.

Alterations to the Gaol building were made in c.1863 and 1877. In June 1864, it was reported that "alterations and improvements at the gaol are not yet finished, but will be shortly".[553] The Gaol accommodated the gaolkeeper, turnkey, and 30 prisoners both male and female.

The Gaol closed in 1894 emphasising the changing population and demographics of the region. On 1 March 1894, it was reported that the Government had decided to close the Redruth Gaol "which for a long time has been used very little. At present there are only three prisoners there. The construction of the Blyth and Gladstone railway will render the gaol still less a necessity, because when this line is finished there will be direct communication with Gladstone Gaol, to which northern prisoners will be taken. Prisoners residing south of the Burra will be brought to Adelaide".[554]

On 22 October 1897, it was reported that the Redruth Gaol had been converted to a Girls' Reformatory which went onto operate for over two decades.[555] In July 1922, it was announced that the Girls' Reformatory at Redruth would be closed.[556] On 15 September 1922, the Government issued a proclamation that it was "abolishing the Girls' Reformatory at Redruth, the inmates having been placed under the direct care of the Salvation Army at the new home at Enfield".[557]
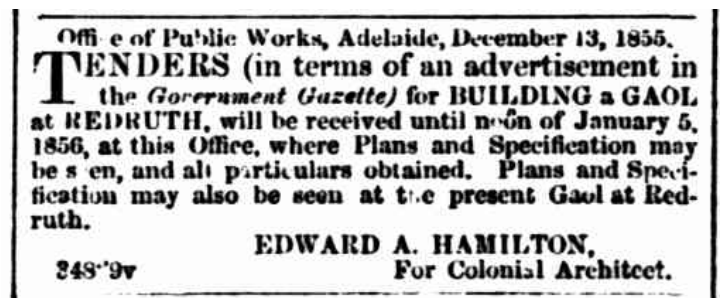


"Advertising", *Adelaide Observer*, 15 December 1855, p1.



Redruth Gaol, 1933. Source: State Library of South Australia B 8635.

**Former Redruth Courthouse (1857) (SAHR 10027)**

In September 1847, William Lang was appointed Resident Magistrate and Coroner and resided in a company cottage in Kooringa. Burra's first Courthouse was also a rented cottage in Kooringa which doubled as a schoolroom.[558] It was located in Queen Street, Kooringa. "Court cases suggest '… deplorable-looking nymphs' being drunk and disorderly on the Sabbath, of sly-grogging, of miners unable to work on 'maze Mondays' – a familiar feature of Cornish mining life. Meetings of the Burra Total Abstinence Society were often held on a Monday when bouts of weekend drinking were followed by bouts of pledge-signing by remorseful miners. Many miners found it necessary to sign the pledge weekly."[559]

Indeed, "periods of excessive drinking and excessive repentance were confined mainly to the mining population of Burra, and to the non-conformist adherents. By 1851 the population of the Burra Burra Mine townships was heading towards 5,000 and crime was on the increase. The commonest offences were drunkenness, petty larceny and disorderly behaviour. In this respect, Burra differed little from the rest of South Australia … Burra, however, had its own particular criminal activity – forgery. Both the mining company and the smelting company paid their workmen in promissory notes, those of £1 or higher being distinguished by colour. … Forgery of paper money orders by alteration of words or figures, was common … In 1850 and 1851 charges of forgery were heard almost weekly in the little courthouse of the Resident Magistrate."[560]

Due to the lack of land tenure in Kooringa together with the complexity involved with transporting offenders from the cottage courthouse in Kooringa to the police station in Redruth, a new Redruth Courthouse was constructed. In November 1856, the Colonial Architect, E.A. Hamilton called for tenders for the construction of a Courthouse at Redruth.[561] Some sources stated that in early 1857 the courthouse was completed.[562] On 16 October 1857, it was reported that a proclamation was declared that after the 21 October 1857 the "Local Courts heretofore appointed to be holden at Kooringa shall be holden at the Local Court-house at Redruth, with the like powers and jurisdiction as are now exercised by the said Local Court at Kooringa",[563] confirming that it was completed at this time. The Courthouse costed £799.[564] Thus, the Police Station and Courthouse were finally co-located.

In 1864, the building was enlarged, and the roof was raised. In June 1864, it was reported that the Redruth Courthouse was "now ready for customary business. To-day several cases were heard for the first time since the repairs".[565] From 1861 to 1877, approximately 450 labourers, 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer,[566] were gaoled after being convicted at the Redruth Courthouse emphasising the mining character of the community.

There were also many cases of a more minor nature which did not result in imprisonment, these often involving drunkenness, combined with the use of abusive language.[567] One such case was of a man charged after disturbing the court while in session, his defence, that he could not have been drunk as he had only been released from the gaol an hour before, proved to be unsuccessful.[568] In addition, the Courthouse was also used as the polling place, the place to register births, deaths and marriages, and a venue for inquests into a range of incidents, including deaths and fires.[569] Supplementing these official duties, it was also used during the period of significance as a venue for public meetings and entertainment, doubling up as a hall for the community of the northern towns.[570]

In January 1873, it was reported that the "Court-House … has had its share of renovation, and is now receiving the addition of a new ceiling, the old one having been in a most dangerous state".[571] In 1878, a porch was added, and further extensions were undertaken. On 30 November 1878, it was reported that the Architect-in-Chief's Department had accepted a tender for the "building additions to the Redruth Court-House, [from] G. & W. Sara & Dunstan, [for] £402 17s".[572]



TENDERS, in terms of an advertisement in the *Government Gazette*, for BUILDING a COURT-HOUSE at Redruth, will be received until noon of the 5th December, 1856, at this Office, where plan and specification may be seen, and all particulars obtained, and on application at the Police-Station, Redruth.
E. A. HAMILTON, Colonial Architect.
Public Works Office, Adelaide,
13th Nov., 1856.                mt2

"Advertising", *Adelaide Times*, 18 November 1856, p3.



Redruth Courthouse, 1933. Source: SLSA B 8628.



Courthouse, 1878. Elevation. Source: LLSAM
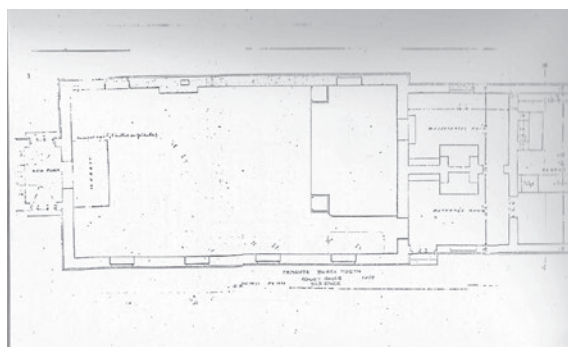


Courthouse, 1878. Ground Floor Plan. Source: LLSAM

# 4.7.  Commercial Buildings

The SAMA's restrictive approach to the development of Kooringa included commercial buildings such as banks and hotels. These commercial establishments supported not only Cornish miners but also the development of the townships. Perhaps surprisingly, Burra's first bank was not opened until 1859, around fourteen years after the establishment of the Mine in 1845.

**Background: Banking**

The SAMA initially issued its own money order notes to miners as a form of payment due to limited access to cash because of both low supply of notes and coins in the colony and its own liquidity problems. Initially, "[p]ayment of all wages, except mine officers' salaries, was never made in cash. It took the form of money orders – promissory notes of different denominations, printed by the Mining Association. Miners mistrusted the system. ... Transmuting the money orders into coin could be a risky transaction for Burra miners. ... Money orders could only be changed in shops or hotels".[573] The shops would then exchange these notes "for legal tender by the SAMA, or by the Bank of Australasia", the latter being the bank through which the SAMA banked.[574]

In 1851, it was reported that the "trade of this place is conducted with a private circulating medium of local promise notes. The Burra Company issues notes; the Copper [Smelting] Company does the same; those of £1 or higher distinguished by colour ... All are payable in Adelaide. Little other money is current, and silver is scarce".[575] However, "forgery of money orders ... was a common offence ... there was never a shortage of would-be forgers, and resultant court-cases. ... With the arrival of the first banks in Kooringa, in 1859 and 1861, the days of 'The Burra Flimsies', as the paper currency was named, were over".[576]

During one of the 1850s floods of Burra Burra Creek, it was reported that the: "'water accumulated so quickly that in many instances large sums of money were forgotten to be removed' ... The habit of storing 'large sums of money' in their huts, was not due to imprudence on the part of the miners but the lack of any banking facility in Kooringa. Burra's first bank – a branch of the National Bank of Australasia was opened in April 1859 ... One visitor, hearing of the amount of specie stored by miners in their dug-outs, referred to the creek-banks as the 'Savings bank'".[577] Indeed, in 1859 a temporary branch of the National Bank of Australasia was opened in Kooringa, with new premises being built shortly after in 1862.

**National Bank of Australasia (1862) (SAHR 10007)**

In April 1859, Abraham Scott and John Neales travelled to the copper mines of Burra and Kapunda, where they established the first South Australian branches of the National Bank of Australasia; a banking institution which was established in Australia in 1858 with its headquarters in Melbourne. "Shrewdly courting the mining business of Kapunda, they appointed the superintendent of the large mine as local agent at £150 a year and lightened the work by sending the Adelaide teller to run the business. These branches quickly succeeded in attracting deposits, circulating notes, and transacting the considerable exchange of business created by the sale of South Australian copper in London".[578]

Thus, in April 1859, Burra's first bank, a temporary branch of the National Bank of Australasia, was opened in Kooringa. It was claimed a, "great success, and has improved the Burra money circulation. Instead of the well-known and familiar orders of the mine and smelting works for odd amounts, puzzling the arithmetic capabilities of the worthy townsfolks, we have now an abundance of gold, silver, and the well-engraved bank notes of the National Bank, in circulation, which, when seen alongside the little, unpretending orders of the Burra Mine, make the latter, as has been facetiously remarked, look uncommonly small. We understand Messrs. Drew & Co., and nearly all the principal tradesmen, have transferred their accounts, saving, as it does, the trouble and risk of remitting; and the affability of the manager has also tended to the success of what has been called the "Little Bank"".[579] With such a large population of mine and smelter workers, the National Bank clearly saw a growing opportunity for business.

On 16 July 1861, tenders were called for the erection of the new premises for the National Bank of Australasia at Kooringa.[580] In 1862, the new National Bank building was constructed. It "is one of South Australia's earliest offices for the National Bank of Australasia. Its formal style ... reflects Burra's prosperity as a mining town at that time, and was built at a cost of £1,500".[581] It was designed by architect Edmund Wright.[582] When completed it was by far the most substantial building in the town in stark contrast with the rest of the structures, with the result being to "materially improve the appearance of the township, albeit by contrast with this handsome structure some of our whilom pretentious edifices look all the shabbier for comparison. Perhaps some of our enterprising tradesmen will take the hint, and 'go and do likewise'".[583]

The "National Australia Signature Book 1" dates from when the Kooringa branch was first opened in 1859 to 1884, and contains the names, address, and occupation of the Bank's customers.[584] Customers related to the mine included miners, teamsters, mine agents, and related to the smelts included Isaac Killicoat, others included Redruth builder, James Tiver. Indeed, the signature book contains over 860 signatures. The Bank was also one of the first National Bank of Australasia branches in Australia.[585]



Advertisement for Burra Burra Mines orders and Patent Copper Company notes and money orders. Source: "South Australian Mining Association", *South Australian Register*, 16 June 1851, p4.

Earliest known photograph of the National Bank, 1879. Source: Burra Record, 17 February 1909.


Undated: Source: The Burra History Group Inc.


National Bank, c.1915. Source: SLSA B27689.

## Background: Hotels

Burra was known for its numerous hotels in the early years of its establishment and development. The development of hotels or public inns, as they were known, was seen by one SAMA director, William Paxton as a highly lucrative venture in which to invest. In mid-1846, Burra's first hotel, a "temporary wooden structure",[586] was constructed at the entrance to the town. The Burra Hotel, as it was known, was built and owned by Paxton who had arrived in South Australia in 1840 and became a SAMA director in 1846. Initially in 1847, the Burra Hotel run by Abraham Wren was the "only Inn of the place".[587] In September 1847, the new *Burra Hotel* a "permanent stone building of some fifteen rooms was to be opened replacing the temporary wooden inn. Beer brewed in the hotel's own brewery nearby would be flowing freely. A second hotel, *The Miners Arms*, was already nearly completed in Market Square close to the Burra Creek with its increasing population of cave-dwellers".[588] The Burra Hotel was designed by architect George Strickland Kingston and was a prestigious establishment which attracted the patronage of amongst others, the SAMA's directors.

In the early years, the "hotels were – Wren's Burra Hotel, Kooringa; Taylor's Aberdeen Hotel; Magor's White hart; Stacy's Southampton Arms, Aberdeen. So that there was only one hotel in Kooringa so far, but Mr. Paxton … built three pubs to secure the lion's share of the trade, viz., the Miner's Arms, the Pig and Whistle, and the Smelter's Arms. The Burra company would not allow any person other than themselves to build a public house on their property, so Paxton secured the monopoly of the Kooringa end of the town".[589] By 1855, Paxton "owned Kooringa's three hotels, the Pig and Whistle Inn, the Burra Hotel and the Miners' Arms Hotel, as well as the Burra Brewery and the Smelters' Home in Aberdeen. Paxton's interest in providing hotels may have had some bearing upon his popularity with the miners themselves".[590] The Burra Hotel eventually closed in 1876 and was converted to the Burra Hospital, however none of the original building remains.

During the period of the Mine's operation, the minimum drinking age was twelve years and hotels had long opening hours. "Not all Victorian gold brought back by Burra miners and tradesmen went into the building of churches … Much of it found its way into the new hotels which were built in the prosperous '50s in Burra. Six new hotels were built in the mining townships in the same decade which witnessed the great church revivals, and two more the *Bon Accord* and the *Commercial* in the 1870s. … Until 1880, any man could get a drink … in any of the twelve Burra hotels".[591]

**Burra Hotel (1847) (previously Miners Arms Hotel) (SAHR 10404)**

The Miners Arms Hotel, was owned by William Paxton and "constructed by Mr. Fred Cowper".[592] It was built in 1847 as a single storey building. It was the town's second hotel and was first licensed in the same year with its first licensee being H. Chandler.[593] In 1848, it was reported that Charles James Ware was granted a "Publicans' General Licences" for "The Miners' Arms" at Kooringa, as was Abraham Wren for "The Burra Burra Hotel" also at Kooringa.[594] Indeed, C.J. Ware was remembered not only as a brewer and licensee of the Miners Arms Hotel but also for his appeal to Henry Ayers for a proper funeral and burial of Thomas Pickett; the discoverer of the copper lode who had died in unfortunate circumstances in 1851.[595] In 1859, improvements were made to the Hotel.[596]

Cornish wrestling was popular at the Hotel. The "'convincing ground' was a sawdust ring at the rear of the *Miners' Arms*, and wrestling became an annual Christmas event. A typical wrestling match was recorded in the Adelaide *Register* of 30 December 1859".[597] A Burra resident reminisced that during this period, the "old Cornish game of wrestling was promoted at Christmas time, and was held in the stable yards of the Miners' Arms Hotel, where there was plenty of manure and sawdust. The Cornish game was not like the brutal exhibitions now witnessed under the name of wrestling … Ginger beer was supplied free by the lessee of the hotels … These contests took two or three days during the holiday season".[598]

The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records a nineteen room Hotel on the site.[599] In January 1873, it was reported that "Mr. Banks, of the Miners' Arms, has built an extensive and commodious assembly room, at a cost of over £1,000".[600] On 24 December 1878, it was reported that the Miners' Arms at Kooringa was burned down. The "fire was discovered at half-past 2 o'clock this morning. The furniture was partly saved. The stock and premises were destroyed, and were insured in the Northern Insurance Company. The stables were saved".[601] Some reports however stated that the Hotel was badly damaged by the fire not completely burned down.[602] It was also reported that "trading continued and by September 1879 a new building was completed incorporating some of the surviving structure".[603] It was rebuilt by builders Sara & Dunstan to the design of Adelaide architect Michael McMullen (1830–87). It comprised a new single storey section in front of the old building while incorporating the undamaged sections of the earlier structure including the cellars, billiard room, dining and assembly rooms and a few smaller bedrooms.[604] It appears that the Hotel was renamed after its landlord Mr T. Richardson. In 1879 it was reported that Richardson's Hotel held a house-warming on the "completion of the new building. … The greater portion of this hotel was burnt down about twelve months since, the only part left standing being the billiard and dining rooms with a few small bedrooms. On the site of the old building new premises have been erected by Messrs. Sara & Dunstan as contractors. … Mr T. Richardson responded, and told of his early struggles twenty-five years ago in the Burra, when he had worked for 3s. per day. At the time he first took the old Miners' Arms it was a very heavy undertaking with his limited means".[605]

The Hotel was renamed again in 1880 as the Burra Hotel and a verandah was added. "Until 1904 the hotel provided sales at adjacent stock yards and until at least the 1880s traditional Cornish games including wrestling were held … at Christmas".[606] In c.1904-05, gas lighting and skylights were added.[607] In 1907, George Lord purchased the Hotel and in c.1911-12 he added a second storey with bedrooms to the front section built in 1879. It became known as the George Lord Hotel until 1918 when the name reverted to the Burra Hotel or Lord's Burra Hotel.[608] In 1920, a two storey verandah was added.


Former Miners Arms Hotel, c.1911. Source: The Burra History Group Inc.


Former Miners Arms Hotel, c.1910s. Source: The Burra History Group Inc.


"Lord's Burra Hotel", c.1930. Source: Museums Victoria, MM 3105

**Dwelling (1849) (former Smelter's Home Hotel) (SAHR 10419)**

In 1849, the Smelters Home Hotel was built in the same year as the Smelting works commenced operations. It was owned by William Paxton, although some sources record that it was designed "by"[609] him. It provided a place of recreation for workers and was first licensed to J. Robins in 1849. Indeed, on 15 September 1849, it was reported under the "New General Publicans' Licences" that Jeremiah Robins was granted a Licence for the "Smelters' Home, Kooringa, Burra Burra".[610] On 7 October 1849, it was commented that the "Smelters' Home, being the third public house in this flourishing township was opened. It is a good substantial stout building and affords plenty of accommodation for travellers and others. It is excellently situated for the convenience of the inhabitants in this part of the township, being about midway between the Company's Smelting Works and the Burra Mine, and adjoining the Bon Accord property. A supper was provided on the occasion by the liberal landlord, Mr Jeremiah Robins, who invited all his friends to partake, and did all in his power to promote the happiness and conviviality of the evening. ... The landlord, Mr Robins, formerly attached to the mounted police force of this province, is much respected, and we wish him every success in his undertaking".[611]

The Hotel provided a location for social gatherings for miners, smelters, and carters.[612] In 1851, there were around 1,000 people working at the Burra Burra Mine, and around 378 people employed at the Smelting Works. In c.1850-51, Alfred Barker who had arrived in South Australia in 1836 with Colonel Light, was a licensee of the Smelters' Home Hotel. "Two years later he took over as licensee of the Burra Hotel. During the next five years [1852-1857] Barker and his wife found themselves hosting Burra mine Directors, Governors, members of parliament and other notables on their visits to the Burra Burra Mines. ... By 1859, however, Alfred Barker had left hotel life and with his family had moved out to Baldina Creek, seven miles east of Kooringa".[613]

In 1859, the Smelters' Home Hotel and stabling was advertised for lease.[614] In 1861, Nicholas Opie purchased the Smelters' Home Hotel from Paxton and it became known as Opie's Hotel.[615] Previously, from 1857 until 1861, Opie had owned and licensed the Bushman's Home Hotel in Redruth.[616] From Opie's Hotel "he ran the mail and passenger service to Kapunda in direct opposition to Rounsevells who had previously had a monopoly on this business".[617] In January 1873, it was reported that "Mrs. Opie, of the Smelters' Home, has added a half-dozen good roomy bedrooms to her hostelry, affording a greatly increased amount of accommodation to travellers".[618]



"Advertising", *Adelaide Observer*, 12 February 1859, p8.



Former Smelter's Home Hotel, c. 1900. Source: The Burra History Group Inc.



Part of "The Township of Graham" map showing the Former Smelter's Home Hotel, 1875. Source: State Library of South Australia Map C41.



Former Smelter's Home Hotel, c.1860-70. Source: SLSA Map C 316.

# Key Places

Burra Mines Historic Site

Town Centre

10359 — 1

10042 — A

10032
10037
10038
10039
10203
10446

2

3 — 10033
10034
10036

B

C — 10027
D — 10014

10023 — 4

5 — 10419

6 — 10204

7 — 10024

E

F

9 — 10019
10 — 10049
G — 10021

8 — 10989

12 — 10970

13 — 10054
14 — 10045

11 — 10020

15 — 10056

16 — 10055

17 — 10445
18 — 10047

19 20 — 10052 10053
21 — 10046

22 — 10018
23 — 10022

24 — 10403

10007

30 — 10159
31 — 10160

H

28 — 10404
29 — 10013

26 — 10436
27 — 10435

25 — 10434

32 — 10040 10041
33 34 — 10011
35 — 10447
28 — 10029 10030 10031

36 — 10050

37 — 11187

38 — 10432

## Key Structures Not Referenced in National Values Statement (Table 2 & 3)

A. Former Redruth Gaol **10042**
B. Redruth Wesleyan Church
C. Former Redruth Courthouse **10027**
D. Former Redruth (North Burra) Police Station, Cells and Stables **10014**
E. Former Mine Hospital
F. Former Foreman's Residence on Mine site
G. Mine Bridge **10021**
H. National Australia Bank Burra Agency [National Bank of Australasia] **10007**

0 — 250 — 500m

ACMS (Burra) & State Heritage Area Boundary

## Key Structures Referenced in National Values Statement (Table 1)

1. Hampton Township Precinct **10359**
2. Attached Dwellings ('Tiver's Row') **10032, 10037, 10038, 10039, 10203, 10446**
3. Attached Cottages **10033, 10034, 10036**
4. Former Bon Accord Mine Site **10023**
5. Dwelling (former Smelter's Home Hotel) **10419**
6. Former Smelts Superintendent's Dwelling & Wall **10204**
7. Former Burra Smeltsyard & Storehouse **10024**
8. Former Burra Smelts Historic Site **10989**
9. Former South Australian Mining Association Store Room, Yard & Walls **10019**
10. Former South Australian Mining Association Storeman's Dwelling **10049**
11. Peacock's Chimney **10020**

12. Burra Mines Historic Site **10970**
13. Former Graves Pump House **10054**
14. Former Powder Magazine **10045**
15. Former Mine Manager's Dwelling and Office **10056**
16. Former Ore Sorting Floor **10055**
17. Former Engine/Crusher House **10445**
18. Former Crusher Chimney **10047**
19. Former Winding House **10052**
20. Former Morphett's Pump House **10053**
21. Former Haulage Engine Chimney **10046**
22. St Mary's Anglican Church **10018**
23. St Mary's Anglican Church Hall **10022**
24. Burra Town Hall **10403**
25. Timber Dwelling of the 1840s **10434**
26. Stone Wall located on north

side of Commercial Street **10436**
27. Stone Wall located on south side of Commercial Street and Ware Street **10435**
28. Burra Hotel **10404**
29. Office (former Burra Bible Christian Chapel) **10013**
30. Dwellings (Paxton Square Cottages) **10159**
31. Former Burra Salvation Army Citadel **10160**
32. Attached Stone Cottages built for the South Australian Mining Association **10040, 10041**
33. Dwellings built by the South Australian Mining Association **10028, 10029, 10030, 10031**
34. Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) **10011**
35. Dwelling **10447**
36. Former Miners' Dugouts **10050**
37. Former Dugout Sites **11187**
38. Burra Cemetery **10432**

Modern Water Supply Tank

Former Foreman's Residence on Mine site

Former SAMA Store Room, Yard & Walls **10019**

Former SAMA Storeman's Dwelling **10049**

Former Mine Roadway

Modern Opencut Over Burden

Buddle Pits

Water Wheel

Peacock's Chimney [Cornish] **10020**

Former Graves Pump House **10054**

Former Powder Magazine **10045**

Former Mine Manager's Dwelling and Office **10056**

Morphett's Drainage Tunnel

Former Ore Sorting Floor **10055**

Engine/Crusher House

Underground Flue

Former Crusher Chimney [Cornish] **10047**

Miners' Residences

Schneider's Chimney Base & Flue

Stable Floor

Morphett's Boiler House

Ore Dressing Tower

Former Engine/ Crusher House **10445**

Morphett's Engine Pool

Former Winding House **10052**

Former Morphett's Pump House **10053**

Haulage Enginehouse

Underground Flue

Former Haulage Engine Chimney [Welsh] **10046**

Morphett's Chimney Base & Flue

Hector Shaft

Haulage Cutting

Shafts

Cottage

# Key Places
## Burra Mines Historic Site

0   20        100m

Structure referenced in National Values Statement

Structure not referenced in the National Values Statement

Approximate location of known demolished structure

Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) **10403**

National Australia Bank Burra Agency [National Bank of Australasia] **10007**

Burra Hotel (previously Miners Arms Hotel) **10404**

Dwellings (Paxton Square Cottages) **10159**

Office (former Burra Bible Christian Chapel) **10013**

Attached Stone Cottages built for the South Australian Mining Association **10040, 10041**

**10028**

Dwellings built by the South Australian Mining Association

**10029**

**10030**

**10031**

Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) **10011**

Dwelling **10447**

MARKET STREET

MARKET SQUARE

COMMERCIAL STREET

UPPER THAMES STREET

2
4
6
8
10
12
16

# Key Places
## Town Centre

0    20        100m

■ Structure referenced in National Values Statement

■ Structure not referenced in the National Values Statement

⌐ ¬ Approximate location of known
⌊ ⌋ demolished structure

# 5.    Place Description

## 5.1.    Chapter Outline

This chapter seeks to provide a summary description of the ACMS (Burra) and assess the condition and integrity of key sites. These sites demonstrate Cornish mining technology and practice, and the Cornish way of life, including social structure, customs, beliefs and working and living conditions. A first section of the chapter provides a framework for measuring the condition and integrity of places. A second section provides an overall picture of the area, including general qualities that influenced the way in which the area developed, such as the local climate and the local topography and geology. A third section describes in greater detail the key places that specifically contribute to an understanding of Cornish mining and technology and the Cornish way of life. This third section is arranged in themes following from the thematic history developed in the previous thematic history chapter. Each theme includes a description of the key places and a table describing the current condition of the physical fabric and the place's overall integrity. A fuller physical description of key sites, including a detailed map overlaid on high resolution aerial photography is provided in Appendix C: Significant Places.

As a conclusion to the chapter, a list of known comparative Cornish mining places internationally and within Australia is provided.

## 5.2.    Framework for Measuring Condition and Integrity of Values

This report has adopted the State of the Environment guidelines "Study of condition and integrity of historic heritage places" for measuring the condition and integrity of historic heritage places[619].

As previously described, a physical survey was undertaken to assess and record the condition of significant buildings and sites. Various individual places are specifically referenced in the National Heritage values, but other potential places were identified as part of the preparation of the historic summary and through overlay mapping. All the places, both mentioned and later identified, were inspected, mapped and their condition surveyed.

Many sites within the ACMS (Burra) are publicly accessible through the Burra Heritage Passport key system, but others are privately owned residences and businesses that are generally not open to the public. In cases where access could not be arranged, a judgement was made on the overall condition and integrity of the structure based on those areas visible from the street.

With respect to sites that do not retain a use, and are ruins, the assessed condition and integrity ratings are weighted towards the place's remaining ability to retain and convey its former use and the perceived risk of further loss of this ability. More detailed explanations regarding the factors that affect the place's condition are provided below.

### 5.2.1    Condition

| Rating | Guideline |
|---|---|
| Poor | There are signs of damage from water penetration, rot, instability or structural failure of buildings, or erosion or major disturbance of sites. Might include the loss of a roof, fire damage, wall collapse or subsidence, major rising or falling damp damage, or major disturbance or damage to a site. Internally, walls, floors or joinery are missing, or in dilapidated condition. Loss of significant fabric, including landscape elements, movable objects, archaeological deposits, etc. |
| Fair | A site retains its important features, including (where relevant) landscape elements, vegetation, associated movable objects etc. but these need conservation action and maintenance. A building is structurally sound but has had inadequate maintenance and needs minor repair. Internally, walls, floors and joinery are in need of minor repair, painting etc. |
| Good | A site has its important features well-maintained. A building is structurally sound, weathertight, and with no significant repair needed. Internally, walls, floor and joinery are well maintained. |

### 5.2.2    Integrity

| Rating | Guideline |
|---|---|
| Low | A site has had important features (such as structures, machinery, archaeological deposits etc) removed, or a new structure covers the site. A building has major elements that would contribute substantially to its heritage values, removed, or extensively altered. Original cladding of walls or roof may have been replaced with newer materials or removed entirely, interiors may have been removed or destroyed, or re-arranged with the insertion of a new interior. |
| Medium | Where the values of the place do not relate directly to fabric (such as in a place valued for association with an historic event, community associations or use), judgement must be made on the impact of changes in diminishing the ability of the viewer to understand the associations of the place. There has been some loss of important elements, but the site or building still retains sufficient significant fabric for its values to be understood and interpreted. Intrusions are not substantial. |
| High | The features that contribute to the value of the place are very largely intact and not compromised by significant removals, modification, or additions. |

# 5.3. General description of the area

**Location and topography**

The ACMS (Burra), as included in the SAHR and the NHL, is in the mid-north of South Australia, about 150km northwest of the state capital of Adelaide. The area, set within a sheltered valley of the Bald Hills, comprises the Burra settlement, remnants of the historic copper mining and smelting activities with which the towns were historically associated, a section of the Burra Creek, and open land around.

The settlement itself encompasses a series of former company, private and government developed towns. Although the towns each had their distinct identities at the height of mining activity, in the post mining era as the population dissipated, the towns of Kooringa, Llwchwr, Aberdeen, New Aberdeen, and Graham were joined and renamed 'Burra'[620]. Redruth was at first renamed 'Burra North' but also was eventually merged into the greater Burra town.

The distance and remoteness from a shipping port had significant influence on the development of the settlement and sustainment of the mine. All transport was by mule or bullock. Long teams of bullocks and mules carried the ore to port and returned with supplies for the diggings, smelting and the mine community. Prior to smelting being established in Burra, as many as 1,200 bullock drays, each carrying about 2t of ore, were to be seen on the roads between Burra and Port Adelaide.[621] Small stopover towns sprung up along the route, many of which later became regional service centres. Other trading routes were also established to the early agricultural areas north of Adelaide such as the Barossa and Clare districts to bring fresh produce to market in Burra. Barossa Germans particularly took advantage of the remoteness of the Burra community to attain better prices for their fresh produce than they could get at the Adelaide market[622].

**Climate**

ACMS (Burra) is in a temperate region, located just inside Goyder's Line[623]. The climate is characterised by a warm Mediterranean climate, with short, sometimes wet winters and long hot and dry summers, when it can reach more than 40°C for consecutive days. The average rainfall is about 434mm per year. The highest monthly rainfalls occur in the winter months of June, July, and August.

Although Burra had sufficient supply of water as a biproduct of dewatering the mines, the variability of the seasons held sway on the lifeline of fuel and goods supplied by animal transport, and hence the mine's economic viability. The summer months ensured that tracks were trafficable, but a lack of rain meant no feed on the route. Conversely, in winter months the bullock tracks became impassable despite abundant feed and water[624].

**Geology and Soils**

The geology of the ACMS (Burra) is important in that the historic significance of the area is largely due to its metal bearing ores. The ingredients for the Burra copper orebody were likely percolated up through the Earth's crust 300 to 400 million years ago, at the end of a period of volcanic activity in the area.

*The Burra orebody formed in a zone of heavily fractured dolomite rock confirmed between two faults...The ore zone was up to 70 metres wide and contained brightly coloured oxidised copper minerals, chiefly malachite (green) and azurite (blue) These occurred as veins, blebs and nodules in the dolomite host rocks.*

*The rich Burra oxidised ores were formed from a much poorer body of copper sulphide mineralisation over a period of many millions of years, but a process known as secondary enrichment[625].*

The overlaying soil within the ACMS (Burra) is largely made up of alluvial clays and sands with the occasional well-rounded pebbles and boulders. In valley areas the alluvium can be up to 15m deep.

**Vegetation**

The Burra area has been classified by the Interim Biogeographic Regionalisation for Australia v.7 (IBRA7) as within the Flinders Lofty Block, subregion FL02: Broughton. Prior to the European settlement, the ACMS (Burra) area was likely a Eucalyptus camaldulensis ssp. camaldulensis (River Red Gum) Open Woodland with a mix of open grass and shrub understorey.

The northern areas of South Australia within range of Adelaide were first used for low intensity sheep grazing, mainly on the grassy openings scattered through the scrub until large scale clearing for cereal crops occurred in the 1880s. The intensity of activity at Burra during the mining period saw the denuding of the area to the extent that very little original vegetation remains within the ACMS (Burra) boundaries. Post 1877, as the town transitioned to an agricultural service centre, the Burra Creek has become a recreational area and revegetated with a mix of native and introduced species.

## European Settlement Pattern

The settlement accompanying the mining development at ACMS (Burra) is defined by a dispersed group of planned grid towns established to the south and north of the mine, the first of which was Kooringa, a private town laid out on land owned to the south of the mine by the SAMA in 1846 to provide accommodation for the miners. A substantial number of miners initially disregarded the company allotments, preferring to construct make-do shelters by digging into the banks of the Burra Creek near to Kooringa. Early descriptions also mention the mine site being dotted with timber dwellings. The motivations for the non-compliance of an estimated 40% of the mining population are not altogether clear but assumed the result of inexperienced mine owners who imposed high rents and failed to fully comprehend the miners' desire for independence. Floods and subsequent health problems effectively ended the creek settlement by the late 1850s and little evidence of the 'dugouts' survives today.

Not wanting to limit their access to yet undiscovered lodes, the company also refused to grant freehold title within their land, and this eventually led to the now observable north/south disbursement of the settlement. In 1849 the town of Redruth was laid out by the Government on Crown land north of the border of the SAMA land and became the focus of Colonial government institutions including the police station and courthouse. Growing emigration led to the expansion of additional private towns to the north of the mine around Redruth, namely Aberdeen (1849), New Aberdeen (1872), Llwchwr (1855), and Hampton (1857). Despite a similarity of grid layout and construction type, the villages developed their own identity, to a degree influenced by the ethnicity of the residents.

This loose grouping of settlements north and south of the mine overlaid on varying topography is a defining characteristic of ACMS (Burra) and is an intrinsic part of the heritage of the area.

## Current Land Tenure and Management

The land which contained within the ACMS (Burra) boundary is almost entirely held under freehold title, although some land, such as the Historic Mine Site, the Burra Creek, and other areas are Council land and publicly accessible. Some sites are owned or managed by the National Trust (SA) and can be accessed by the purchase of a self-guided tour which includes a passport key to obtain access to key buildings.

## Underground Workings

As the ore originally cropped out at the surface, initial mining at Burra was a surface operation. The Cornish system was then used to further exploit the lode. Shafts were sunk vertically to intersect the lode at a given depth or inclined following the lode. In the upper layers the shafts were timbered to prevent collapse. Once a shaft had reached a depth of about 10 fathoms (18m) a horizontal level was formed in both directions. This process was repeated at each 10-fathom depth and further shafts were dug once the mine had reached about 50 fathoms (91m), largely to create updraft ventilation. Thus, an underground grid of shafts and levels was created from which the ore body could be accessed. At Burra, the deepest shaft reached 183m.

The formation of shafts and levels was called 'tutwork' and was distinguished from the extraction of ore. A miner could either by employed in the tutwork or in ore extraction, referred to as 'tribute' work. Tutworkers generally worked for a fixed wage while tributers were paid a proportion of the value of the ore they extracted.

In removing the ore, miners worked from the upper part, or back, of one level towards the bottom of another. The resulting excavation, or stope, was therefore arranged so that broken ore fell to the level below and was trammed to a hauling shaft. As the opening of a stope progressed, timbers were fastened to the sides forming a platform which gave a protective cover to the level below. Ore was passed onto the level through chutes. A stope was worked by taking one metre off the roof of the stope at one end and continuing to work towards the other end. Where the lode was wide and the ground weak, timber pillars known as 'styes' were erected to support the roof. As the roof was removed, the styes were increased in height and filled with crushed rock or attle.

Gunpowder was used to break the rock and was placed in shot holes drilled by hand, using a technique known as hammer and tap. One man held a steel borer while two others alternatively hit it with hammers.

The later open cut operation destroyed a substantial portion of the underground workings. South Australian Department of Mines maps show that only two of approximately twelve major shafts were unaffected. None of the shafts and levels developed during the mine's operation are accessible today. The standing water level is about 37m below the surface and hence the all the lower mine levels are flooded. The underground workings will contain abandoned mining machinery including the remains of iron pipes used for pumping, timber drive shafts, timber shoring, ladders, false floors, and loading chutes. The fabric above the standing water level will consists of the remains of timbered shafts and shaft collars.

FIGURE 3

Carting routes & local sources of raw materials used by Burra smelting Works

- – – – – Bullock route, 1848-57
- • • • • • Mule route, 1853-7
- – • – • – Route used by both mules & bullocks
- × × × × × New route, to meet railway to Port Adelaide, 1857-70

5 0 5 10 15 20 25 kilometres

🧱 = fireclay (for firebricks)
⛏ = iron mining (for flux)
🌳 = wood (for furnace fuel)
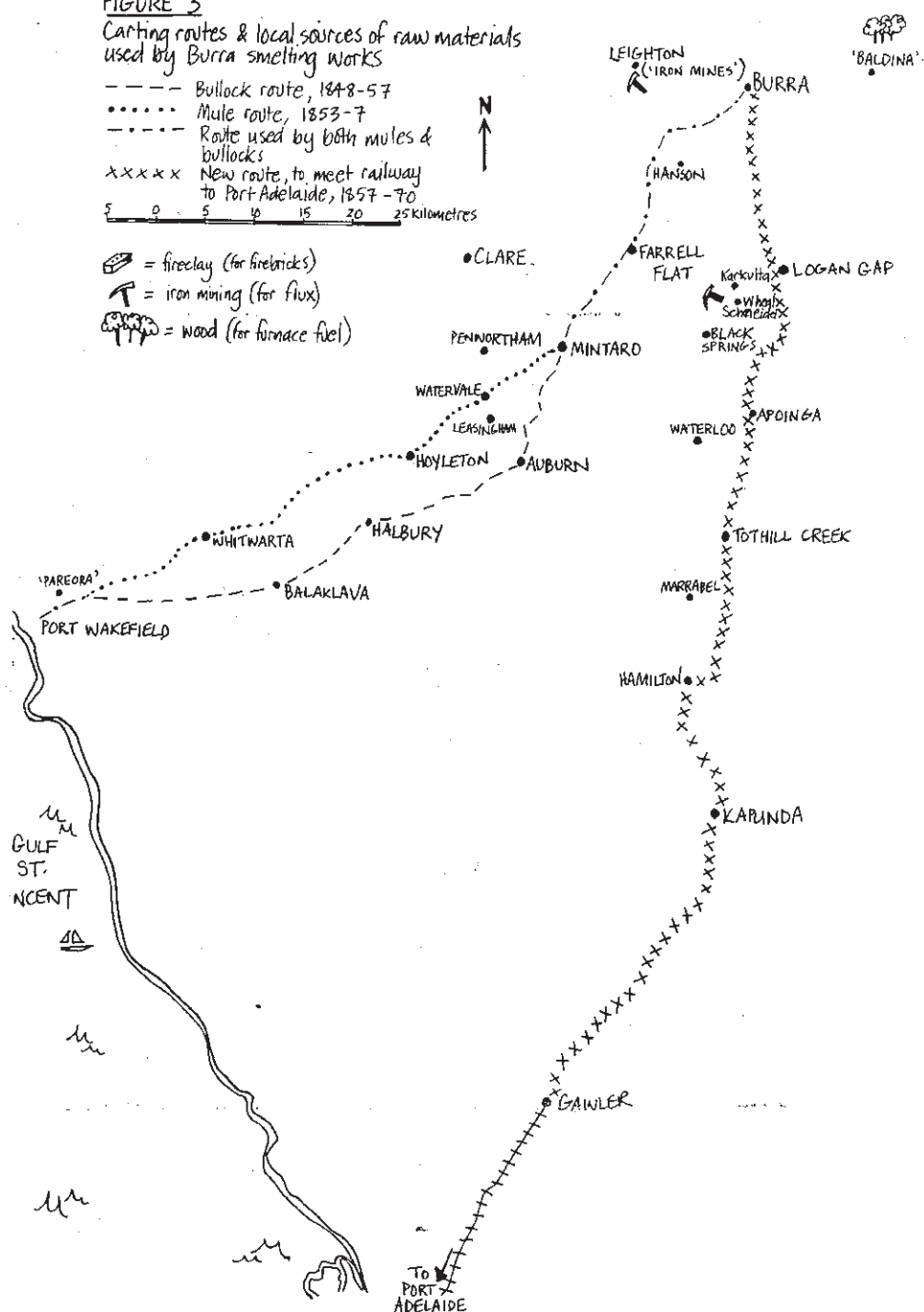
Carting routes and local sources of raw materials, used by the Burra Smelting Works
Source: Bannear, D. and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (Burra: District Council of Burra Burra, 1990), p.143.

# 5.4. Description and condition of places

### 5.4.1 Mining

**Fabric Description**

The remnant physical evidence of Cornish mining technology and practice is demonstrated at two sites within the ACMS (Burra). The primary site is the Burra Mines Historic Site (SAHR 10970), while a secondary site, the Bon Accord Mine, lies to the north.

Burra Mines Historic Site (SAHR 10970)
The Burra Mines Historic site is a distinct area within the greater Burra town. It is west of Burra Creek between the former townships of Redruth and Aberdeen. The barren, expansive landscape is defined by gently sloping hills and mine overburden, dotted with established trees and ruined structures, but the area is dominated by a large open cut mine, the lower levels of which are filled with water.

Approached from Market Street, the first structure viewed is Peacocks Chimney which defines the Mine entrance. The Former SAMA Storeman's Dwelling, Storeroom, Yard and Walls are situated close by. A steep road leads up to the viewing area where the open-cut mine is seen. The two other chimneys are visible in the distance, as are the three remaining engine houses.

The other elements not separately described below include:

- Ruins of various residences of mine company employees
- Underground flues and chimney bases for no longer existent boiler houses, such as Schneider's engine house
- Ruins of Morphett's pool for storing water pumped from Morphett's pumping engine to operate the various machinery
- Underground drainage channel for the water from Morphett's pool
- Ruins of ore concentrating processes, such as the buddle pits and water wheel, with other areas concealed below overburden
- Former roadways
- Remnants of the floor of a horse stable complex
- Cuttings associated with mining operations, such as the haulage cutting
- Top of various mine shafts
- Timber jinker used to transport Cornish engines used at the mine, currently displayed in Market Street
- While Captain Roach's headstone is displayed on the site, it has been relocated to this position



ROACH'S ENGINE SHAFT
BURRA BURRA MINES
1850
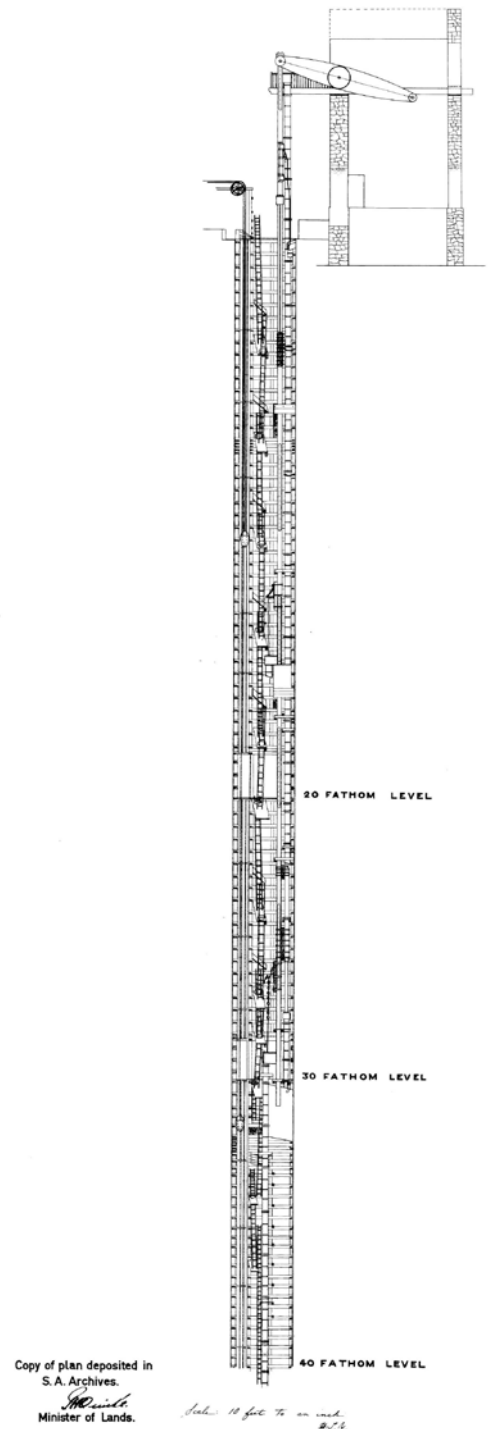
Diagram of Roach's Shaft showing the ladder access system, timber shoring, winding and pumping arrangements.
Source: SA Mines & Energy Archive.

### Former Powder Magazine (SAHR 10045)

A single storey structure, built from random rubble to store gunpowder used in blasting at the mine, comprising of a central building enclosed by an external perimeter blast wall.

### Former South Australian Mining Association Store Room, Yard and Walls (SAHR 10019) and Former South Australian Mining Association Storeman's Dwelling (SAHR 10049)

The SAMA Storeroom complex is a collection of company buildings within a high stone boundary wall. Built at the entrance to the mine, the complex was the company's main depot for the storage of building materials and mining equipment and included offices, a store building and a storeman's residence. The tall stone and brick storeroom is the dominant feature to which the storeman's dwelling is attached, a single storey stone structure also integrated into the boundary wall. The yard and walls were to prevent theft of company materials and consist mainly of random rubble stone, however some are ruins.

The complex is also the site of the earliest attempt to smelter copper ore, although there is disagreement amongst later research about its exact location.

The Dwelling, Storeroom and Yard are now occupied as a private residence. Some structures have been adapted to suit new facilities and shedding. The yard has fallen into disuse and new layers of derelict vehicles and machinery have been introduced since it was sold by the company in about 1914[626] with the mine site.

### Mine Hospital

The mine hospital is a substantial symmetrical stone cottage with a central door and a pair of windows each side. It was built by the SAMA for injured miners, although rarely used during the mining period as injuries were relatively rare and miners and their families preferred traditional Cornish remedies. The hospital cottage has a hipped roof clad with corrugated roof sheeting and a bullnose verandah clad with corrugated roof sheeting which returns around one side, the return being constructed post-1970. There are two prominent stone retaining walls at the front of the house; one which forms the verandah plinth and includes steps which lead to the entrance door.

The stone mortuary is located to the west at the rear of the building and has been integrated into later shedding.

The cottage is now used as a private residence. Several layers of later development and adaptation are evident to the rear of the house.

### Former Mine Manager's Dwelling and Office (SAHR 10056)

The Former Mine Manager's Dwelling and Office is a single storey structure with a series of basement rooms at the north end, with the whole structure now a ruin. The structure is located on the very edge of the cutting for the upper bench of the modern open cut mine, affecting the verandah and terrace on the east side of the building. There is no roof, and no timber structure or fittings remain. Some sections of external render remain on the walls. Much of the remaining internal plaster is now inscribed with graffiti etched into the surface. The ruins include several outbuildings to the west.

### Former Foreman's Residence

The Former Foreman's Residence is a single storey symmetrical double fronted cottage with a hipped roof. It is one of two surviving intact dwellings constructed by the mining company to house company employees at the mine site. The walls are constructed from coursed bluestone with white lined pointing. There is a series of random rubble bluestone lean-tos added to the rear. Later adjoining skillion carports have also been added to each side.

### Peacock's Chimney [Cornish] (SAHR 10020)

The stone and brick Peacock's Chimney provides a landmark entry to the mine site. It originally provided updraft for the boilers at Peacock's Enginehouse but in c.1971-1972, the chimney was dismantled due to the demolition of the enginehouse to make way for the modern open-cut mine and the chimney was relocated to the present site. A metal, painted figure at the top of the chimney is "Johnny Green" – the mascot of the early Burra Burra miners.

### Former Morphett's Pump House (SAHR 10053)

The Former Morphett's engine house is a three-storey bluestone structure whose timber internal floor structures and roof were reconstructed. A more recent steel framed access stair is located to the west side with cantilevered canopy over the door opening. The stone retaining walls forming the lower portion of the boiler house along with a remaining Cornish boiler adjoin the engine house to the west.

Internally, the building now houses an interpretive display. It has timber framed floors and floorboards, and timber framed stairs with a central circular void in the floor surrounded by a steel balustrade indicating the original location of the cylinder of the engine. The ground floor is part slate flags and the original bedstones for the cylinder remain in place. Some of the wrought iron holding down bolts for the cylinder also remain in place.

The top of Morphett's shaft is adjacent and is covered with steel mesh and surrounded with fencing. Adjacent there is also a large pit formed by stone retaining walls which housed a counterweight, the original drainage adit lined with timber internally is located north of the shaft, and associated cast iron pipework which was removed from the shaft displayed on the ground to the north.

### Former Winding House (SAHR 10052)

The Former Morphett's winding house is a three-storey structure which is now without a roof, its timber internal floors, doors, and windows. It was constructed from coursed bluestone with red brickwork forming the voussoirs of the arched openings. The adjoining stone structure on its south side originally housed the flywheel while remains of the mounting blocks for the drive and pulley for the dressing tower remain on the north side. Various wrought iron holding down bolts remain in place, as do the bed stones for the cylinder. The timber lintels for the openings in the bob wall were replaced as part of stabilisation works carried out in 1987. Internally the structure is inaccessible being blocked off by steel mesh barriers.

### Mine Bridge [Stone Arch] (SAHR 10021)

The single arch bridge was constructed from stone from the Hampton quarry with parapet walls, and stone coping. The bridge continues to carry the roadway, but this has been widened on the west side resulting in the loss of the west parapet. The western side of the vault has a more recent concrete retaining wall with culvert.

### Former Graves Pump House (SAHR 10054)

The Former Graves engine house was originally a three-storey structure but is now a ruin. Internally the structure is inaccessible being blocked off by steel mesh barriers.

### Former Ore Sorting Floor (SAHR 10055)

Although the mine site would have included many ore sorting floors, as is evident in historic photographs, the majority were located where the overburden from the modern open cut mine was dumped and are no longer visible. The surviving Ore Sorting Floor is an expansive area cut into the slope running northeast – southwest and is paved with stone cobbles. A stone retaining wall is located on its east side to retain the higher ground to the east and this returns to the south end of the floor. An underground drain is located below the north end of the floor to drain the slope to the east. There is pipework associated with the historic mine displayed on the adjacent ground.

### Former Engine/Crusher House (SAHR 10445)

The ruins of the Former Engine/Crusher House consist of a complex of ruined structures including the roll crusher, ore dressing tower, boiler house and engine house. The ore dressing tower is constructed from stone with the southwest wall built against an embankment which is otherwise supported by a tall drystone retaining wall. There is no roof, but some remaining timber beams remain within the tower representing the various original floor levels. There is no northeast wall, and it is presumed that this was originally timber framed. Through the southwest wall of the tower is also a timbered tunnel that passes through the embankment for feeding water into a cistern used in the ore dressing process.

Further to the northeast is the lower stone walls which act as the retaining walls of the crusher house and adjoining are the similar stone walls of the engine and boiler house, which include the stone engine mounting blocks with remaining wrought iron holding down bolts. The other ruins consist primarily of stonework walls and foundations. Remnants of jigging machinery are displayed on the adjacent ground.

### Former Crusher Chimney [Cornish] (SAHR 10047)

The Former Crusher Chimney is a tall structure constructed with a rectangular, stone base, and a circular taperings, stone chimney stack, with a red brickwork section at the top.

The ruins of the boiler and engine house remain well below the chimney to the west. This is comprised of stone walls which act as retaining walls and formerly were the base of the building, together with stone mounting blocks for the engine including various iron holding down bolts.

### Former Haulage Engine Chimney [Welsh] (SAHR 10046)

The Former Haulage Engine Chimney is a tall structure constructed with a square, stone base with capping supporting a square, stone chimney stack. It has a projecting stone stringcourse at the top with brick capping.

To the north, lower down the slope is the ruins of the engine and boilerhouse, these comprised of stone mounting blocks and wall bases with brick walls around the boiler. The remainder of the building was constructed of timber and galvanised iron. Various iron holding down bolts and timber plates remain associated with the mounting of the machinery. The boiler was connected to the chimney via an underground vaulted stone flue.

### Former Bon Accord Mine Site (SAHR 10023)

The mine site at Bon Accord is a compact complex of former mining structures set within the town streets of Aberdeen and New Aberdeen that later grew around the mine. It was largely unsuccessful as a mine, but its shaft was used for the town's main water supply until 1966.

The complex of structures comprise the former main shaft, subsequently enclosed within a shed as part of the Burra Waterworks, and two separate stone structures, being the managers residence and the mine office/shop/forge with portions of the surrounding stone walls. The large pump shed is clad with corrugated sheeting and painted and now provides an entrance to the Bon Accord shaft. The mine office/shop/forge is a long single storey structure with a basement and has a distinctive barrel roof. Some sections of the former stone yard wall are standing while only footings are evident in other places.

The Bon Accord complex is a National Trust run museum. It has extensive interpretive displays dating from the 1980s, including an interactive scale model of the Burra mine.

**Current Use**

The Burra Mines Historic Site (SAHR 10970) is currently operating as an open-air museum site. Public access is uncontrolled to most of the mine site via a public road from the east. The western and portions of the southern and northern boundaries are fenced with a 2m chain link fence.

The publicly accessible mine site incorporates the following features:

- Former Powder Magazine (SAHR 10045), Former Mine Manager's Dwelling and Office (SAHR 10056);
- Peacock's Chimney [Cornish] (SAHR 10020), Former Morphett's Pump House (SAHR 10053);
- Former Winding House (SAHR 10052), Former Graves Pump House (SAHR 10054);
- Former Ore Sorting Floor (SAHR 10055), Former Engine/Crusher House (SAHR 10445); and
- Former Crusher Chimney [Cornish] (SAHR 10047);
- Former Haulage Engine Chimney [Welsh] (SAHR 10046).
- The Former SAMA Store Room, Yard and Walls (SAHR 10019) and the Former SAMA Storeman's Dwelling (SAHR 10049) is currently a private dwelling.
- The Mine Hospital is currently a private dwelling.
- The Former Foreman's Residence is currently a private dwelling.
- The Former Bon Accord Mine Site (SAHR 10023) is owned by the National Trust (SA) and operated as a museum and for short-term accommodation.

General view of the mining landscape at Burra Mines Historic Site


Ruins of dwelling at the Mine Site


Company dwelling ruins at the Mine Site


Mine shafts in the vicinity of Morphett's chimney base


Ruins of Morphett's engine pool with Morphett's Pump House and Winding House in the background


Morphett's Pump House (SAHR 10053)

Morphett's Winding House (SAHR 10052)



Ruins of Morphett's Boiler House



Graves Pump House (SAHR 10054)



Ore Sorting Floor & Retaining Wall (SAHR 10055)



Ruins of former Engine/Crusher House (SAHR 10445)



Crusher Chimney (SAHR 10047)

Haulage Engine Chimney (SAHR 10046)


Former Powder Magazine (SAHR 10045)


View of the Storeman's Residence from south (SAHR 10049)


Interior view of the yard looking towards the rear of the Storeroom (SAHR 10019)


Walls of former Store offices against west wall to yard (SAHR 10019)

Site plan of SAMA Stores, including Storeman's Dwelling. Source: Habitable Places & Phillips+Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", (Burra: The District Council of Burra Burra, 1996).



Floor plan of Storeman's Dwelling & Storeroom. Source: Habitable Places & Phillips+Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", (Burra: The District Council of Burra Burra, 1996).

East (Market Street) elevation of Storeman's Dwelling & Storeroom. Source: Habitable Places & Phillips+Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", (Burra: The District Council of Burra Burra, 1996).



Former Mine Hospital from Market Street



Former Mine Mortuary (left) incorporated into shedding behind the former Mine Hospital



Former Mine Foreman's Residence



Peacock's Chimney (relocated) (SAHR 10020)

Burra Jinker



Mine Bridge abutments and wall on east side of Market Street (SAHR 10021)



Bon Accord Mine Smithy and Boundary wall (SAHR 10023)



Former residence at the Bon Accord Mine (SAHR 10023)

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Burra Mines Historic Site (SAHR 10970) | Fair –<br><br>Many of the elements are in a ruinous state and suffer from the typical issues associated with unprotected masonry construction, including stone and pointing deterioration through weathering, and dampness, whether rising, falling or penetrating, collapse of top sections of underground flues and damage caused by vegetation, particularly woody weeds. | High –<br><br>The Burra Mines Historic Site provides evidence of the scale and success of the Burra Mine. Enginehouses, chimneys and associated structures reflect Cornish mining technology, and the mining process can be interpreted and followed in principle from the remaining features.<br><br>The visual landscape has been severely disrupted by the modern open cut and the resultant overburden. The overburden covers most of the ore dressing areas from the early mining period. The modern water tank is also highly intrusive.<br><br>There is existing interpretive signage throughout the site.<br><br>The site has value as an archaeological record, the potential of which is yet to be fully researched and mapped. |
| Former Powder Magazine (SAHR 10045) | Good –<br><br>Minor deterioration at base of perimeter yard walls, particularly to north side.<br><br>Wear to ground/undermining of quoins to sides of gate opening in perimeter wall.<br><br>Poor paint condition to gate. | Medium –<br><br>The magazine was restored by the National Trust in 1976, including partial reconstruction of collapsed portions.<br><br>Former use is clear in the extant fabric.<br><br>Existing interpretive sign including historical image, and information. |
| Former SAMA Store Room (Part SAHR 10019) and Former SAMA Storeman's Dwelling (SAHR 10049) | Fair –<br><br>The Store and Dwelling are generally in fair condition<br><br>Issues include cement pointing to masonry, windows missing to east lean-to portion with that part infested with pigeons, paintwork to timber in poor condition, and minor cracking.<br><br>Original timber shakes extant under iron roofing. | High –<br><br>The Store and Dwelling are largely intact. Some insensitive modifications have occurred to integrate modern wet areas.<br><br>Loss of ceiling, doors and internal plaster to walls to north lean-to.<br><br>Collapsed sections of perimeter stone wall. |
| Former SAMA Yard and Walls (Part SAHR 10019) | Poor –<br><br>Large portions of the yard walls are collapsed and structures within the walls are also ruined and not maintained. | Medium –<br><br>Despite the diminishment of the form of structures through fabric loss and collapse, the layout of the yard and early structures within it are legible. New shedding and the dumping of rubbish confuses the site and has affected its archaeological potential.<br><br>The site has value as an archaeological record. Refer to Habitable Places & Phillips Pilkington Architects, Burra Mines Storeroom Yard and Wall, (Burra: District Council of Burra Burra, 1996). |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Mine Hospital | Fair –<br><br>The mine hospital is generally in fair condition and is in current use as a residence.<br><br>The following issues were noted:<br><br>Visible signs of red rust to roofing.<br><br>Severe salt attack and rising damp to stone walling to the rear of the cottage. The likely cause is a combination of a solid internal floor, poor site drainage and leaking laundry drain. | Medium –<br><br>Although the building has been extended, initial investigations indicated that the early portion of the building is largely intact. Some changes have occurred to the separate mortuary building located to the rear which has been integrated into a shed.<br><br>Return verandah to Mine Hospital constructed post-1970.<br><br>Alterations and additions in concrete block are intrusive. |
| Former Mine Manager's Dwelling and Office (SAHR 10056) | Poor –<br><br>The structure is a ruin in poor condition. No roof, timber structure or fittings remain. The following major issues were observed during the inspection:<br><br>Noticeable lean to the remaining standing walls, particularly east-west wall to north central portion of structure.<br><br>Delamination of faces of remaining standing walls in several locations to north and south end of structure.<br><br>Collapsed core of north-south internal spine wall to south central portion of structure.<br><br>Deterioration of lower stone due to rising damp to walls of outbuilding at southwest corner of structure, with these at risk of collapse.<br><br>Dropping voussoirs to arch of door opening in east-west wall at north end of structure.<br><br>Vegetation, including woody weeds, growing within and amongst the ruins. | Low –<br><br>Only a few full height walls remain and there is a substantial loss of the structure's value. There are some sections of original internal render on the walls. Much of the remaining internal plaster is now inscribed with graffiti etched into the surface. |
| Former Foreman's Residence | Good –<br><br>The Former Foreman's Residence is generally in good condition and currently occupied.<br><br>Rising damp and salt attack is evident to lower portions of walls in select areas. | Medium –<br><br>The external form of the dwelling is largely intact. There is a substantial addition to rear and the verandah is unlikely to be the original form.<br><br>Intrusive carport structures are to each side of the dwelling. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Peacock's Chimney [Cornish] (SAHR 10020) | Good – <br><br> The structure was found in good condition at the time of the inspection with no issues of note observed. | Low – <br><br> The reopening of the open cut mine in the 1970s required the destruction of the chimney and it was subsequently dismantled and rebuilt in a different location, on its present site, by the National Trust in 1972. Its siting does not relate to the original operation of the Mine. <br><br> Existing interpretive sign including historical image, and information. |
| Former Morphett's Pump House (SAHR 10053) | Good – <br><br> The following issues were observed during the inspection: <br><br> Bird roosting/nesting within the roof void via holes formed through soffit and timber linings. <br><br> West wall of boiler house in poor condition and as it is acting as a retaining wall it is at risk of collapse. <br><br> Cracking to south end of east and west walls visible internally to upper level. Most noticeable to west wall. | Medium – <br><br> Stone walling largely intact. <br><br> In 1986, the engine house was partly reconstructed and the shaft retimbered, and in 1988 the original bell reinstated at the top, but later removed. In 2012, the slate roof, installed in 1986, was replaced with galvanised steel. <br><br> The building now houses an interpretive display and museum, and previously provided access to a restored portion of the drainage adit from the shaft (currently closed to the public). <br><br> There are several existing interpretive signs including historical images. |
| Former Winding House (SAHR 10052) | Fair – <br><br> The following issues were observed during the inspection: <br><br> Open joint and cracking to wall below infilled door to north elevation. <br><br> Loose bricks to underside of crown of upper arched opening to north elevation. <br><br> Cracks over arched head of lower door extending through to underside of window opening over. <br><br> Undermining of soil below footing to northeast. <br><br> Open joints in masonry to lower east corner. <br><br> Open joints and cracking over timber lintel over door opening to southeast elevation. <br><br> Deterioration of stones forming piers to the sides of the crow holes at bottom of southeast side of southeast mounting block for flywheel. <br><br> Small open joints to top of masonry mounting blocks to flywheel. | Low – <br><br> Loss of roof and timber internal floors, doors, and windows has diminished the legibility of the structure's original use. The timber lintels for the openings in the bob wall were replaced as part of stabilisation works carried out in 1987. Internally the structure is inaccessible being blocked off by steel mesh barriers. <br><br> Existing interpretive sign including image, and historical information. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Mine Bridge [Stone Arch] (SAHR 10021) | Fair –<br><br>The following issues were observed during the inspection:<br><br>Significant deterioration to face of stonework to east wall below springing off vault.<br><br>Significant deterioration to face of stonework to top two courses below coping of parapet.<br><br>Stone to external corners of walls below vault is in poor condition.<br><br>Stone coping missing to top of north pier.<br><br>Surface of pointing deteriorated throughout with only few indications of original ironed joints.<br><br>Surface corrosion of iron cramps to coping. | Low –<br><br>West side of structure has been significantly changed because of subsequent road widening and this resulted is the loss of the west parapet. The western side of the vault has a more recent concrete retaining wall with culvert.<br><br>Existing interpretive sign plaque containing historical information. |
| Former Graves Pump House (SAHR 10054) | Fair –<br><br>The following issues were observed during the inspection:<br><br>Timber plate to top of balance east bob wall is rotten along with remaining joists to base of cockpit against east wall internally.<br><br>Section of missing facework to west wall south of main entry at low level.<br><br>Cracks through upper opening lintels to north and west elevations.<br><br>Woody weeds growing to windowsills.<br><br>Deterioration of pointing to north elevation – this wall has not been repointed.<br><br>Collapse of bank on east side. | Medium –<br><br>Loss of roofs and floors has diminished the structure's value but the ruin is clearly recognisable as a Cornish style engine house. Internally the structure is inaccessible being blocked off by steel mesh barriers.<br><br>Existing interpretive sign including historical image, and information. |
| Former Ore Sorting Floor (SAHR 10055) | Fair –<br><br>The following issues were observed during the inspection:<br><br>Open joints to west retaining wall with localised stabilisation required in places.<br><br>Open joints to west end of retaining wall to south side of floor.<br><br>Lower level deterioration of stone surface and pointing to central portion of east retaining wall.<br><br>Stone paving missing to southwest corner of floor. | High –<br><br>The floor and retaining wall remain largely intact.<br><br>Existing interpretive sign including historical image, and information. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Former Engine/Crusher House (SAHR 10445) | Poor –<br><br>The following issues were observed during the inspection:<br><br>Timber beams spanning between the high walls of the former Dressing Tower are in poor condition with significant rot with risk of collapse of walls if beams fail.<br><br>Cracked stone lintel over void in south wing of retaining wall with likely collapse of section of wall over.<br><br>Outward bulge in lower stone retaining wall north of Dressing Tower with large vertical crack.<br><br>Minor deterioration of pointing to inside of Dressing Tower, particularly to north wall. | Low –<br><br>Loss of roof and most of the internal structure has significantly altered the structure's original form and the ability to understand its operation. There are some remaining timber beams which remain within the tower representing the various original floor levels, but there is no northeast wall, it is presumed that this was originally timber framed.<br><br>Existing interpretive sign including historical image, and information. |
| Former Crusher Chimney [Cornish] (SAHR 10047) | Fair –<br><br>The following issues were observed during the inspection:<br><br>Chimney<br>Open joints to brick coping and below to east side.<br><br>Deterioration of stone face below brickwork to south east side.<br><br>Open mortar joints to stone to full height on west side.<br><br>Coping stone has fallen to ground to Northeast corner of base.<br><br>Engine house<br><br>Rotten timber projecting from southeast retaining wall of roller crusher and structure.<br><br>Deterioration to majority of height to south west wall of engine house.<br><br>Low level deterioration to retaining wall northwest of footprint of original building.<br><br>Low level of deterioration of stone to north east and south west walls of engine house with many open mortar joints.<br><br>Collapsed area to face of lower section of northeast stone retaining wall of boiler house.<br><br>Collapsed top of flue to chimney behind retaining walls to northeast and southwest sides of boiler house. | High –<br><br>Remains largely intact. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Former Haulage Engine Chimney [Welsh] (SAHR 10046) | Fair –<br><br>The following issues were observed during the inspection:<br><br>Deterioration of pointing to full height of northwest side of chimney and some deterioration of pointing to southwest side of base of chimney.<br><br>Deterioration of render flaunching to top of chimney.<br><br>Collapsed top of the vaulted underground masonry flue connected to the boilerhouse to the north immediately at the base of the chimney.<br><br>Rotten timber plates to top of mounting walls near boiler.<br><br>Deterioration of brickwork at end of boiler. | High –<br><br>Remains largely intact.<br><br>Existing interpretive sign including historical images, and information. |
| Former Bon Accord Mine Site (SAHR 10023) | Fair -<br><br>The buildings are generally in a fair state of repair. The following issues were noted:<br><br>Rising damp and cracking to stonework and inappropriate cement mortar repairs are exacerbating the salt attack.<br><br>Major crack (2-9mm) to wall of manager's residence.<br><br>Roof in poor condition to building adjacent waterworks building.<br><br>Trees pushing out wall adjacent waterworks building. | Medium -<br><br>Bon Accord Mine retains many of its original features and demonstrates the form and layout of a copper mine on a compact site which can be readily interpreted.<br><br>Compromised integrity due to partial demolition of yard walls and full demolition of engine house.<br><br>The Bon Accord complex is a National Trust run museum. It has extensive interpretive displays dating from the 1980s, including an interactive scale model of the Burra mine. The provenance of much of the collection is however not clear. |

### 5.4.2   Smelting

**Fabric Description**

Although the Burra Smelts were a large and impressively scaled industrial complex during the mining period, very little of those structures have survived intact. Today only scattered ruins of the furnace houses, chimney stacks, and casting houses are visible above ground.

Associated structures such as the smelting company houses, and offices survive as they were more readily useable after the industrial operations ceased. Remnant features are described in more detail below.

Former Burra Smelts Historic Site (SAHR 10989)
Former Burra Smelts Historic Site including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office occupies a large area from the west bank of the Burra Creek through to Smelts Road to the east. The Bridge Abutments are located on either side of the Burra Creek east of the original mine entrance road and provided access between the mine and the smelters. The other components are concentrated near the east side of the site. Apart from the Smelts Managers Residence and Office, which has been converted into a residence, all the other components are in ruins. The remnants are primarily masonry with the outline of the base of various walls being visible together with remnants of paved areas. Other floors are likely to be concealed below debris from collapsed walls.

The Smelts Managers Residence and Office is a single storey structure which has two attached buildings with a party wall. It is constructed from stone with a gable roof and skillion verandah.

Former Burra Smeltsyard and Storehouse (SAHR 10024)
Former Burra Smeltsyard and Storehouse is located on the east side of Smelts Road opposite the Managers Residence and Office. It is comprised of a large rectangular stone walled yard orientated parallel to Smelts Road whose northwest end is no longer present. Various masonry structures are located against the inside faces of the walls. One of which is a single storey roofed structure constructed of stone. It has a hipped roof clad with corrugated roof sheeting and a skillion verandah at the rear.

Former Smelts Superintendent's Residence and Wall (SAHR 10204)
Former Smelts Superintendent's Residence and Wall is now isolated from the other smelter components due to subsequent residential subdivision of the northern part of the Smelts site. It is a single storey stone building with a steeply pitched double gable roof. It has a concave front verandah and a rear skillion lean-to which is in part constructed from weatherboard.

**Current Use**

The Former Burra Smelts Historic Site (SAHR 10989) is currently an uncontrolled open-air museum site ruin. The Manager's Residence and Offices are currently two private dwellings.

The Former Burra Smeltsyard and Storehouse (SAHR 10024) is currently not occupied. Standing walls used as stock fencing.

The Former Smelts Superintendent's Residence and Wall (SAHR 10204) is currently a private dwelling.



Distant view of the smelter site, looking over the mine stores in the foreground. Most of the industrial complex has been demolished, but the site is demarked by grey slag waste and scattered ruins.



'Former Burra Smelts Historic Site.



Smelts Manager's Residence & Offices
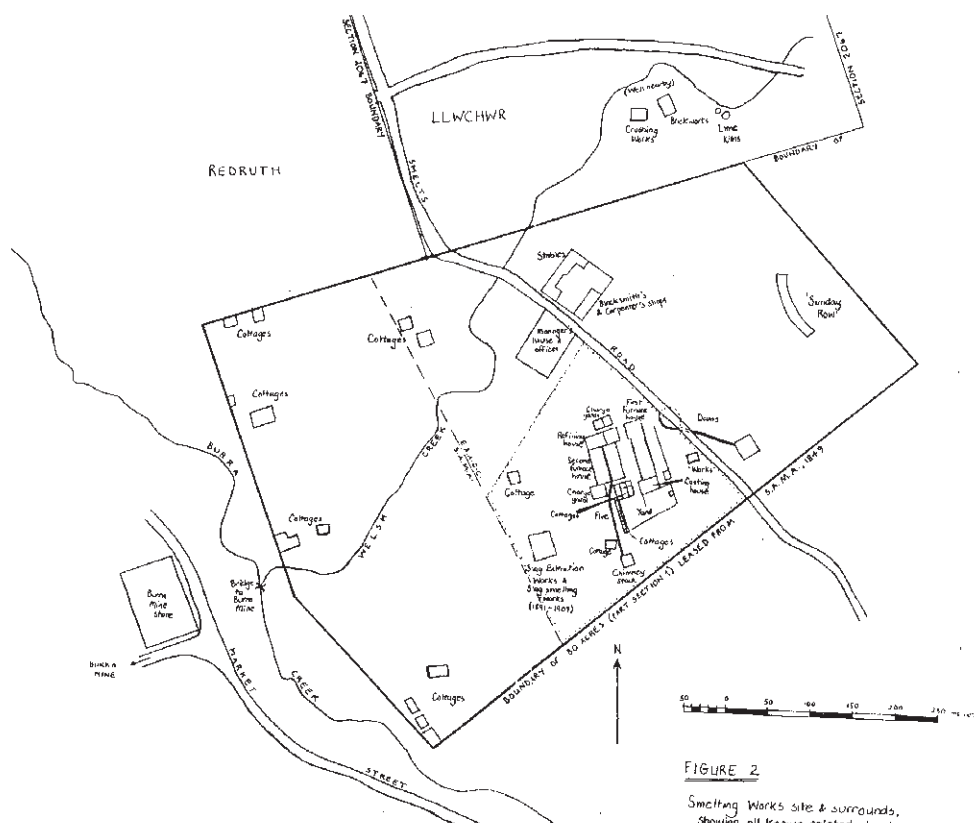
'Smelting Works Site & Surrounds, showing all known structures and features'. Source: Bannear, D. and Annear, R., The Burra Smelting Works: A survey of its history and archaeology, (Burra: District Council of Burra Burra, 1990).



Smeltsyard boundary wall and later adaptation of a portion to a dwelling, now abandoned



General view of the Smeltsyard, including former store to the right of image. The area is now used as a horse enclosure



Former Smelts Superintendent's Residence and Wall



Smelts Bridge Abutments in the Burra Creek

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Former Burra Smelts Historic Site (SAHR 10989) | Poor –<br><br>Apart from the Manager's Residence and Offices which are in good condition, the remaining features are in a ruinous state and are suffering from ongoing deterioration due to weathering and rising and falling dampness. Portions of remnant masonry walls are undermined.<br><br>Damage is also being caused by vegetation, particularly trees and woody weeds. | Low –<br><br>Most structures are in a ruinous state and their former uses and relationships are not easily understood.<br><br>The site has value as an archaeological record. Refer to Bannear, D. and Annear, R., The Burra Smelting Works: A survey of its history and archaeology, (Burra: District Council of Burra Burra, 1990).<br><br>Interpretive signs including historical images and information are located throughout the site. |
| Former Burra Smelts Bridge Abutments | Poor –<br><br>Masonry is in poor condition and not maintained. | Low –<br><br>Abutments are in a ruinous state and distant from the other site features such that their heritage value and relationship is not easily understood.<br><br>No interpretive materials explain the former relationship. |
| Former Burra Smeltsyard and Storehouse (SAHR 10024) | Poor –<br><br>The remaining features are in a ruinous state and are suffering from further deterioration due to rising and falling dampness leading to collapse. The wall to Smelts Road is leaning out and has several major cracks. | Medium –<br><br>The site is confused by the loss of former major features such as the former stables to the west and the addition of later layers of redevelopment. Other major structures such as the stores to the east are compromised due to loss of fabric and are in a ruinous state.<br><br>The now abandoned cottage against the west wall appears to be a later development. Sections of walling are at serious risk of further collapse.<br><br>The site is generally at high risk of further loss as there is no ongoing maintenance to exposed and ruined masonry. |
| Former Smelts Superintendent's Residence and Wall (SAHR 10204) | Good –<br><br>Rising damp and salt attack to lower portions of masonry. | Medium –<br><br>Former Smelts Superintendent's Residence and Wall is now isolated from the other smelter components due to subsequent residential subdivision of the northern part of the Smelts site. Its relationship to the Smelting Works is subsequently impacted.<br><br>Further research should be undertaken to determine provenance. |

### 5.4.3  Residential – Housing on Company Land

The physical remains of housing built on SAMA land is represented in the following places.

**Fabric Description**

2-12 & 16 Upper Thames Street, Burra (SAHR 10040/10041/10028/10029/10030/10031/10447)

The cottages located at 2-12 & 16 Upper Thames Street are six of the nine attached houses designed by colonial architect George Strickland Kingston for the SAMA in the town of Kooringa. Originally, they were built as pairs of single storey two-roomed cottages and shared a central diagonal chimney. Walls are from Hampton quarry random rubble bluestone. Side entrances served each pair of cottages, and the longest side faced the street was built to the boundary. Roofs are gabled over the front two rooms with a skillion roof over the two rear rooms. They were originally clad with timber shakes but later replaced with corrugated iron roofing. Some cottages retain the original shakes under the new iron. Four of the six surviving cottages of this type were subsequently converted to a single dwelling.

2 Upper Thames Street (SAHR 10040) is attached to the Cottage located at 4 Upper Thames Street (SAHR 10041). These cottages remained separate but were extended. The original side entrances off the street have been altered with new door openings on the street which became the front of the Cottages. The Cottages include a later second window facing the street.

6 Upper Thames Street (SAHR 10028) retained the north side entry and a later bullnose verandah was added to this side. The southern side entry was closed and the two houses joined by new internal openings. There is a central, diagonal, bluestone chimney. 8 Upper Thames Street (SAHR 10029), 10 Upper Thames Street (SAHR 10030), and 12 Upper Thames Street (SAHR 10031) are all similar to No.6. The only difference is No.12 has a later skillion roof to a weatherboard sheeting clad addition, rather than a corrugated sheeting clad addition.

In the conversion of 16 Upper Thames Street, Burra (SAHR 10447) to a single dwelling the side entrances were bricked up with a new door opening on the street which became the front of the cottage.

Timber Dwelling of the 1840's (SAHR 10434)

The timber dwelling is a single storey structure; the front section of which is based on a symmetrical double fronted cottage. It was constructed from a timber frame and clad with timber boards. The roof is a hipped form and is clad with corrugated iron with no eaves. There is evidence of timber roof shingles internally, calico ceiling and timber matchboard linings, however most internal linings have been lost. The rear section of the dwelling is a lean-to and is constructed from mud, rubble, and concrete with a skillion roof clad in corrugated iron.

Dwellings (Paxton Square Cottages) (SAHR 10159)

The Paxton Square Cottages is comprised of three separate rows of attached single storey dwellings. Each of these rows are comprised of eleven cottages in several different room configurations, with each of the rows built on the street boundaries to the north, west and south sides of the site.

They are constructed from solid random rubble stone walls with masonry chimneys. They have a gabled roof originally clad with split timber shales but now over clad with corrugated steel roof sheeting with the roof broken into individual forms where they step down the slope to the north and south terraces. The rear rooms have skillion roofs. The later rear additions are timber framed and are clad with weatherboard.

**Current Use**

2-12 Upper Thames Street, Burra (SAHR 10040/10041/10028/10029/10030/10031) are currently private dwellings.

16 Upper Thames Street, Burra (SAHR 10447) is currently a private dwelling.

The Timber Dwelling of the 1840's (SAHR 10434) is currently a vacant ruin on private land.

The Dwellings (Paxton Square Cottages) (SAHR 10159) is currently holiday accommodation. One the cottages is a house museum dressed with early furniture and equipment to interpret the living conditions of a Cornish mining family. Access is by the Burra Heritage Passport key system.



2 Upper Thames St (SAHR 10040)



6 Upper Thames St (SAHR 10028).

4 Upper Thames St (SAHR 10041).



12 Upper Thames Street (SAHR 10031).



8 Upper Thames St (SAHR 10029).



16 Upper Thames Street (SAHR 10447).



Timber Dwelling of the 1840's (SAHR 10434).



10 Upper Thames Street (SAHR 10030).



Dwellings (Paxton Square Cottages) (SAHR 10159).

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Historic layout of Upper Thames Street and visual relationship between SAMA company housing. | – | High – <br><br> This group of Upper Thames Street buildings are located on the wide, tree lined street and reflect the early nucleus of the town. Apart from 14 Upper Thames Street which was demolished, the remaining SAMA housing of 2-12 Upper Thames Street and 16 Upper Thames Street remains intact. <br><br> Existing interpretive sign plaque containing historical information. |
| 2 Upper Thames Street, Burra (SAHR 10040) | Fair – <br><br> The building is well maintained and is currently occupied as a residence. <br><br> Rising damp and salt attack to wall facing Upper Thames Street and part north wall. | Medium – <br><br> The building retains many of the early features, however, of the group of surviving SAMA cottages, 2 Upper Thames St is the most modified. A one-room wide addition has been made to both sides and door openings added to Upper Thames Street. <br><br> Original windows to Upper Thames Street are lost. <br><br> Later modern shed. <br><br> Compromised integrity due to modification for conversion into a single dwelling. |
| 4 Upper Thames Street, Burra (SAHR 10041) | Fair – <br><br> The building is well maintained and is currently occupied as a residence. <br><br> Rising damp and salt attack to sill height of wall facing Upper Thames Street. <br><br> Minor cracking to south wall. | Medium - <br><br> Largely intact but compromised integrity due to alterations and loss of original features. <br><br> Original street windows lost in conversion to two houses. <br><br> Lean-to addition (may contain early elements – not inspected internally). |
| 6 Upper Thames Street, Burra (SAHR 10028) | Fair – <br><br> The building is well maintained and is currently occupied as a residence. <br><br> Rising damp and salt attack to sill height of wall facing Upper Thames Street. <br><br> Minor cracking to south wall. | Medium – <br><br> The building retains many of the early features. <br><br> Later verandah added. <br><br> Compromised integrity due to modification for conversion into a single dwelling. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| 8 Upper Thames Street, Burra (SAHR 10029) | Fair –<br><br>The building is well maintained and is currently occupied as a residence.<br><br>Salt attack and rising damp to masonry to 600mm high generally to wall facing Upper Thames Street and part south wall.<br><br>Poorly executed re-pointing, including cement paint. | Medium –<br><br>The building retains many of the early features.<br><br>Later bullnose verandah.<br><br>Later CGI clad lean-to (may contain early fabric – not inspected internally).<br><br>Intrusive 'D' gutters and PVC downpipes.<br><br>Compromised integrity due to modification for conversion into a single dwelling. |
| 10 Upper Thames Street, Burra (SAHR 10030) | Fair -<br><br>The building is well maintained and is currently occupied as a residence.<br><br>Rising damp and salt attack to 600mm high to wall facing Upper Thames Street and part south wall.<br><br>Inappropriate cement pointing repairs to masonry.<br><br>Minor cracking to street wall.<br><br>Major deflection to south wall. | Medium -<br><br>The building retains many of the early features.<br><br>Later bullnose verandah.<br><br>Later carport.<br><br>Intrusive PVC downpipes.<br><br>Compromised integrity due to modification for conversion into a single dwelling. Windows replaced with double hung sashes. |
| 12 Upper Thames Street, Burra (SAHR 10031) | Fair –<br><br>The building is well maintained and is currently occupied as a residence.<br><br>Rising damp and salt attack to wall facing Upper Thames Street and wall facing Church Street.<br><br>Poorly executed and inappropriate cement repointing repairs.<br><br>Painted quoins over the original stone quoins.<br><br>Windows replaced with double hung sashes. | Medium –<br><br>The building retains many of the early features.<br><br>Later Bullnose verandah.<br><br>Later Fibre cement boarded lean-to.<br><br>Intrusive PVC downpipes.<br><br>Intrusive air-conditioning installation.<br><br>Compromised integrity due to modification for conversion into a single dwelling. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| 16 Upper Thames Street, Burra (SAHR 10447) | Fair –<br><br>The building is well maintained and is currently occupied as a residence.<br><br>Salt attack and rising damp to sill height generally.<br><br>Suspected that the masonry has been entirely repointed using cement mortar.<br><br>Minor cracking – three railway line plates and tie rods have been installed later. | Medium –<br><br>The building retains many of the early features.<br><br>Non-original profile 'D' gutters.<br><br>Windows replaced with double hung sashes.<br><br>Compromised integrity due to modification for conversion into a single dwelling. |
| Timber Dwelling of the 1840's (SAHR 10434) | Poor –<br><br>The building is generally in poor condition and is at risk. It is currently unoccupied and used for storage.<br><br>External timber is generally in very poor condition – termite attack, rot, weathering, and little paint cover.<br><br>The roof is serviceable but badly rusted.<br><br>Windowpanes broken.<br><br>Calico ceilings fallen in. | Medium –<br><br>Fabric is at tipping point and should no conservation action occur in the next two to three years there is likely to be irretrievable loss of fabric and original detail.<br><br>Most internal linings have been lost. Remnant lathe and plaster lining to east wall.<br><br>It appears a concrete floor has been poured inside over the original timber floor.<br><br>Non original gutters. |
| Dwellings (Paxton Square Cottages) (SAHR 10159) | Good –<br><br>Deterioration of paint finishes to lower portions of stone walls.<br><br>Minor deterioration of paint finishes to external timberwork and some areas of rot to timbers. | Medium –<br><br>They have a gabled roof originally clad with split timber shales but now over clad with corrugated steel roof sheeting.<br><br>The verandahs to the street frontages were added in 1940, while timber framed bathrooms were added to the rear in the 1980s when they were converted to tourist accommodation.<br><br>The interiors have concrete floors finished in slate tiles and carpets, a combination of flushed and battened ceilings and while internal walls are either of painted stone or flushed linings to additions.<br><br>Existing interpretive sign plaque containing historical information. |

### 5.4.4 Residential – Private Housing

Surviving privately developed housing in Burra demonstrates the variety of forms and types of dwelling, including the unusual and unique practice of creating homes by digging into the creek bank. In addition to those places described in more detail below, throughout the villages are many historic houses that retain a high degree of original form and fabric. These contribute to the visual context and cultural landscape.

**Fabric Description**

Dugouts (SAHR 11187)
This is essentially an archaeological site, with no remnants being visible above ground other than the occasional depression which suggests the site of a dugout.

Former Miner's Dugouts (SAHR 10050)
Entailing three separate structures excavated into the creek bank, they are located on the east side of the Creek south of the central part of the town and in a gully off the main creek alignment. All are excavated into the clay banks of the gully. Two structures are located on the south side of the gully while a third is on the north side, this latter structure having a roof structure of timber logs covered with earth with two access openings through the bank. The two dugouts on the south side have the front rooms constructed of stone with window and door openings with a combination of timber and concrete lintels supporting timber logs covered over with earth. Vertical shafts remain to these dugouts indicating the location of the fireplaces, with short stone shafts above ground level. All dugouts have later steel framed grilles to limit access to the interiors. There are recently installed galvanised steel supporting columns for the timber roof structure added to the north dugout. All the dugouts have earth floors.

Attached Dwellings, 8-18 Truro Street ('Tiver's Row') (formerly Redruth) (SAHR 10203/10032/10446/10037/10038/10039)
The single storey attached symmetrical cottages are built on the front boundary. They were constructed from Hampton quarry random rubble bluestone with lined pointing. Each has an attached, stepped, gabled parapet corrugated iron sheeting roof to the front on the street and a corrugated iron skillion roof to the rear and rear lean-to.

9-13 Truro Street (formerly Redruth) (SAHR 10033/10034/10036)
9 Truro Street (SAHR 10033) and 11 Truro Street (SAHR 10036) are both single storey attached symmetrical row cottages built on the front boundary. Both were constructed from Hampton quarry random rubble bluestone with lined pointing. 9 Truro Street has painted red brickwork quoins to corners, doors, and windows. 9 and 11 Truro Street cottages have a gabled roof clad with corrugated iron sheeting to the street, with a skillion roof to the rear. 13 Truro Street (SAHR 10034) consists of two single storey attached symmetrical cottages built on the front boundary. Prior to 1978 the two cottages appear to have been joined and the street doorway to the eastern-most cottage bricked up. The cottages were constructed from Hampton quarry random rubble bluestone with lined pointing. The roof to the front portion over rooms facing the street is a gabled form, clad with corrugated iron sheeting. At the rear, there is a part hipped and gabled roof which forms a box gutter with the front roof, and a skillion roof to the side at the rear.

Hampton Township Precinct (SAHR 10359)
The Hampton Precinct is a collection of residential structures and associated outbuildings in varying degrees of ruination, but the majority form groups of standing walls combined with piles of rubble. Ruins include: Lewis House, Watkins House, Cullen House, Wallace House, Muller House, Bertram House, Birt House, Griffiths House, Kemp House, Quarry & Rogers House (sign reads Wall House), a Well, Lynn House, East House (with timber window frame and fireplace), Jacka House (the most complete house with walls and the only one with a timber framed corrugated iron clad roof structure), Brooks House, Head House, and Bunney House. The site of the Bible Christian Chapel is identified but no evidence of this structure remains above ground. There are also several remaining introduced plantings.

**Current Use**

The Dugouts (SAHR 11187) are currently a Council Reserve. Public access is uncontrolled.

The Former Miner's Dugouts (SAHR 10050) are currently a fenced open museum site accessed by the Burra Heritage Passport system.

The Attached Dwellings, 8-18 Truro Street ('Tiver's Row') (formerly Redruth) (SAHR 10203/10032/10446/10037/10038/10039) are currently private dwellings and holiday accommodation.

9 Truro Street (SAHR 10033) and 11 Truro Street (SAHR 10036) are currently private dwellings.

13 Truro Street (SAHR 10034) is currently a vacant dwelling.

The Hampton Township Precinct (SAHR 10359) is an open-air museum site. The site is included on the Burra Heritage Passport trail but access is effectively not controlled.



Former Dugout Sites (SAHR 11187).

Former Miner's Dugouts (SAHR 10050).


8 Truro Street (SAHR 10203).


10 Truro Street (SAHR 10032).


12 Truro Street (SAHR 10446).


14 Truro Street (SAHR 10037).


16 Truro Street (SAHR 10038).


18 Truro Street (SAHR 10039).


9 Truro Street (SAHR 10033).
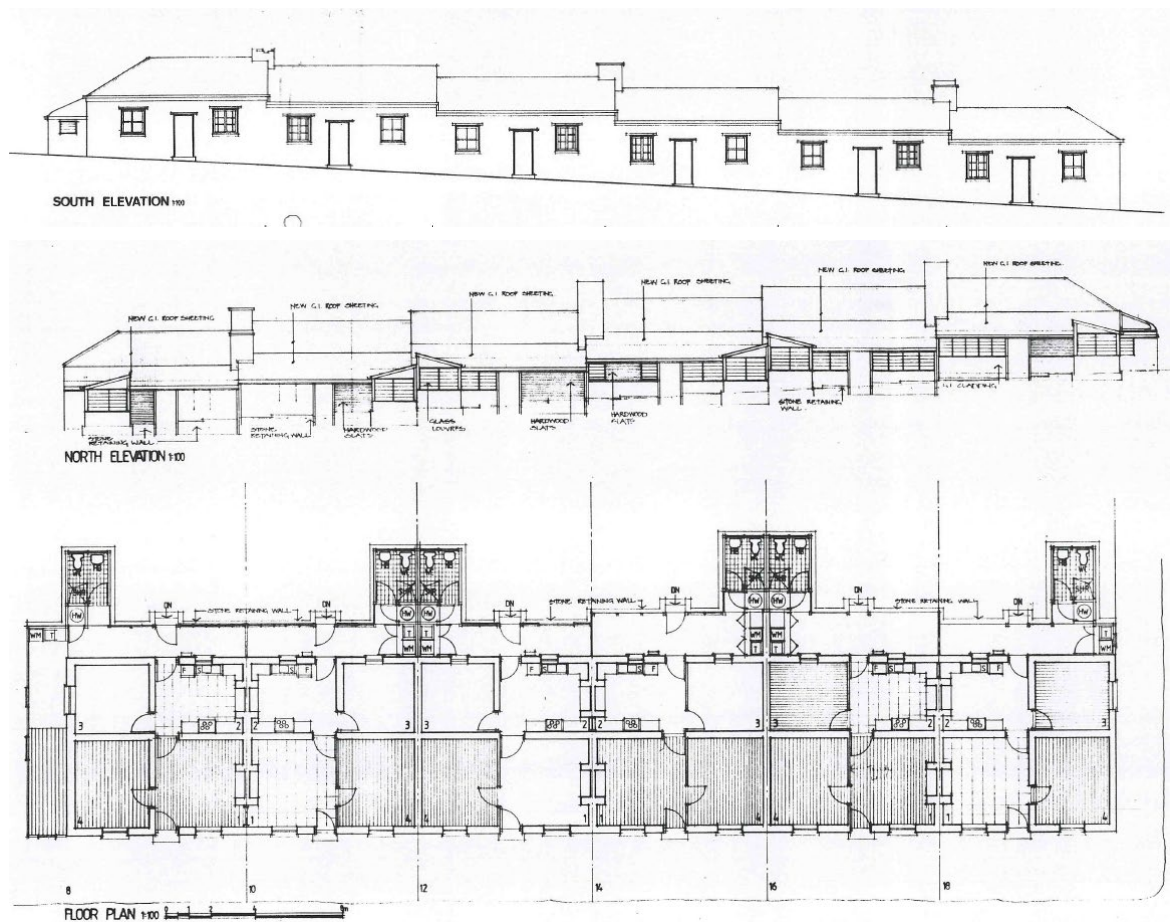
SOUTH ELEVATION 1:100

NORTH ELEVATION 1:100

FLOOR PLAN 1:100

Extracted plans and elevations. Source: Flightpath Architects drawings , 1989.



WEST ELEVATION 1:100

EAST ELEVATION 1:100

SITE PLAN 1:500
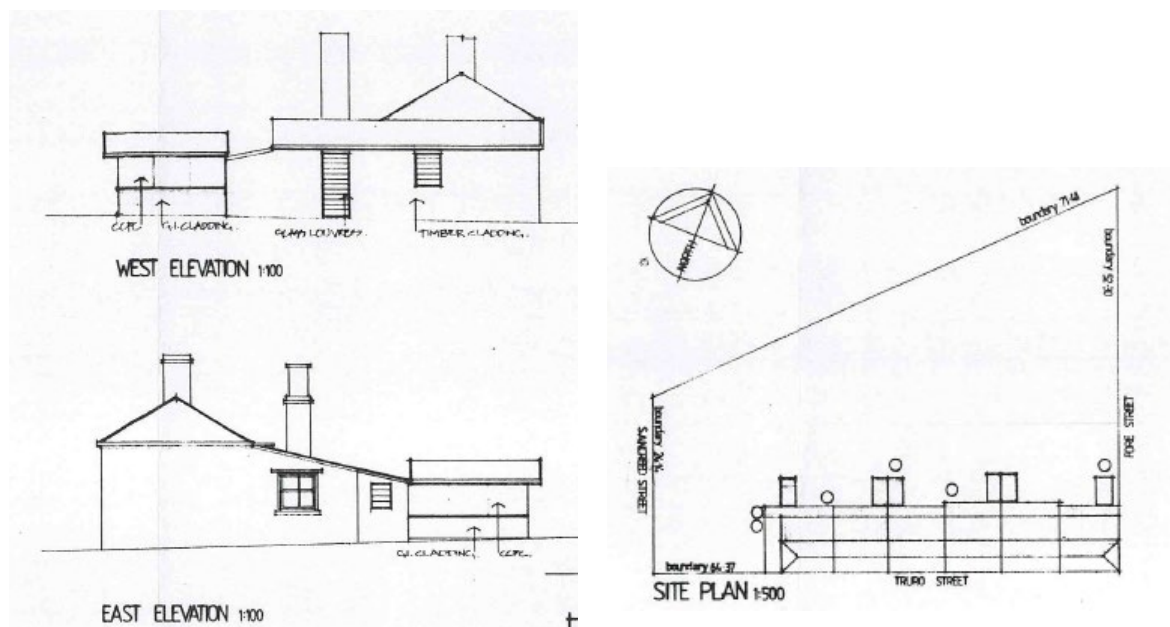
Extracted site plan and elevations. Source: Flightpath Architects drawings , 1989.

11 Truro Street (SAHR 10036).


13 Truro Street (SAHR 10034).


Hampton Township Precinct (SAHR 10359).


Griffiths House (SAHR 10359).


Lynn House (SAHR 10359).


East House (SAHR 10359).


Kemp House (SAHR 10359).


Jacka House (SAHR 10359).
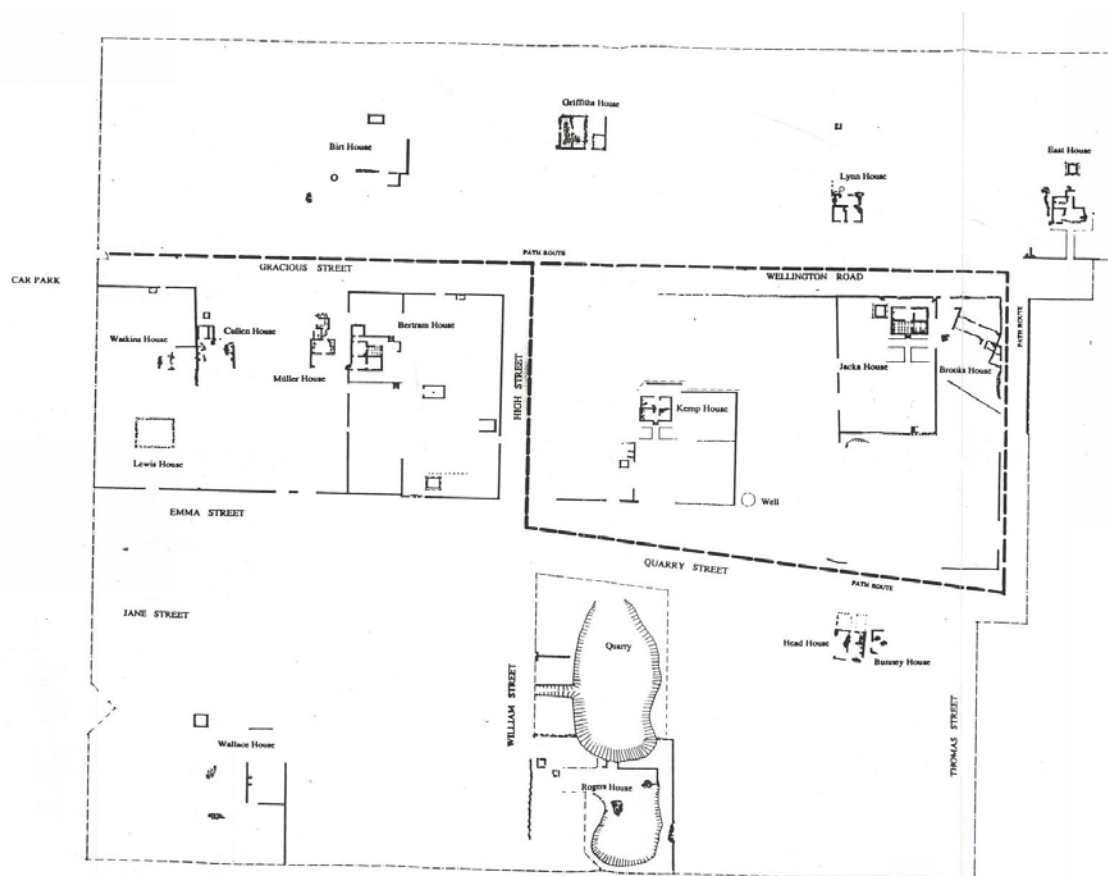
Danvers Architects, "Hampton Village Conservation Study", (1988)".

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Historic layout of Truro Street and visual relationship between private housing. | – | Medium – <br><br> The layout of the Redruth town has been largely retained and supports the context of the Truro street row houses. Other historic private cottages of a similar scale and design from the early mining period dotted through the town support the visual and material context. <br><br> The visual relationship between 8-18 Truro Street and 9-13 Truro Street themselves is compromised by later housing. In addition, the two sets of housing are diagonally opposite rather than adjacent, and the road slopes downward, thus making the visual relationship more difficult to interpret. |
| Dugouts (SAHR 11187) | Poor – <br><br> While essentially an archaeological site, it is noted that the drainage from the roadway to Flat Place on the east side of the site drains through the site risking erosion and potentially further compromising the integrity of any surface and sub-surface remains. | Low – <br><br> This is essentially an archaeological site, with no remnants being visible above ground other than the occasional depression which may suggest the site of a dugout. |
| Former Miner's Dugouts (SAHR 10050) | Fair – <br><br> Major issues include: <br><br> Deterioration generally of stone front sections to south dugouts, most to full height. <br><br> Ongoing fretting of clay soil walls and ceilings with build-up of debris on floors. <br><br> Termite damage of timber supports and roof structures. | Low – <br><br> In 1925, the Dugouts were reportedly "renovated". Structures were apparently largely rebuilt in 1971 by the Burra Council and the National Trust.[627] <br><br> Existing interpretive sign including historical image, and information. |
| 8-18 Truro Street ('Tiver's Row') (formerly Redruth) (SAHR 10203, 10032, 10446, 10037, 10038, 10039) | Good – <br><br> The building is in a good state of repair. The following issues were identified in the inspection: <br><br> Generally rising damp to 200mm high and poorly executed repairs to pointing at low level and around openings leading to damage to pointing, render and stonework. <br><br> Gutters poorly maintained and full of leaf litter. <br><br> Corrosion to roof (although generally sound). <br><br> Later cement render to chimneys. | High – <br><br> The building has good integrity. The form, design and use of the building as dwellings has been substantially maintained. The adaptation to holiday units has been successfully achieved while retaining the integrity of the historic layout and fabric. <br><br> Existing interpretive sign plaque containing historical information. <br><br> Not inspected internally |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| 9 Truro Street (formerly Redruth) (SAHR 10033) | Good – <br><br>The building is generally in a good state of repair. The building is well maintained and is currently occupied as a residence. <br><br>The following issues were noted in the inspection: <br><br>Cement pointing generally and poorly executed repairs. <br><br>Open joints to chimney. | High – <br><br>The building retains many of the early features. <br><br>Faux heritage exterior light is intrusive. <br><br>Not inspected internally |
| 11 Truro Street (SAHR 10036) | Fair – <br><br>The building is generally in a poor state of repair and is at risk. The building is not well maintained and appears currently unoccupied. Major issues include: <br><br>Roof serviceable, but in poor to fair condition with red rust evident. <br><br>Rising damp/salt attack to stonework. Cement pointing and poorly executed repairs. <br><br>Chimney missing pointing and at risk of collapse. <br><br>Paint cover to timberwork, windows and doors is poor. As a result, the timberwork is weathered. <br><br>Holes in end gable – barge missing. | Medium – <br><br>The building's condition has affected its overall intactness. <br><br>Not inspected internally |
| 13 Truro Street (SAHR 10034) | Fair – <br><br>The building is generally in a poor state of repair and is at risk. The building is not maintained and appears currently unoccupied. The following major issues were noted in the inspection: <br><br>Roof serviceable, but in poor to fair condition. <br><br>Rising damp/salt attack to stonework. <br><br>Cement pointing and poorly executed repairs. <br><br>No perimeter paving. <br><br>Chimneys missing pointing and the west chimney is partially collapsed. <br><br>Paint cover to timberwork, windows and doors is poor. | Medium – <br><br>The building's condition has affected its overall intactness. <br><br>Not inspected internally |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Hampton Township Precinct (SAHR 10359) | Poor – <br><br> The following major issues were observed during the inspection: <br><br> Leaning of various standing stone sections. <br><br> Delamination of faces of standing walls. <br><br> Falling damp to tops of walls leading to deterioration of pointing leaving open joints and eventual collapse <br><br> Weathering of remaining unpainted timber surfaces. | Low – <br><br> The Hampton Precinct is a collection of residential structures and associated outbuildings in varying degrees of ruination, but the overall form of the settlement is legible. <br><br> A few walls remain at their original height, but most have collapsed or are in the process of collapse. <br><br> There are also several remaining introduced plantings. <br><br> Existing interpretive sign including historical image, and information. |

### 5.4.5 Ecclesiastical

**Fabric Description**

Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) 9 Upper Thames Street (SAHR 10011)
The Former Kooringa Primitive Methodist Church building is a single storey structure. The front façade is constructed from coursed stone with lined pointing. The Gothic-style, lancet windows are symmetrically placed either side of a pair of central main, Gothic-style pointed, entrance doors. The gabled, corrugated iron clad roof sits behind the stone parapets at each end of the building. There is a lower, single storey lean-to section, with parapet, on one side of the building.

Office (former Burra Bible Christian Chapel) (SAHR 10013)
The former Bible Christian Chapel is a single storey structure. It is an early symmetrical hall and is constructed from random rubble stone with two large stone buttresses to the west elevation. There is a timber framed hipped roof clad with corrugated steel in continuous sheets with a rear north lean-to skillion roof, and "D" profile eaves gutters.

Redruth Wesleyan Church
Redruth Wesleyan Church is a single storey structure in a cruciform plan. It is a substantial building constructed from coursed bluestone with white lined pointing. The front façade is symmetrical with a central arched door opening and a central louvred ocular window above. The front section of the Church has a gabled roof clad with corrugated roof sheeting. This section intersects perpendicularly with the middle section of the building which is also constructed from bluestone and has a gabled roof clad with corrugated roof sheeting and stone gables at each end. There is a later rear section with a gabled roof clad with corrugated roof sheeting and a stone gable at the end with a decorative window.

St Mary's Anglican Church & Hall (SAHR 10018 & 10022)
St Mary's Anglican Church is a large single storey structure. It is constructed from bluestone with rendered dressings. It has two gabled entrance porticos with lancet arched door openings. There are prominent stone buttresses to the porticos. It has a large central gabled section which has a large decorative tracery window. It has a gabled roof clad with corrugated roof sheeting. The Hall is random rubble with a projecting plinth and rendered quoins to corners. It has a timber framed roof clad in short sheet corrugated galvanised steel.

Former Burra Salvation Army Citadel (SAHR 10160)
Rectangular hall building constructed from Hampton quarry stone with stone quoins and red brick dressings to openings and decorative parapet to top.

**Current Use**

The Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) 9 Upper Thames Street (SAHR 10011) is currently a private dwelling.

The Office (former Burra Bible Christian Chapel) (SAHR 10013) is operated as a National Trust (SA) museum.

Redruth Wesleyan Church is currently a private dwelling used for bed and breakfast accommodation.

St Mary's Anglican Church & Hall (SAHR 10018 & 10022) retains its original use as a church and hall.

Former Burra Salvation Army Citadel (SAHR 10160) is a private dwelling.


9 Upper Thames Street (SAHR 10011).


Office (former Burra Bible Christian Chapel) (SAHR 10013).

Redruth Wesleyan Church.


St Mary's Anglican Church (SAHR 10018).


St Mary's Anglican Church Hall (SAHR 10022).


Former Burra Salvation Army Citadel (SAHR 10160)

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) 9 Upper Thames Street (SAHR 10011) | Good – <br><br>The following issues were noted: <br><br>Roof in fair condition but rust evident in places. <br><br>Chimney in poor condition with missing pointing and is at risk. <br><br>Termite attack to front door. <br><br>Patch pointing to cracked masonry with cement rich mortars. | Medium – <br><br>Alterations made in c.1879-80 to replace the front façade has impacted on the church's integrity as the association is with a later period of development. A more recent addition has also been built on the side. <br><br>Non-original 'D' gutters and PVC downpipes are intrusive. <br><br>Existing interpretive sign plaque containing historical information. |
| Office (former Burra Bible Christian Chapel) (SAHR 10013) | Good – <br><br>The following issues were noted: <br><br>Vertical cracks to render around chimney to northwest corner and fine cracks over west side of window opening and door to north wall. <br><br>Low level deterioration to stone and pointing on west and south elevation and either side of north door. <br><br>Open joints to tops of buttresses. <br><br>Paint condition fair, poor to fascia of west elevation. Blistering paint at low level to west end of south internal wall. | High – <br><br>Largely intact and unaltered from its original form. <br><br>The building adjoins a more recent structure to the east but the intrusion is not substantial. <br><br>"D" profile eaves gutters are not consistent with the period of construction. <br><br>Existing interpretive sign plaque containing historical information. |
| Redruth Wesleyan Church | Good – <br><br>The building is in a good state of repair. The following issues were noted: <br><br>Dolomite gravel has been laid adjacent to the base of walls. Dolomite can contain high levels of salts. <br><br>Build-up of level adjacent to the base of walls and lack of perimeter paving. <br><br>Rising damp and salt attack to lower portions of walls. Select areas have been repointed using cement mortars. <br><br>Rusted roof sheets. <br><br>Biological growth to rendered surfaces: copings, string courses, sills & buttresses. | Medium – <br><br>The building retains most of the structure's early features and the form and design of the building have been substantially maintained. <br><br>The adaptation to a dwelling included the installation of a kitchen to the eastern end of the transept and the conversion of the former vestry to amenities. Although the original use and function has been compromised, the adaptation has been done sensitively. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| St Mary's Anglican Church & Hall (SAHR 10018 & 10022) | Good - <br><br> The church building is in a good state of repair and/or restoration retaining most of the structure's early features. The following issues were observed: <br><br> Leak in north corner of east transept with blistering of plaster finishes internally. <br><br> Deteriorated door threshold to north elevation. <br><br> Minor cracking to rendered windowsills to east side. <br><br> The hall is generally is good condition with minor cracking through mortar joints below the coping to the west elevation to the southern end. Timberwork is generally weathered due to lack of paint cover. | High – <br><br> The church and hall buildings retain most of the structure's early features. The integrity of the early construction materials, form and building layout is unaltered. |
| Former Burra Salvation Army Citadel (SAHR 10160) | Good - <br><br> The building is generally in a good state of repair and is well maintained. There are some areas of weathering to external timbers, particularly to fascias where paint cover has not been maintained. Roof has visible red rust and will require replacement within the next 10 years. | High – <br><br> Remains largely intact externally. <br><br> Not inspected internally |

### 5.4.6 Civic

**Fabric Description**

Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) (SAHR 10403)
The Burra Town Hall is a substantial single storey structure. It is constructed of stone with rendered detail and dressings to the main east elevation and brick quoins to openings to the lesser elevations with a high central hall flanked by lower rooms set in the front of the hall to the north and south sides. The central hall has a parapet, cornice, and a pediment which bears the building's name while the flanking rooms also have smaller parapets and cornice with corbels.

Stone Wall located on South Side of Commercial Street and Ware Street (SAHR 10435)
A L-shaped stone boundary wall capped in select areas with castellated stones on edge.

Stone Wall located on North Side of Commercial Street (SAHR 10436)
A L-shaped stone boundary wall capped with castellated stones on edge.

Burra Cemetery (SAHR 10432)
Burra Cemetery is comprised of a rectangular grid of graves divided by pathways surrounded by a stone boundary wall with wrought iron gates. It has been extended to the south with the graves and wall to this section being of more recent construction.

Former Redruth Police Stables (1847), Police Cells, stables, and stable yard (c.1872-73), and Police Station (1879) (SAHR 10014)
The Police Station complex incorporates the Police stables (1847), Police cells, stables, and stable yard (c.1872-73), and Police Station (1879). The Police Stables building is a small single storey structure. It is constructed from random rubble stone which has been limewashed on all walls except one which faces the grassed reserve. It has an exposed hipped, timber framed roof with timber shingles with no eaves.

The Police cells is a single storey structure constructed from random rubble stone with lined pointing. All walls are limewashed except for the side wall facing Tregony Street, and the gable parapet wall facing the Stable Yard. There is a small, lean-to stone WC attached to the Cells which has timber boards to the WC seat. There is a gabled, corrugated iron clad roof with stone gable parapets each end, and no eaves.

The Stables are constructed from random rubble stone and some walls are limewashed. It has a hipped corrugated iron clad roof with no eaves. The stable yard (and cobbled yard adjacent the Police Station) is defined by tall, random rubble stone with lined pointing. The stable yard is paved with stone and includes an open culvert formed with stone.

The Police Station building is a single storey structure. It is constructed from coursed stone with lined pointing. It has a hipped, corrugated sheeting roof. It has a small, front skillion verandah. There are later, lightweight additions with skillion roofs to the side and rear of the building, and on the site in general.

Former Redruth Gaol (1856) (SAHR 10042)
The front section of the Gaol is single storey and essentially symmetrical in design. This is comprised of two separate buildings; one which was the Gaolkeeper's Quarters, to the left, and the other was the Turnkey's Quarters, to the right. These two buildings are separated by a central, entrance courtyard or sally port which is located behind the front façade. The high-level Hampton quarry random rubble bluestone walls abut the rendered façade on each side and enclose yards to the sides of each of the buildings. The roofs are similar to each building being hipped corrugated steel concealed behind parapets with side skillions. The secure section of the Gaol is two-storey and housed the Kitchen, Store and Cells. It was constructed from Hampton quarry random rubble bluestone with red brickwork quoins, many of which are painted. It has both a hipped roof to one part and a lower gable corrugated steel sheeting roof to the section housing the cells. The building is centrally located with high level random rubble bluestone walls which enclose the adjacent exercise yards each side. Broken glass is evident to the top of the wall to the western yard.

Former Redruth Courthouse (1857) (SAHR 10027)
The Redruth Courthouse is a large, single storey structure. It was constructed from random rubble stone sourced from the Hampton quarry with lined pointing and red brickwork quoins/dressings to external corners and painted projecting plinth. The front façade is rendered and painted, as is the later front entry portico (c.1878) which is rendered. The main structure has a timber framed hipped roof clad with corrugated steel short sheets with red paint finish. The later, rear extension (c.1878) has a hipped corrugated sheeting roof. There is a later corrugated sheeting clad porch to the South side.

**Current Use**

The Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) (SAHR 10403) is operated as a museum/gallery.

The Burra Cemetery (SAHR 10432) is an active cemetery.

The Former Redruth Police Stables (1847), Police Cells, stables, and stable yard (c.1872-73), and Police Station (1879) (SAHR 10014) is a National Trust (SA) museum/private dwelling.

The Former Redruth Gaol (1856) (SAHR 10042) is a National Trust (SA) museum.

The Former Redruth Courthouse (1857) (SAHR 10027) is currently used as National Trust (SA) storage.

Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) (SAHR 10403).



Stone Wall located on South Side of Commercial Street and Ware Street (SAHR 10435)



Stone Wall located on North Side of Commercial Street (SAHR 10436).



Burra Cemetery (SAHR 10432).



Former Redruth Police Stables (1847), Police Cells, stables, and stable yard (c.1872-73), and Police Station (1879) (SAHR 10014).



Former Redruth Gaol (1856) (SAHR 10042).



Former Redruth Courthouse (1857) (SAHR 10027).

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Historic layout of the Police Stables, Police Cells, stables and stable yard and Police Station, and the Redruth Courthouse and visual relationship between them. | – | High – <br><br> No new structures have been introduced to the site. <br><br> The relationship between the two buildings is strong and emphasised by their position on a defined parcel of land. |
| Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) (SAHR 10403) | Good – <br><br> The following issues were observed during the inspection: <br><br> Pointing deterioration to lower walls of east and south elevations of single storey sections due to rising damp. <br><br> Bulge evident to centre of east elevation of south wing with fine cracks to coping. <br><br> Voids in early pointing to upper portions of south wall of south wing. <br><br> Cracks to top of side walls of entry steps, loose riser, and cracked tread with gaps between slate flags to porch. <br><br> Deterioration of brick joints to west brick addition. <br><br> Paint condition to timberwork generally poor and paint deterioration to chimneys. <br><br> Peeling paint to south rooms due to roof leaks. <br><br> Blistering plaster to reveal of external door to north wall to hall. <br><br> Salts on retaining walls in old kitchen at west end of building due to penetrating damp. | High – <br><br> Timber framed canopy over entrance introduced c.1930s <br><br> Existing interpretive sign plaque containing historical information. |
| Stone Wall located on South Side of Commercial Street and Ware Street (SAHR 10435) | Fair – <br><br> The wall is generally in fair condition. There is rising damp and salt attack generally at low level and cracking to select areas. | Low – <br><br> The west portion to Commercial Street and to Ware Street has been modified to include lowered sections. |
| Stone Wall located on North Side of Commercial Street (SAHR 10436) | Good – <br><br> The wall is generally in good condition. There is rising damp and salt attack generally at low level to 600mm above ground level. | Low – |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Burra Cemetery (SAHR 10432) | Fair – <br><br> The following issues were observed during the inspection: <br><br> North boundary wall <br> Stone deterioration up to 1000mm high to northwest corner. <br><br> Stone and pointing deterioration lower portion of wall generally. <br><br> Significant stone deterioration to 500mm above ground level with void behind section of wall used as a urinal. <br><br> Cracking particularly to east portion. <br><br> Missing sections of coping. <br><br> East boundary wall <br> Bulging noted to sections, particularly to north end. <br><br> Lean or displacement to south portion. <br><br> Deterioration of stone and pointing including to full height of some sections. Voids in pointing to south end. <br><br> Collapsed internal face of wall near south end. <br><br> Sections of deteriorated or missing coping. <br><br> West boundary wall <br> Stone and pointing deterioration to lower sections of parts not recently rebuilt, varying from 500mm above ground level to full height. <br><br> Collapsed internal face to full height of wall to several sections near south end. <br><br> Small areas of missing coping. | Low – <br><br> The earliest section of the Cemetery dating from 1850-1892 has undergone many changes. The central section has been cleared, and the western section, partially cleared. Perhaps one quarter of this section remains unaltered. <br><br> Past clearance of large areas of the early headstones and associated railings etc. <br><br> It has been extended to the south with the graves and wall to this section being of more recent construction. |

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| Former Redruth Police Stables (1847), Police Cells, stables, and stable yard (c.1872-73), and Police Station (1879) (SAHR 10014) | Good –<br><br>The following issues were observed during the inspection:<br><br>Boundary walls<br>Stone deterioration generally to low level of masonry from rising damp<br><br>Cobbled Yard<br>Flaking whitewash to walls generally.<br><br>Original stable<br>Fine cracks to walls<br><br>Deterioration of timber shingles particularly cappings to original Stables (1847).<br><br>Later Stable<br>Areas of flaking paint to timberwork.<br><br>Cells<br>Stone deterioration to walls and fine cracking.<br><br>Flaking whitewash generally.<br><br>Rust to steel spreader plates.<br><br>Rot to timber lining in cell door. | High –<br><br>Remains largely intact. Former use is clearly evident in fabric.<br><br>There are later, lightweight additions with skillion roofs to the side and rear of the Police Station building, and on the site in general.<br><br>Existing interpretive sign including image, and historical information. |
| Former Redruth Gaol (1856) (SAHR 10042) | Good –<br><br>The following issues were observed during the inspection:<br><br>Boundary walls<br>Deterioration of masonry to select areas and cracking<br><br>Buildings<br>Cracking to select areas of masonry. Wide gap to west side of store ceiling.<br><br>Beehive to top of chimney to main building.<br><br>Flaking whitewash to select areas | High –<br><br>Remains largely intact. Former use is clearly represented in fabric.<br><br>Existing interpretive signs including historical image, and information. |
| Former Redruth Courthouse (1857) (SAHR 10027) | Good –<br><br>The following issues were observed during the inspection:<br><br>Cement rich pointing repairs.<br><br>Significant cracking around quoins to northeast corner of Courtroom & east of high-level window to north elevation. Less significant cracking to west end of north elevation.<br><br>Paint condition poor to window of west porch.<br><br>Poor stormwater disposal to base of downpipe to west porch. | High –<br><br>Remains largely intact. Former use is clearly evident in fabric.<br><br>Later framed corrugated steel clad/porch. |

### 5.4.7 Commercial Buildings

**Fabric Description**

National Bank of Australasia (1862) (SAHR 10007)

The Bank building is a two storey structure with a chamfered corner which forms the main entrance. It is designed in the Italianate commercial style. It is constructed from Hampton quarry random rubble stone with lined pointing. A hipped timber framed roof clad with recent corrugated steel sits behind the stone parapet walls to the street frontages. There is a single storey section with parapet similarly constructed from Hampton quarry stone with lined pointing. There are several later single storey and two storey additions to the side and rear of the building. There is also a later rendered masonry addition to the north elevation.

Burra Hotel (1847) (previously Miners Arms Hotel) (SAHR 10404)

The Burra Hotel is largely a single storey building with several large cellars, with the two storey section being added after the significant period. The original single storey structure is constructed from stone with brickwork quoins to openings but the ground floor front façade has been rendered and painted. The later upper storey structure is of timber framed construction with stucco pressed metal and a combination of shiplap board finishes. The roof is hipped with corrugated roof sheeting with the verandah to the west elevation being bullnosed. The Hotel includes two separate cellars connected by a tunnel. There are several later additions to the rear of the building.

Dwelling (1849) (former Smelter's Home Hotel) (SAHR 10419)

The Former Smelters Home Hotel is a large single storey structure. It is constructed from stone. It has a series of hipped roofs clad with corrugated roof sheeting which sit behind a main parapet. It has a raised pediment which denotes the main entrance door which is located on a chamfered corner. The building has a concave corrugated roof sheeting verandah which runs along the two facades which face the street.

**Current Use**

The National Bank of Australasia (1862) (SAHR 10007) is currently used as National Trust (SA) Offices.

The Burra Hotel (1847) (previously Miners Arms Hotel) (SAHR 10404) has a continuous use as a hotel.

The Dwelling (1849) (former Smelter's Home Hotel) (SAHR 10419) is currently a private dwelling.
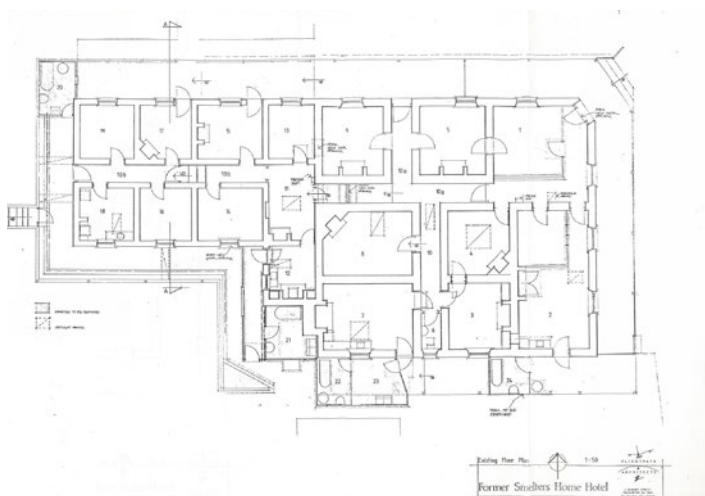

National Bank of Australasia (1862) (SAHR 10007).


Burra Hotel (1847) (previously Miners Arms Hotel) (SAHR 10404).


Dwelling (1849) (former Smelter's Home Hotel) (SAHR 10419).


Plan of projected conservation. Source: Former Smelter's Home Hotel: Burra Loan/ Grant Application for Proposed Conservation Works, Flightpath Architects, 1993.

**Current condition and integrity of the fabric associated with the NHL values**

| Feature | Current condition of fabric | Current integrity |
|---|---|---|
| National Bank of Australasia (1862) (SAHR 10007) | Good – <br><br> The following issues were observed during the inspection: <br><br> Lean to west end of boundary wall with deterioration to lower level (risk of collapse) and cement render repair to lower portion. Deterioration to coping. <br><br> Areas of damp affected masonry. <br><br> Deterioration to paint to top of chimney. <br><br> Minor deterioration of paint finishes. <br><br> Cracks to rendered wall of rear addition, west elevation. | High – <br><br> Remains largely intact. <br><br> There is a later rendered masonry addition to the north elevation. <br><br> Later intrusive window-mounted air conditioning unit. <br><br> Existing interpretive sign plaque containing historical information. |
| Burra Hotel (1847) (previously Miners Arms Hotel) (SAHR 10404) | Fair – <br><br> The following issues were observed during the inspection: <br><br> Pointing deterioration of stone to select areas. <br><br> Deterioration to individual bricks to the chimneys of the single storey section of the building. <br><br> Paint deterioration to timberwork. | Low – <br><br> Although parts of the earlier building survived the 1878 fire and were apparently integrated into the current building it is unclear how much of the building fabric is from the significant period, the remaining fabric primarily dates from 1880, after the Burra Burra Mine closed in 1877. <br><br> A second storey was added in 1912 and verandah in 1920. There is compromised integrity due to addition of the first floor. <br><br> Later flat verandah extension and later cement render and fibre cement addition to rear. <br><br> Existing interpretive sign plaque containing historical information. |
| Dwelling (1849) (former Smelter's Home Hotel) (SAHR 10419) | Good – <br><br> The following issues were observed during the inspection: <br><br> Rising damp and salt attack at low level. <br><br> Cement re-pointing repairs generally <br><br> Parapet corner rotating out – cracks apparent. <br><br> Paint to timberwork in poor condition. <br><br> Roof watertight but rusting. <br><br> Retaining wall collapsed to rear. | High – <br><br> Remains largely intact with very little intervention. The site includes early outbuildings. <br><br> Later c.1930s garage and open shed were added to the site. |

# 5.5. Comparative Places

The Burra Mine can be compared to several mine sites (excluding quarries) which exist in South Australia, Australia and internationally.

### 5.5.1    World Heritage List Places

The Burra Mine can also be compared to Cornish influenced mine sites which are on the World Heritage List.

| **World Heritage List Examples[628]** |
|---|
| World heritage listed Cornish/Cornish influenced mines include: |
| Cornwall and West Devon Mining Landscape (Ref- 1215)<br>This listing includes the following mines:<br>▪ 1215-001 St Just Mining District<br>▪ 1215-002 The Port of Hayle<br>▪ 1215-003 Tregonning and Gwinear Mining Districts(003i) with Trewavas (003ii)<br>▪ 1215-004 Wendron Mining District<br>▪ 1215-005 Camborne and Redruth Mining District(005i) with Wheal Peevor (005ii) and Portreath Harbour (005iii)<br>▪ 1215-006 Gwennap Mining District (006i) with Devoran and Perran (006ii) and Kennall Vale (006iii)<br>▪ 1215-007 St Agnes Mining District<br>▪ 1215-008 The Luxulyan Valley (008i) and Charlestown (008ii)<br>▪ 1215-009 Caradon Mining District<br>▪ 1215-010 Tamar Valley Mining District (010i) with Tavistock (010ii) |

### 5.5.2 Australian National Heritage List Places

The Burra Mine can be compared to other Cornish influenced mine sites which exist in Australia and are included on the National Heritage List. These are summarised below.

| National Heritage List Examples[629] |
| --- |
| Other Australian, National heritage listed Cornish influenced mines include: |

Australian Cornish Mining Sites: Moonta (National Heritage List Place ID 106096)
Moonta Mine was established in 1862, following the discovery of copper in 1861. For most of the late nineteenth century "Moonta Mines was one of Australia's largest and most profitable mining operations".[630] In 1923 the mine closed. It was significantly influenced by Cornish mining technology and the large number of Cornish miners who worked there. The Moonta district is known as "Australia's Little Cornwall".[631]

Extant structures: Moonta Mine State Heritage Area (Heritage Number 27551 and State Heritage ID 13975): former Moonta Cooper mine including mining infrastructure, remnant surface and underground mining structures such as "Hughes enginehouse and stack, the Hughes engine pool, the ruins of Elders enginehouse, Richmans enginehouse and nearby tailings dumps, Hancocks tailings dump (including the tailings and the form and shape of the heap, nearby former mining shafts, remnant ore floors and the foundations of Hancocks enginehouse and crusher house), Ryans tailings heap, Ryans shaft, Taylors shaft, Treuers shaft, ruins of precipitation works, site of the mine workshops, site of mine offices, site of General Manager's residence, site of the assayers residence, the ruins of the powder magazine, the remnant water reservoir (Ryan Road), site and remnant structures of the Hamley mine, the remnant route of the Hamley tramline and the Moonta Railway Station (including disused railway line within the Moonta Mines State Heritage Area)".[632] Other structures include: "the site of the Bible Christian church, site of the Primitive Methodist church, the Moonta Mines Methodist Church (1865) and the Moonta Mines Model Sunday School. The historic miner's cottage and garden (Verco Street) is significant as a place which demonstrates the way miners and their families lived on the mining lease".[633]

Castlemaine Diggings National Heritage Park, Chewton Rd, Castlemaine, VIC (National Heritage List Place ID 105683)
Castlemaine was the site of one of Australia's major gold rushes. By 1852, the gold rush had attracted a population of 30,000, many of whom were immigrants. It was known as the "world's richest goldfield".[634] The goldfield generated a vast amount of wealth which in turn played a significant role in the development of Victoria and Australia as a whole. The Castlemaine Goldfield has "one of the richest collections of mining sites and landscapes in Australia … The Castlemaine Goldfield's collection of mining sites is, in terms of diversity, integrity and time-depth, possibly the most outstanding in Australia. In addition, there are large numbers of habitation sites and groups of sites which form a rich tapestry depicting the pattern of settlement on the goldfield".[635] The Goldfield also represents Cornish mining technology and structures include "Cornish ground flues" and the Cornish Enginehouse.[636]

Extant structures: early (1850s) and later alluvial workings (earthworks, shallow pits, shallow shafts, shafts to pudding machines, pudding machines, lease markers, surfacing, stream diversions, water races, dams, ground sluicing, hydraulic sluicing and dredging sites, deep lead mining), Cornish technology, the Vaughan Chinese cemetery, pudding machine sites, early reefing sites (stamper batteries and remains, remains of buildings, intact buildings, roasting kilns), early Chilean mill site, habitation sites (ruined miners' huts and houses, intact structures, tracks, cemeteries), remains of a Cornish Enginehouse, and Cornish ground flues.

On the Australian Heritage Database these are further classified as follows:

"Alluvial mining sites such as shallow shafts, puddling machines, lease markers, surfacing, ground and hydraulic sluicing;
Water races;
Cement (i.e. conglomerate hilltop) mining sites such as tunnels, open cuts, sludge, surfacing, puddling, batteries, steam power, chimneys and Chilean mills;
Deep lead mining sites such as mullock heaps, mining engine footings, and chimney stacks;
Reef mining sites such as adits, open cuts, shallow reef workings, stoping, costeaning, mullock heaps, shafts, poppet heads, engine houses, mining engine footings, bob-pits, air-receivers, chimney stacks, whims, mine buildings, power plants, carting, loading bays, haulage adit/tramways, water wheels, Chilean mills, roasting kilns, state crushing works, battery engines, stamper footings, classification floors, loading ramps, sludge ponds, water dams;
Tailings retreatment sites such as cyanide vats, treated tailings."[637]

The Cornish influence is evident at Herons Reef in form of the "Cornish engine house [remains] – [built] for the Anglo-American mine", and the "Stone boiler foundations and/or Cornish ground flues … at Golden Point, Cobblers Gully, Tubal Cain, Eureka Reef and the Phoenix Company, and stamper battery footings at the Spring Gully, Hands Across the Sea and Little Nuggetty mines".[638]

### 5.5.3  South Australian Heritage Places

South Australian Heritage Register examples are summarised in the table below.

The Burra Mine can be compared to other Cornish mine sites which exist in South Australia and are included on the State Heritage Register. These are summarised below. Typically, there is limited, or no information contained in the "Descriptions" of the listed places nor details in the "Extent of Listing" on the SA Heritage Places Database, therefore additional research has been undertaken to determine extant structures on site.

| South Australian Heritage Register Examples[639] |
| --- |
| South Australian, State heritage listed Cornish influenced mines include: |
| Arsenic Labyrinth, Wheal Ellen Mine, Strathalbyn (SAHR 12773)<br>The Wheal Ellen Mine was reportedly operational from around 1857. Cornish ore dressing machinery was used and the arsenic labyrinth was influenced by Cornish designs.[640]<br><br>Extant structures: above ground flue and labyrinth. |
| Blinman Mine & Mine Manager's Cottage, Blinman (SAHR 13888)<br>Blinman Mine was established in 1862, following the discovery of copper in 1859. It operated until 1907.<br><br>Extant structures: main shaft (underground tours are currently held), slag heap, Mine Manager's Cottage, Cornish ore concentrating remains such as buddle pits.[641] |
| Chimney [Cornish], Preamimma Mine, Monarto (SAHR 10449)<br>Extant structures: chimney. |
| Engine House for Direct Acting ('Bull') Pumping Engine, North Rhine Mine (SAHR 12846) (Keyneton)<br>Extant structures: Ruins - Engine house.<br>Note - It is assumed that the above listing includes: the North Rhine (Cornish) Enginehouse (1859) (no roof), shaft (flooded), chimney ruins (pile of bricks and masonry), remains of the whim or capstan circular plat, small dam and sluice.[642] |
| Former Harvey's Pumping Station (Enginehouse), Kadina (SAHR 10125)<br>The Wallaroo Mine, located near the township of Kadina, was established c.1859-1860, following the discovery of copper earlier in 1859. In 1923 the mine closed.<br><br>Extant structures: Harveys (Cornish) Enginehouse (1875).<br>Note - It is unclear whether the following structures at Wallaroo Mines are included in the listing: Taylors winding enginehouse rubble ruins; Boilerhouse ruins, collapsed shaft and pump rod, balance weight pit - all located adjacent Harvey's Enginehouse; Elders Enginehouse base remains, and adjacent infilled shaft.[643]<br><br><br>Harvey's Enginehouse.<br>Source: Newcrest Mining Website, http://www.cadiavalleyheritage.com.au/, accessed 19 March 2019. |

**South Australian Heritage Register Examples[639]**

Former Powder Magazine (SAHR 10499) and Settling Tanks (SAHR 10501), Bremer Mine Area, Callington
Extant structures: circular masonry engine pool, round powder magazine with conical roof.[644]

Kapunda Mine Historic Site (SAHR 11535), Chimney [Cornish], former Kapunda Copper Mine (SAHR 10089), and Dwelling (Mine Square Cottage), Kapunda (SAHR 10103)
Kapunda Mine was established in 1844, following the discovery of copper ore in 1842. It was Australia's first commercial discovery of copper. It was also the nation's first profitable mine. It "still has the oldest surviving mining building on Australian mainland".[645]
Extant structures: Smokestack c.1850, Mine Square Cottages (c.1845), Mine Store (c.1846), Mine Manager's Residence (c.1867), Buhl Pumping House Ruins (c.1850-51), Draft Engine House Ruins (c.1862), Cottage, Wheal Dutton Opencut (c.1844), Wheal Charles Opencut, East Kapunda Opencut (c.1862), Hillside Mine ruins (c.1880s), Gravel Quarry (c. late 1930s), Smelter remains (c.1849-79), Henderson Plant remains.[646]

Moonta Mines State Heritage Area (SAHR 13975) and Former Hughes Pumphouse & Chimney (SAHR 10113)
Moonta Mine was established in 1862, following the discovery of copper in 1861. For most of the late nineteenth century "Moonta Mines was one of Australia's largest and most profitable mining operations".[647] In 1923 the mine closed. It was significantly influenced by Cornish mining technology and the large number of Cornish miners who worked there. The Moonta district is known as "Australia's Little Cornwall".[648]
Extant Mine structures: "Hughes" Pump House and flue, adjacent Ruins, Shaft and Paving.[649]
Note - It is assumed that the above listing includes: Hughes (Cornish) Enginehouse (1864) (no roof), condenser pit, round chimney, part reconstructed shaft and pump rod and balance bob, Richmans Enginehouse (1869) with flat roof and parapet, Stuckeys shaft, mounting block for compressors, stone bases of crusherhouse and jiggerhouse.[650]

Extant structures in State Heritage Area: Former Moonta Railway Station (SAHR 10187), Moonta Mines Uniting Church, fence and Sunday School building (SAHR 10114), Moonta Mines Model Sunday School site (13110), Miner's cottage and fence (SAHR 10135), former Moonta Mines Model School (11732).



Richman's Enginehouse, Moonta Mines



Hughes Enginehouse, Moonta Mines

Prince Alfred Copper Mine Precinct including mine, smelter, and township complex, via Cradock (SAHR 26450)
The Prince Alfred Copper Mine demonstrates mining practices imported from Cornwall.[651]
Extant structures: it is a rare example of a combined Cornish engine and crusher house, archaeological potential includes Welsh smelter, assay house, brickworks, and small township.[652]

Wheal Watkins Mine Historic Site, Glen Osmond (SAHR 11607)
The Wheal Watkins Mine was one of the first silver-lead mines in Australia, established in 1843. It is associated with Cornish miners who worked there.
Extant structures: main shaft and three adits.

**South Australian Heritage Register Examples**[639]

Wheal Gawler Mine Historic Site, Glen Osmond (SAHR 11606)
The Wheal Gawler Mine was the first metal mine established in Australia following the discovery of silver-lead ore in 1841. It is associated with Cornish miners who worked there.
Extant structures: four shafts, an adit to the north, and part of an adit to the west.

Worthing (Hallett) Mine Site (including Mine, Chimney & Pump House) (SAHR 10545) (near Hallett Cove)
The Worthing Enginehouse is the "oldest remaining Cornish enginehouse in Australia".[653]
Extant structures: Mine Site (including Mine, Chimney & Pump House).
Note - It is assumed that the above listing includes: Worthing (Cornish) Enginehouse (1851) (no roof) and engine shaft (infilled), flue, chimney, adjacent Boilerhouse ruins.[654]



Worthing Mine Enginehouse.
Source: Australian Mining History Association 2011 Conference proceedings, http://www.mininghistory.asn.au/wp-content/uploads/17-AMHA-Proceedings-Volume-compressed-2.pdf, accessed 7 October 2020.

South Australian, State heritage listed Smelters include:

- Apoinga Smelter Site (SAHR 11025)
- Bolla Bollana Brick Kiln & Copper Smelter Ruins, Vulkathunha-Gammon Ranges National Park (SAHR 10317)
- Former Glen Osmond Smelting Works Chimney [Cornish] (SAHR 10528)
- Prince Alfred Copper Mine (and Smelter) Precinct via Cradock (SAHR 26450)
- Wallaroo Smelters Site, including Hughes chimney stack, Wallaroo Seafarers' Centre (former Smelters' offices), ruins of various structures and slag heaps (SAHR 10137)
- Yelta Smelter (Ruin) (SAHR 11167)

**Local Heritage Examples**[655]

South Australian, local heritage listed Cornish influenced mines include:

Bremer Mine - chimney, engine house & ruins, Callington
Extant structures: remains of Leggs Enginehouse bob wall, remains of Boilerhouse, remains of flue.[656]

Former Wheal Grainger Mine, Brown Hill Creek (Bhc.004)
Extant structures: unknown

Wheal Augusta Mine Site, Mount Osmond
Extant structures: Adits and mine workings associated with Wheal Augusta Mine.

Wheal Nitschke Mine, Seppeltsfield (S02)
Extant structures: unknown

### 5.5.4 Other Australian State and Territory Heritage Places

The Burra Mine can be compared to other Cornish influenced mine sites which exist in Australia and are included on the various separate state or territory heritage registers. These are summarised below.

| Australian State or Territory Heritage Register examples |
| --- |
| **New South Wales Heritage Register**[657] |
| The following list is based on searching the NSW State Heritage Register using the term "mine" in "Item name" and the term "Cornish" in "significance, description or historical notes". |
| Central Mine Manager's Residence, South Broken Hill (NSW HR 01770)<br>The residence is associated with the Broken Hill mine manager James Hebbard whose family originated from Cornwall. The father of James Hebbard originally settled in Burra and was associated with the Burra Burra mine.<br>Extant structures: single storey residence |
| The following list is based on searching the NSW State Heritage Register using the term "Cornish" in "significance, description or historical notes". |
| Cadia Engine House & Surrounds, (NSW HR 00779)<br>In 1851, copper was discovered near Cadiangullong Creek. In the 1860s, the Scottish Australian Mining Company erected an enginehouse and smelting works. A small village was established including a general store, school and cemetery. It is the only Cornish Engine house in New South Wales.[658]<br>Extant structures: Cornish Engine house (1865); Cornish Engine house roof; part of the crusher house; machinery including part of the beam engine, pump parts, drive and brake mechanisms, parts of the crusher machinery and the boiler; chimney; open pit lookout; part enginehouse boiler abutting the chimney; and garden of remembrance (exhumed Cadia Cemetery remains).[659]<br><br><br>Cadia Enginehouse, c.2003.<br>Source: Newcrest Mining Website, http://www.cadiavalleyheritage.com.au/, accessed 19 March 2019.<br><br>Note:<br>Tin Buddles at Pyes Creek, Johnstones Rd, via Torrington, NSW (Register of National Estate 19057) (Not State listed)<br>Extant structures: four buddles and infrastructure adjacent mine shaft. |

**Victorian Heritage Register**[660]
The Victorian Heritage Register is searchable by keywords only. The terms "Mine" and "Cornish" were searched.

Berry No.1 Deep Lead Gold Mine (Cornish Enginehouse), Lawrence (VIC HR H1740)
In the early 1870s, lead mining began near Smeaton, Victoria. The Berry No. 1 Mine Company was floated in 1881 and a 70-inch Cornish style (but locally manufactured) pumping engine was erected in an enginehouse.
Extant structures: Cornish Engine house (part), bob-pit and machinery foundations, mullock heap, pebble dump, and archaeological features.


Berry No.1 Deep Lead Gold Mine brick Enginehouse.
Source: Victorian Heritage Database, http://vhd.heritage.vic.gov.au/places/result_detail/5506, accessed 7 October 2020.

Central Deborah Gold Mine, Bendigo (Cornish boiler) (VIC HR 5996)
This was a later gold mine which was operational from 1939 to 1954.
Extant structures: working machinery includes a Cornish boiler, winding engine and two compressors.

Duke and Timor Deep Lead Gold Mine, Timor (VIC HR H1764)
This mine was the site of the "first use of Cornish beam-pumping technology for deep lead mining"[661] in Victoria.
Extant structures: pumping engine building (part), granite pump arch, cockpit, cylinder bed, engine and battery foundations, large mullock heap and archaeological features.

Gambetta Reef Gold Battery Site, Omeo (VIC HR H1269)
Extant structures: one 5-head stamping battery, portable steam engine, shell of Cornish boiler, underground flue and chimney stack base.

Good Hope Quartz Gold Mining Precinct, Wongungarra (VIC HR H1268)
Extant structures: two crushing batteries: the Good Hope battery (three 4-head stamp batteries, horizontal engine and a Cornish boiler), and the Good Hope Consolidated battery (portable steam engine and one 5-head iron framed stamping battery).

Royal Standard Gold Battery Site, Woods Point (VIC HR H1270)
Extant structures: three 5-head stamp batteries, waterwheel, two Cornish boilers, metal chimney flue, and equipment for an inclined tramway.

Ruins of Duke of Cornwall Mine (VIC HR H0385), Vaughan-Chewton Road, Fryerstown
The Duke of Cornwall Mine was a gold mine in the Castlemaine area. The ruins include the Cornish style Duke of Cornwall Enginehouse (c.1865) constructed by the Anglo Australian Goldmining Co. and a chimney.
Extant structures: Duke of Cornwall Cornish Enginehouse (1865) (with roof) and chimney.



Duke of Cornwall Enginehouse.
Source: Goldfields Guide website, https://www.goldfieldsguide.com.au/explore-location/241/duke-of-cornwall-engine-house/, accessed 7 October 2020.

Note: The following National Trust of Australia listings in Victoria include:

Band of Hope & Albion Consols Mining Co. Machinery Site No.9 Shaft, Ballarat (enginehouse) (National Trust Place ID 67451)
Extant structures: some sections of the beam wall of the enginehouse and foundations for a winding engine.

Hepburn Estate Leasehold Co. Mine & Machinery Site, Smeaton (National Trust Place ID 68520)
Extant structures: The "most significant extant remains are at No. 1 shaft and consist of a substantial mullock dump, chiefly made up of water-washed quartz pebbles and stones, and the beam wall of a brick Cornish engine house. The beam engine used here was the second largest such engine to be made locally in Victoria. It was identical to that installed at the Berry No. 1 mine down the road".[662]

Note: The following Victorian Heritage Inventory listing includes:

Cornishtown Goldmining village, Fryerstown (Place ID 11618)
A town named after the Cornish gold miners who settled there.
Extant structures: "Remains of stone houses, including fireplaces and benched tent platforms, roads, stone walls, bridges, orchards, alluvial mining features and domestic artefacts".[663]

| **Australian State or Territory Heritage Register examples** |
| --- |
| **Queensland Heritage Register**[664]<br>This list is based on searching the Queensland State Heritage Register using the term "Mine" in the "Name" field. The Queensland Heritage Register does not enable "significance, description or historical notes" to be searched. Each individual mine listing "Significance", "History", and "Description" section has been subsequently searched using the term "Cornish" to determine if the mine was Cornish influenced. The results are shown below. |
| Alexandra Mine and Battery, Maytown (c.1878-1898) (600429)<br>The "survival of the mine and battery site, complete with a Cornish boiler still in its brick bed and with an intact steel chimney, is rare, both in Queensland and in Australia. The single cylinder horizontal steam engine is also very early and rare".[665]<br>Extant structures: Cornish boiler- JW Sutton & Co, Brisbane, One-cylinder portable steam engine, One-cylinder horizontal steam engine, Boiler casing (converted to a water tank), Pump arm, two 5-stamp mortar boxes.<br><br>Golden Gate Mining and town Complex, Croydon (645605)<br>The Golden Gate Mine is located on the Croydon Goldfield. It was in operation briefly from 1886 to 1887. It was reopened in 1891 until it declined in 1915. Ethnic mining groups include Irish, Cornish and Scottish.[666]<br>Extant structures: Golden Gate Mine; Croydon Consols Battery and Cyanide Plant; Golden Gate Cemetery; Golden Gate No.10 North Mine; Croydon Consols Pump Shaft; Golden Gate Township.<br><br>Tyrconnel Mine and Battery (1876-1980s) (600687)<br>Extant Structures: living quarters, mine including Cornish boilers, battery, and cyanide works. |
| **Western Australian Heritage Register**[667]<br>This list is based on searching the Western Australian State Heritage Register using the term "Mine" in the "Name" field. An additional search was undertaken using both "Mine" in the "Name" field and "Cornish" in the "text field". |
| Baddera Mines, Alma (Place No. 08924)<br>In 1873, Galena deposits were discovered near Alma. This led to the development of the Baddera Mine (c.1906-1921) and North Baddera Mine (1948-1951).[668] Baddera Mine was the largest lead producer in Western Australia and was "closely linked with early attempts to establish a works to smelt Kalgoorlie gold ores".[669] The "Baddera boilers are the last known mine site Cornish boilers in Western Australia which are still in their working location and still retain their flue ducting and the stonework base of their chimney".[670]<br>Extant structures: Cornish boiler (1908).<br><br>Geraldine Mine (Geraldine Mine Site, Buildings and graveyard), Galena (Place no. 03455)<br>In 1849, the Geraldine Lead mine began operations. A smelting works was built close by. The Mine employed experienced miners from Cornwall including a Cornish mine manager.[671] It was the first commercial mine in Western Australia.<br>Extant structures: Engine House (c.1851), Mine Manager's House (c.1851), Ore breaking floor (c.1851), Cemetery (c.1854), Mine Shafts (1849), and the Ore processing site (c.1960s), machinery (including parts of an early steam traction engine). Note - poor condition. |
| **Australian Capital Territory Heritage Register**[672]<br>The Australian Capital Territory Heritage Register has limited search capabilities. The Register is searchable by suburb/district only. It is not possible to search for "Mines" or "Cornish" as terms. The entire suburb/district list was reviewed, and this resulted in no findings. |
| **Northern Territory Heritage Register**[673]<br>The Northern Territory Heritage Register is searchable by "Name" only. The term "Mine" was used in this field. This resulted in several Listed Mines. The Statement of Heritage Value for each of these Mines was subsequently searched using the term "Cornish". This resulted in no findings. |
| **Tasmanian Heritage Register**[674]<br>The Tasmanian Heritage Register has limited search capabilities and is currently in a pdf format. It is searchable only by name or address. It does not list "Significance, History, or Descriptions of Places". The search term "Mine" was used and resulted in five Mines but it is not known if any of the Mines listed are Cornish influenced, thus they have not been included. |

### 5.5.5  Other International Examples

The Burra Mine can also be compared to Cornish influenced mine sites which exist internationally, as summarised in the tables below.

| Other International Examples[675] |
| --- |
| Other International Cornish influenced mines include: |
| Mexico<br>▪ Real del Monte (silver mine) near Pachuca. Indeed, the "area of Pachuca and Real del Monte is now being marketed as Mexico's 'Little Cornwall' and there are plans to link them with Camborne and Redruth".[676]<br><br>North America<br>▪ Grass Valley, California.<br>▪ Mineral Point, Wisconsin.<br>▪ Upper Peninsula of Michigan (known as the Copper Country).<br><br>Spain<br>▪ Linares, Andalucia (lead mine) (Cornish enginehouses and chimneys).<br><br>South Africa<br>▪ Kimberley (Diamond mine).<br>▪ Johannesburg (Gold mine).<br>▪ Cape Copper Mining Company, O'okiep (Copper mine with intact enginehouse and beam engine).<br><br>Other regions include:<br>▪ Wales<br>▪ Ireland<br>▪ Cumbria, England<br>▪ New Zealand (Pumping enginehouse, Kawau Island, North Island) |

# 6. Heritage Significance

## 6.1. General

On 9 May 2017, the "Australian Cornish Mining Sites: Burra and Moonta" were entered on the National Heritage List as comprising Places of national significance. The Australian Cornish Mining Sites: Burra is a joint listing with Moonta.

This section is structured under the following headings: firstly, National Heritage; secondly, State and Local Heritage; and finally, Areas for Further Research. The National Heritage section includes a copy of the official values, and the statement of significance as published with the listing. This information references the Government Gazette and the Australian Heritage database. It also identifies any matters of national environmental significance (NES).

The State and Local heritage section covers the Places listed on the South Australian Heritage Register. It provides information related to the Indigenous heritage register. In addition, it comments on the Protected species listings for flora and fauna. Finally, it covers planning instruments and heritage surveys associated with heritage provisions and controls.

It is noted that "Inclusion of a place on one or more of the above statutory lists will require that the administrative systems, processes and arrangements are incorporated into a management plan for a national Heritage place. it also involves working with all levels of government to ensure that all heritage values are respected in any decisions made about the place".[677]

The final section includes Areas for Further Research which identifies places located within the existing State Heritage Area which may have potential to be included in the National heritage values statement.

# 6.2. National

**National Heritage Place: Official values as published with the listing. Note - this is a joint listing with Moonta.**

Criterion (a) the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history.

**Values**

*"The 'Burra' copper mine operated profitably for thirty two years from 1845 to 1877. This mine was one of the early and first copper mines in Australia, established following finds of copper in South Australia. The copper mines at Burra and Kapunda (a much smaller mine) mark the beginning of Australia's base metal mining industry.*

*This new form of deep, hard rock mining required new skills and technology not then present in Australia. Mining for copper required the skills of miners who knew how to establish mines and systematically mine them in a way which created the best return for the effort and cost required to access the ore body.*

*Cornish technology, embodied in the steam engines, work practices and ore processing methods applied in the early copper mines of South Australia, was critical to the establishment and ongoing economic viability of these mines. The application of steam power in particular was essential. Without steam power copper mining was impossible. Over the course of the nineteenth century Australia began to move from a pre-industrial agrarian based society and economy to one which was rapidly industrialising. At Burra, Cornish miners established a system of mining on a 'greenfield' site, transplanting from one of the world's most advanced centres of machine innovation (Cornwall) an emergent form of industry which was being shaped by a new revolutionary machine, the steam engine.*

*South Australia's colonial relationship with Britain enabled access to Britain's steam engine technology which at the time was protected to prevent transfer to competitor nations. Steam power was not just an 'improving' technology - it was revolutionary. The power of one boiler for example replaced the power of one thousand men.*

*Burra is of outstanding importance because Burra remains, with Moonta, one of only two areas in Australia where Cornish mining technology, skills and culture is demonstrated to a high degree. Burra represents the Cornish mining system's successful transplantation in Australia.*

*Features which express these values include an outstanding collection of nineteenth century civic, residential, church and Cornish mining built structures, all located within the former villages (Kooringa, New Aberdeen, Aberdeen, Llwchwr, Hampton) and mine at Burra.*

*In relation to the demonstration of Cornish mining technology, skills and practice the following items in or near to the Burra Mine Area are significant including but not limited to the former Winding House, the former Ore Sorting Floor, the former Crusher Chimney (Cornish), the former Morphett's Pump House, the former Engine/Crusher House, the former Mine Manager's Dwelling and Office, the former Graves Pump House, the former Haulage Engine Chimney (Welsh), the former Powder Magazine, Peacock's Chimney (Cornish), the former SA Mining Association Store Room, Yard and Walls (Market Street) and the former SA Mining Association Storeman's Dwelling (Market Street).*

*The Burra Mines Historic Site as a whole is also significant as a place which on the surface and underground demonstrates the layout of surface and underground mining operations. The remnant underground shafts including but not limited to Morphetts shaft, Hector shaft and Waterhouse Shaft with their connecting horizontal levels are significant for their ability to demonstrate underground mining practice in association with the arrangement of surface mining structures.*

*In relation to the demonstration of smelting technology used to improve the economic viability of the mine, the following items in the Smelter area to the east of the Burra Mine Area are significant including but not limited to the Former Burra Smeltsyard and Storehouse, the former Burra Smelts Historic Site (including Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office) and the former Smelts Superintendent's Dwelling and Wall.*

*In relation to the demonstration of the Cornish miner's living conditions and ways of life which enabled them to mine, the following items are significant including but not limited to the former Miner's Dugouts (tributary of Burra Creek), the former Dugout Sites (Burra Creek), the small, attached dwellings on Truro Street in Redruth (street numbers 8, 9, 10, 11, 12, 13, 14, 16 and 18), the stone cottages and dwellings on Upper Thames Street in old Kooringa (street numbers 2, 4, 6, 8, 10, 12, 16), the former Burra Primitive Church (9 Upper Thames Street), the Paxton Square cottages (33), the former Burra Bible Christian Chapel (Kingston Street), the former Smelter's Home Hotel (SAHR 10419 ' Market Street), the Burra Hotel (SAHR 10404 ' Market Street), the former Burra Salvation Army Citadel (11 Kingston Street) and a 1840s timber dwelling (39 Commercial Street ' SAHR 10434) and Burra Town Hall (original Miners' and Mechanics' Institute). While the Cornish miners were mostly Methodist in faith the following early Anglican Churches are significant for their representative demonstration of the importance of religion in these miner communities including St Mary's Anglican Church and St Mary's Anglican Church Hall.*

*In relation to the demonstration of the speculative nature of mining operations, the former Bon Accord Mine Buildings (SAHR10023) are significant including but not limited to the 1859 mine offices, blacksmith's forge, carpenter's shop and a manager's residence. The following additional features also reflect the Cornish influence within the town of Burra including but not limited to the stone wall located on the east side of Commercial Street and Ware Street, Burra (SAHR 10435) and the stone wall located on the west side of Commercial Street (SAHR 10436) in Burra.*

*Burra is distinctive in its development from a group of smaller townships including Kooringa (Company town), Redruth (Government surveyed town), Aberdeen (Scottish speculators), New Aberdeen (Scottish association), Llwwchwr (Welsh Smelter workers) and Hampton (new mining settlement named after the assayer at the smelting works). The names of these townships reflect the mining history of Burra and the haphazard nature of its development as a mining settlement. The Hampton Township Precinct (SAHR 10359) represents the impact of the decline of the mine and the consequent loss of population when the Burra Mine closed in 1877. The features of significance include but are not limited to Jacka House, the remnant street and allotment layout, fences, walls and remnant stone domestic buildings and introduced trees such as almond, pine, olive and pepper trees and the remains of the quarries that provided stone for the dwellings. Burra Cemetery (SAHR 10432 Spring Street, Burra) is also significant as a place which, through the headstones within the cemetery, chronicles the lives and misfortunes of the mining community up to 1877. These stories are valued as an important complementary record of the life of Cornish miners in Burra".[678]*

Criterion (f) the place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.

**Values**

*"At Burra, Cornish miners established a system of mining on a 'greenfield' site, transplanting from Cornwall - one of the world's most advanced centres of machine innovation - an emergent form of industry which was being shaped by a new revolutionary machine, the steam engine. Welsh smelting technology was also successfully established at the mine soon after its establishment.*

*This achievement created a 'prototype' system which could then be repeated and applied in other later significant mining ventures such as Broken Hill in NSW, Bendigo in Victoria, Kalgoorlie in WA and Charters Towers in Queensland. Cornish mining traditions continued to be used and improved as Cornish miners moved from one mine to another across the country. This achievement also demonstrates the important role technology played in the evolution of Australia's industrialised modern economy.*

*Features which express these values include the remnant mining structures within the Burra Mines Historic Site (SAHR 10970) and all of the significant features listed under criterion (a)".[679]*

**6.2.1    Statement of significance as published with the listing**

*"The former copper mine at Burra represents a milestone in Australia's history of mining. During the nineteenth century the scale and richness of the copper mine at Burra marked the beginning of Australia's metal mining industry.*

*Using technology and skills transferred from Cornwall to Australia, the 'monster mine', for the first ten years of its life was the largest mine in Australia. Copper wealth at this time was a critical revenue source needed for the survival of the then new colony of South Australia. From 1850 to 1860 the Burra mine produced five percent of the world's copper. South Australia soon became known as the Copper Kingdom in recognition of its substantial industrial development focused on copper mining and the export of copper overseas.*

*The surface and underground mining operations at the Burra mine were mainly Cornish in nature. Smelting skills, technology and equipment were also imported from Wales and operated by Welsh smelter experts. Cornish technology and skills transferred to Australia and demonstrated at Burra were essential aspects in the establishment of Australia's first copper mines. The Cornish steam engine, as in Cornwall, was revolutionary, enabling for the first time the mining of metals at depths not previously possible. The deep rock mining skills bought to Australia by Cornish miners also facilitated the further expansion and development of Australia's mining industry.*

*The Cornish Steam engine and its use in the copper mines of South Australia also demonstrates the early course and pattern of Australia's industrialisation. Burra and Moonta former mine areas include the best remaining evidence of these Cornish machines and their application in Australia in the mid to late nineteenth century.*

*Burra is of outstanding heritage significance to Australia because of its very high capacity to demonstrate this major national industrial milestone. At Burra copper mining was of a substantial scale compared to other previous smaller copper mines. The transfer of Cornish mining skills and technology is best demonstrated here more than any other place in Australia".[680]*

### 6.2.2    National environmental significance (NES)

A search has been undertaken to identify if there are any matters of national environmental significance or other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 in the area namely the Local Government area of the Regional Council of Goyder.[681] A copy is included in the Appendix.

### 6.2.3    Indigenous heritage register

The central archive, which includes the Register of Aboriginal Sites and objects (the Register), administered by Aboriginal Affairs and reconciliation (AAR), has no entries for Aboriginal sites within the project area.[682]

### 6.2.4    Protected species listings for flora and fauna

The Government of South Australia, Department of Environment and Water has provided lists of threatened flora and fauna. A copy is included in Appendix. Please note that these records are for Burra with a 10km buffer rather than specifically the Council border. Please note that this list excludes the Red Banks CP and Mokota CP.

### 6.2.5    Planning instruments with heritage provisions and controls

**Survey of the Heritage of Eight Lower North Towns**
In 1990, a Heritage Survey namely the "Survey of the Heritage of Eight Lower North Towns",[683] which included Burra, was commissioned by the State Heritage Branch of the Department of Environment and Planning and funded by the State Heritage Fund. It was jointly undertaken by Historical Consultants Pty Ltd and Hames Sharley Australia. The objectives of the study were to make recommendations for inclusions of places on the Register of State Heritage Items and for the declaration of State Heritage Areas; to identify areas to be declared Historic (Conservation) Zones; and to provide an inventory of heritage places. The report recommended 90 places for entry in the State Heritage Register within the Burra area and the establishment of the Burra State Heritage Area.

**Development Plan Goyder Council Consolidated – 24 November 2016**
The "Development Plan Goyder Council Consolidated – 24 November 2016"[684] identifies 75 State heritage places in Burra and a State Heritage Area which is slightly different to that recommended in the 1990 Heritage Survey. Thus, the findings of the 1990 Heritage Survey were largely adopted in the Development Plan.

## 6.3.  Attributes of National Heritage Value

The table below seeks to describe some of the specific attributes that contribute to the overall heritage value of the ACMS (Burra) site.

| Attribute | Comment |
|---|---|
| Natural vegetation | The mine site was completely cleared of native vegetation in the mining period and no pre-European settlement vegetation is known to have survived. |
| | Today there is regrowth of self-seeded vegetation around the mine site, and within the towns and Burra Creek trees were subsequently planted for shade and amenity, being a mix of both indigenous and introduced species. |
| | In most areas the self-seeded regrowth is not a threat to significant fabric and does not interfere with important visual relationships between interrelated features. At select ruin sites the growth of woody weeds is a risk to fabric.. |
| Topography and visual setting of the ACMS (Burra) site | The visual setting of the ACMS (Burra) area is derived from its valley setting surrounded by hills along the Burra Creek. |
| | The visual setting of the ACMS (Burra) includes the overall character of the area, the townscape that is the setting for the civic, commercial and residential buildings of heritage value, as well as the visual relationships of elements within the broader landscape. The townscape has evolved as a result of a series of interconnected villages established to support the development of the Burra mine, surrounded by contrasting open agricultural lands. . |
| European settlement pattern | The European settlement pattern is expressed through the area's road network, land division, remaining standing structures and scattered ruin sites. The early settlement pattern is integral to understanding the implicit social hierarchy planned by the Mine Company at Kooringa and how those arrangements were contested by the Cornish miners, evidenced by their temporary dugout housing in the Burra Creek. |
| | Later development of private towns in gridded patterns to the north of the Mining Company land explains the economic growth of the mine and the scale of the community and its eventual decline. |
| | Routes developed to connect the mining community to bring ore to market and for the supply of goods influenced the settlement pattern and are an important aspect of understanding the dependence of the remote community on animal transport for the economic success of the mine and smelter. |
| Mining landscape and ruins | The overall layout of the mine visible on the surface reflects both the outline of underground lode structures and the methods by which the ore body was mined. The physical fabric includes ruins of mining shafts, engine houses, crushing plant, ore sorting floors, mine stores, mine offices and Company dwellings which demonstrate the complete process of the Cornish mining system and associated infrastructure. |
| | The open cut mine and overburden diminish this understanding. |
| Below ground workings | Although largely inaccessible, the abandoned underground workings are a record of the transplanted Cornish mining practices of tut and tribute work. |
| | The underground workings below the water table are unlikely to be accessible in the future and therefore their value can only be understood from documentary records and transmitted by interpretation. |
| Archaeological deposits | The ACMS (Burra) site has value as an archaeological record of Cornish mining practices, technology and settlement, the research potential of which is yet to be fully mapped and determined. |
| Smelts ruins | Except for the Smelts office and ruins of the Smelts Store and Stable, the Smelts site can only be determined by the remains of some small sections of standing walls, footings and floors. |
| | The site is nevertheless important as a further reflection of smelting technology and practices. The Smelts site has value as an archaeological record. |
| | The area is open to public access, but interpretation of its history and significance is limited . |
| Dwellings | Dwellings built on Company land and in private or government townships demonstrate the variety of living conditions at the Burra mine and reflect the way of life of the miners and their families. |
| | Most dwellings have been continuously occupied since the establishment of the mine and retain a good degree of integrity. |

| Attribute | Comment |
|---|---|
| Ecclesiastical Buildings | The number and scale of Burra's ecclesiastical buildings evidence the importance of religion, particularly Methodist Christianity, in the social structure of the Cornish community and life of the miners. |
| | Many of the early churches have been converted to dwellings and are not publicly accessible. Irrespective of this, they are imposing buildings in the townscape and continue to demonstrate their historic role.. |
| Civic Buildings | Burra's civic buildings: Town Hall; Gaol; and Courthouse evidence the social structure of the community and the scale of the economic importance of the mine. |
| | The Burra cemetery is a valuable record of the genealogical and religious makeup of the community. . |
| Commercial Buildings | Burra's commercial buildings: hotels; banks; and town centre evidence aspects of the way of life of the miners and the scale of the economic importance of the mine. |
| Connection to other Cornish mining sites | The ACMS (Burra) has connections to Cornish influenced mine sites which exist internationally including the World heritage listed Cornwall and West Devon Mining Landscape (Ref- 1215). Other international Cornish influenced mining landscapes and evidence of the Cornish diaspora can be found across the world. Notable examples include the Real del Monte and Pachuca silver mines in Mexico and the Linares lead mine in Spain. |
| | ACMS (Burra) and ACMS (Moonta) are the two places in Australia recognised for their outstanding national heritage significance where Cornish mining technology, skills and culture is demonstrated to a high degree. |
| | The contemporary phase of Cornish migration and mining at Kapunda (1844 to 1879) and late phase at Moonta (1861 to 1923) is an important aspect to understanding the context of Burra, and vice versa, and to the later dispersion of the Cornish way of mining to other key mining sites in Australia.. |
| Moveable heritage and collections | Moveable heritage items associated with mining in the ACMS (Burra) form an essential part of the heritage values and understanding of the Cornish mining influence and technology. Moveable heritage includes mining equipment such as boilers, pipes, rail cars, pump and engine parts scattered across the ACMS (Burra) site and these form part of the visual setting of the place. |
| Archival records | Institutions such as the State Library of South Australia and the South Australian Department for Energy and Mining, amongst others, hold substantial collections including maps, photographs, and mining company records related to Burra Mines. These form an invaluable record of mining activities and labour organisation at the site and provides for ongoing research and transmission. |

# 6.4. State and local heritage values

### 6.4.1  South Australian Heritage Register

The following Places, mentioned in the National heritage values, are listed on the State Heritage Register and information on them is accessible on the South Australian Heritage Places database.

| SAHR No. | Details | Address | Statement of Significance | Status Date |
|---|---|---|---|---|
| 10011 | Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) | 9 Upper Thames Street BURRA | No statement | 08-NOV-1984 |
| 10013 | Office (former Burra Bible Christian Chapel) | Kingston Street BURRA | No statement | 08-NOV-1984 |
| 10018 | St Mary's Anglican Church | Market Street BURRA | No statement | 24-JUL-1980 |
| 10019 | Former South Australian Mining Association Store Room, Yard & Walls, Burra Mine Area | Market Street BURRA | No statement | 26-NOV-1981 |
| 10020 | Peacock's Chimney [Cornish], Burra Mine Area | Market Street BURRA | No statement | 24-JUL-1980 |
| 10022 | St Mary's Anglican Church Hall | Market Street BURRA | No statement | 08-NOV-1984 |
| 10023 | Former Bon Accord Mine Site (including Mine Buildings, Wall Sections and Slag Heap) | Railway Terrace BURRA | No statement | 24-JUL-1980 |
| 10024 | Former Burra Smeltsyard & Storehouse | Smelts Road BURRA | No statement | 06-MAY-1982 |
| 10028 | Dwelling built by the South Australian Mining Association | 6 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10029 | Dwelling built by the South Australian Mining Association | 8 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10030 | Dwelling built by the South Australian Mining Association | 10 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10031 | Dwelling built by the South Australian Mining Association | 12 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10032 | Attached Dwelling ('Tiver's Row') | 10 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10033 | Attached Cottage | 9 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10034 | Attached Cottage | 13 Truro Street BURRA | No statement | 06-MAY-1982 |

| SAHR No. | Details | Address | Statement of Significance | Status Date |
|---|---|---|---|---|
| 10036 | Attached Cottage | 11 Truro Street BURRA | No statement | 06-MAY-1982 |
| 10037 | Attached Dwelling ('Tiver's Row') | 14 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10038 | Attached Dwelling ('Tiver's Row') | 16 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10039 | Attached Dwelling ('Tiver's Row') | 18 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10040 | Attached Stone Cottage built for the South Australian Mining Association | 2 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10041 | Attached Stone Cottage built for the South Australian Mining Association | 4 Upper Thames Street BURRA | No statement | 24-JUL-1980 |
| 10045 | Former Powder Magazine, Burra Mine Area | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10046 | Former Haulage Engine Chimney [Welsh], Burra Mine Area | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10047 | Former Crusher Chimney [Cornish], Burra Mine Area | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10049 | Former South Australian Mining Association Storeman's Dwelling, Burra Mine Area | Market Street BURRA | No statement | 24-JUL-1980 |
| 10050 | Former Miners' Dugouts, tributary of Burra Creek | Mitchell Flat BURRA | No statement | 24-JUL-1980 |
| 10052 | Former Winding House | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10053 | Former Morphett's Pump House | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10054 | Former Graves Pump House | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10055 | Former Ore Sorting Floor, Burra Mine Area | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10056 | Former Mine Manager's Dwelling and Office | Burra Mine Area BURRA | No statement | 24-JUL-1980 |

| SAHR No. | Details | Address | Statement of Significance | Status Date |
|---|---|---|---|---|
| 10159 | Dwellings (Paxton Square Cottages) | Kingston Street BURRA | No statement | 24-JUL-1980 |
| 10160 | Former Burra Salvation Army Citadel | 11 Kingston Street BURRA | No statement | 08-NOV-1984 |
| 10203 | Attached Dwelling ('Tiver's Row') | 8 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10204 | Former Smelts Superintendent's Dwelling & Wall | 9 St Just Street BURRA | No statement | 08-NOV-1984 |
| 10359 | Hampton Township Precinct | BURRA | No statement | 01-SEP-1983 |
| 10403 | Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) | Market Street BURRA | No statement | 08-NOV-1984 |
| 10404 | Burra Hotel (previously Miners Arms Hotel) | 5 Market Square BURRA | No statement | 08-NOV-1984 |
| 10419 | Dwelling (former Smelter's Home Hotel) | 26 Market Street BURRA | No statement | 08-NOV-1984 |
| 10432 | Burra Cemetery | Spring Street BURRA | No statement | 08-NOV-1984 |
| 10434 | Timber Dwelling of the 1840s | 39 Commercial Street BURRA | No statement | 27-SEP-1990 |
| 10435 | Stone Wall located on south side of Commercial Street and Ware Street | Commercial Street BURRA | No statement | 08-NOV-1984 |
| 10436 | Stone Wall located on north side of Commercial Street | 29 Commercial Street BURRA | No statement | 08-NOV-1984 |
| 10445 | Former Engine/ Crusher House | Burra Mine Area BURRA | No statement | 24-JUL-1980 |
| 10446 | Attached Dwelling ('Tiver's Row') | 12 Truro Street BURRA | No statement | 24-JUL-1980 |
| 10447 | Dwelling | 16 Upper Thames Street BURRA | No statement | 24-JUL-1980 |

| SAHR No. | Details | Address | Statement of Significance | Status Date |
|---|---|---|---|---|
| 10970 | Burra Mines Historic Site [includes Burra Jinker - object of heritage significance] | Market Street BURRA | "STATEMENT OF HERITAGE SIGNIFICANCE (PLACE) The following Statement of Heritage Significance dates from the time of entry of the Burra Historic Mine Site in the Register of State Heritage Items (now known as South Australian Heritage Register) in November 1984: Historically, the Mines Historic site is important because the copper produced by it restored the colony's flagging economy during a crucial time in the mid 1840's. It is responsible for the establishment of the 'copper towns' surrounding the area, the mass influx of settlers who came from Cornwall and Wales to mine and smelt ore, and the provision of a transportation infrastructure that developed and established further settlement. Physically, the Historic Site is important for containing the dramatic and spectacular remains of the State's most influential copper mining endeavour. The remains are as varied as they are beautiful and range from chimneys to huge areas of open cut. Environmentally, the historic site is an exciting element in Burra's character and although its sheer size tends it to blend into the natural landscape, individual features are notable. The Integrity, of the Historic Site has been compromised and most of it is left as ruins. But although not intact, the site does provide the evidence for its own appreciation. STATEMENT OF HERITAGE SIGNIFICANCE (OBJECT) The Burra Jinker (also known as the Woollacott Jinker) has significant associations with the early development and operations of the Burra Copper Mines. The Burra Mines were constructed on a huge scale at a time when copper formed a substantial part of South Australia's economy, and Burra remains one of Australia's most significant heritage places associated with copper mining. The rare surviving 'Jinker' at Burra reflects both the scale of operations at Burra and it has close associations with the work that went on at the Burra mine. First used in the 1850s, the Jinker is known to have transported the large boilers needed for the Schneider and subsequently, the Morphett Engine House from Port Adelaide to Burra. The Schneider Engine was delivered by Bell Freeman and the Morphett engine by William Woollacott who reportedly led a team of 6 drovers and 40 oxen (including 32 spare oxen). The Jinker is considered an important artefact from Burra's past and was displayed at Wayville showgrounds as part of the centenary celebrations in 1936 until it was moved to the main street of Burra in 1965. In 2014, a new shelter was constructed to help protect the Jinker from the elements. The Jinker not only has important associations with the copper mines at Burra, but also demonstrates the evolution of early transport in South Australia, and in particular remarkable carting achievements. The Jinker was adapted for use and often repaired during some of these long and difficult journeys across harsh terrain, reflecting the early technical innovation of the new colonists. The determination and willpower of the men who drove this vehicle exemplifies the experiences of early South Australian settlers in overcoming the obstacles required to build the Burra Mines and the colony".[685] | 08-NOV-1984 |
| 10989 | Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office | Smelts Road BURRA | No statement | 08-NOV-1984 |
| 11187 | Former Dugout Sites, Burra Creek | Mitchell Flat BURRA | No statement | 28-NOV-1985 |

# 6.5. Areas for further research

## 6.5.1 Introduction

During the site survey as part of the preparation for this document, the following Places located in the existing State Heritage Area were identified as having potential to be mentioned in the National heritage values. It is recommended that further research be undertaken on the following Places:

- Mine Bridge [Stone Arch] abutments and wall on east side of Market Street (SAHR 10021), Market Street BURRA.

- Former Foreman's Residence on Mine site (not currently listed)

- Mine Hospital (not currently listed)

- National Australia Bank Burra Agency [National Bank of Australasia] (SAHR 10007), 1 Market Street BURRA.

- Former Redruth (North Burra) Police Station, Cells and Stables (SAHR 10014), Helston Street BURRA.

- Former Redruth (North Burra) Courthouse (SAHR 10027), Sancreed Street BURRA

- Former Redruth Gaol (sometime Girls Reformatory) (SAHR 10042), Tregony Street BURRA

- Redruth Wesleyan Church (not currently listed)

The following section includes a commentary on the potential significance and applicable National Heritage criteria for each place. Refer to the Thematic History Chapter for a brief history of each place.

## 6.5.2 Potential Places within the State Heritage Area

### Mine Bridge [Stone Arch] abutments and wall on east side of Market Street (1868) (SAHR 10021), Market Street BURRA

Potential significance and applicable criteria
The Mine Bridge dates from the period of significance, from 1845 to 1877, and closely relates to both the operations of the mine and the importance of transport to the mine and the community. Thus, Criterion (a) may be applicable.

### Former Foreman's Residence on Mine site (c.1852)

Potential significance and applicable criteria
The Former Foreman's Residence dates from the period of significance and closely relates to the operations of the mine. Thus, Criterion (a) may be applicable.

### Mine Hospital (1848)

Potential significance and applicable criteria
Constructed during the period of significance, the Mine Hospital was located adjacent to the mine and while it appears to have received limited use for its intended purpose, it was an integral part of the infrastructure of the mine and is a further example of the transplanting of Cornish mining traditions to Burra. Thus, Criterion (a) may be applicable.

### National Australia Bank Burra Agency [National Bank of Australasia] (1862)(SAHR 10007), 1 Market Street BURRA

Potential significance and applicable criteria
The National Bank of Australasia was the first bank in the townships, it was well patronised, improved money circulation, and countered fraudulent SAMA money order notes (refer to Former Redruth Courthouse). Its substantial nature was also a symbol of the confidence in the mine and was the first commercial structure of note to display a sense of permanence and civic pride. While the SAMA's bank of preference, the Bank of Australasia, established a branch in Kooringa in April 1860, from which time the SAMA stopped issuing order notes for small amounts, they were not to erect their own substantial building in Commercial Street until 1879 after the significant period from 1845 to 1877.[686] Thus, the National Bank of Australasia better represents banking in the township. Criterion (a) may be applicable.

### Former Redruth Police Stables (1847), Police Cells, Stables and Stable Yard (1873), and Police Station (1879) (SAHR 10014), Helston Street BURRA

Potential significance and applicable criteria
The Redruth Police stables (1847), Police cells, stables and stable yard (1873), and Police Station (1879) played an important role in supporting the establishment of law and order in the townships. Although, the police station was constructed outside the period of significance it is through association with the early period of policing and the continuation of this that it remains significant. The locating of the police station away from the main population centre in Kooringa also emphasises the land tenure issues, and this decision was the genesis of the development of the northern townships beyond the control of the SAMA which is such an important part of the structure of development in Burra. Thus, Criterion (a) may be applicable.

**Former Redruth Courthouse (1857) (SAHR 10027)**

Potential significance and applicable criteria
The Redruth Courthouse was constructed within the period of significance 1845-1877 and was an important part of the establishment of law and order as well as one of its primary public symbols. It played a role in the lives of the community, both as the venue for official government services but also as a public meeting place. Its location away from the main population centre in Kooringa also reinforces the implications of the land tenure issues which led to the development of the northern townships beyond the control of the SAMA. Thus, Criterion (a) may be applicable.

**Former Redruth Gaol (sometime Girls Reformatory) (1856) (SAHR 10042), Tregony Street BURRA**

Potential significance and applicable criteria
The Redruth Gaol was constructed within the period of significance 1845-1877 and was part of the structure of this mining town. There were not only large numbers of labourers imprisoned but miners were also represented. Its presence in the town and that it was the first gaol outside of Adelaide emphasises the importance of Burra as one of Australia's early large inland population centres. Thus, Criterion (a) may be applicable.

**Redruth Wesleyan Church (1874)**

Potential significance and applicable criteria
The existing Statement of Heritage Value in the May 2013 "Redruth Methodist, Burra – CMS (Conservation Management Strategy) Report" reads: "The former Redruth Methodist Church is a significant element in the Burra State Heritage Area, representing the long association of the predominately Methodist Cornish miners that settled and developed the town of Burra. The former Wesleyan Methodist church is the hub of a group of buildings, including the adjacent Sunday school and Manse that were the centre of community life in Redruth village in the mid 19th century. The integrity of the church has not been diminished by internal alterations for its re-use as a residence".[687]

The Wesleyans were a prominent group of Burra's townspeople. This Church represents this denomination and was constructed during the period of significance. Thus, Criterion (a) may be applicable.

# 7. Key Issues and Opportunities

## 7.1. Statutory Context

### 7.1.1 Environment Protection and Biodiversity Conservation Act 1999

The ACMS (Burra) is protected under the Commonwealth *EPBC Act (1999)*. Approval is required under the EPBC Act for any 'action' occurring within, or outside, the Australian Cornish Mining Sites: Burra (ACMS (Burra)) that has, will have, or is likely to have a significant impact on its National Heritage values.

An action is likely to have a significant impact on the National Heritage values of a National Heritage place if there is a real chance or possibility that it will cause:

- one or more of the National Heritage values to be lost
- one or more of the National Heritage values to be degraded or damaged, or
- one or more of the National Heritage values to be notably altered, modified, obscured or diminished.

With respect to a National Heritage place with historic heritage values an action is likely to have a significant impact if there is a real chance or possibility that the action will:

- permanently remove, destroy, damage or substantially alter the fabric of a National Heritage place in a manner which is inconsistent with relevant values;
- extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values;
- permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place;
- involve activities in a National Heritage place with substantial and/or long-term impacts on its values;
- involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values; and
- make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values

The person appointed with the responsibility for a proposed action needs to undertake a 'self-assessment' to decide whether a proposed action is likely to have a 'significant' adverse impact on the National Heritage values of the place. If so, that action must be referred to the Minister of the Environment for a decision.[688] Given the diverse ownership represented within the ACMS (Burra), including a number of private residential occupants and government business enterprises who are unlikely to have an understanding of the obligations under the *EPBC Act (1999)*, this 'self assessment' process does represent a risk of negative impacts upon the National Heritage values.

As the boundaries of the ACMS (Burra) defined by the National Heritage values coincide with those of the existing State Heritage Area, the place currently has existing heritage oversight at the state level (see below). Any works or activities within the ACMS (Burra) boundaries or adjoining those boundaries require referral and review by the delegate of the South Australian Minister for Heritage (Heritage South Australia) as part of the approval process required under the South Australian *Planning, Development and Infrastructure Act (2016)*. This includes quite minor works such as painting and repair, a change of use or the introduction of new services, which are unlikely to raise the need for referral under the EPBC Act.



National Heritage Listing signage, Market Square, Burra. Source: https://www.facebook.com/burrahistory/posts/2232472113684037

At a State government level, existing advice and assessment processes, undertaken by Heritage South Australia, are already in place and have been in operation for some time. Due to both the remoteness of the ACMS (Burra) and the lack of availability of locally-based heritage experts or a local heritage advisory service, the existing management process could be utilised to determine whether a proposal within the ACMS (Burra) meets the threshold for referral under the EPBC Act. This would be on the understanding that this does not remove the responsibilities of the owner in respect of self assessment and referral under the EPBC Act (1999).

Additional training of Heritage South Australia officers on the requirements and obligations under the EPBC Act (1999) would be required and the preparation of a guide for their internal use to facilitate this additional role is recommended.

More guidance on approvals can be found at the Department of Agriculture, Water and the Environment website at the following link: https://www.environment.gov.au/heritage/management/national.

### 7.1.2 Heritage Places Act 1993 & Planning, Development and Infrastructure Act 2016

The ACMS (Burra) is protected under the *South Australian Heritage Places Act (1993)* while any change to a place recognised under this act is regulated by the South Australian *Planning, Development and Infrastructure Act (2016)*.

The boundaries of the ACMS (Burra) coincide with those of the existing State Heritage Area which is defined under the *Heritage Places Act (1993)* and hence the area is included on the South Australian Heritage Register as a place, while a large number of the individual sites within the State Heritage Area are also individually listed. Under the *Planning, Development and Infrastructure Act (2016)*, any development associated with any place included on the South Australian Heritage Register requires the lodging of a development application involving assessment by the local planning authority with referral to the Minister responsible for heritage (or delegate) for approval as an 'on merit' application. Heritage SA is the Departmental agency of the Minister for Environment & Water.

Development associated with a place listed on the South Australian Heritage Register includes a change of use, alteration and modifications, installation of signage or any other activity which has the potential to have a detrimental impact on the heritage values of the place, including development on surrounding sites. This also comprises essentially maintenance works such as painting, carrying out of repairs or the installation of new services.

A direct example of a planning decision, or possible the lack of following the stipulated planning procedure, that has negatively impacted on a listed place is the visually intrusive water tank placed adjacent to the Burra mine site. This was executed by a state government business enterprise that was not subject to the heritage referral under the normal state government planning processes. Executed before the National Heritage Listing of the place this unfortunate decision highlights the importance of following the planning approval process with appropriate referrals to ensure heritage values of listed places are not impacted in the future.

## 7.2. Land ownership

The ACMS (Burra) covers an area of 640 hectares comprised of the historical industrial sites comprised of the mine and smelter site, and surrounded by a series of small townships with Redruth and Kooringa acting as two separate town centres, and outlying primary production areas. Land ownership across this site varies. The majority of the land ownership is private, with some key sites such as the mine site owned outright by the Regional Council of Goyder, and a few other key components owned by the National Trust of South Australia. Management of components which comprises the ACMS (Burra) is the responsibility of the land owner, and while it is expected that Council and the National Trust have a good understanding of the National Heritage values of the ACMS (Burra) and their responsibilities under the *EPBC Act (1999)* and the *Heritage Places Act (1993)*, there is concern that private owners and government business enterprises may have limited understanding of their obligations. There are therefore potential risks from inappropriate decisions that may negatively impact on the place. This is discussed further under **7.3 Management**.

There would be advantages in providing additional information and assistance to private owners to further their understanding of their responsibilities under the EPBC Act and to encouragement them to conserve and maintain the places referenced in the National Heritage values. This could be provided through the provision of an education programme, providing expert heritage advice and possibly financial assistance, such as through a local conservation grants programme.

It is also important that government business enterprises are aware of the implications of their actions associated with sites under their control within the ACMS (Burra) and their responsibilities under the *EPBC Act (1999)*. An internal government training session may assist with this process.

# 7.3.   Management

Unlike many other places included on the National Heritage List, the management of the ACMS (Burra) does not have a central and overarching management authority, with the management that currently exists being coordinated only through informal channels.

**Regional Council of Goyder**
The Regional Council of Goyder manages the environmental health, maintains infrastructure such as local roads, recreation areas, stormwater, and administers planning and building regulations for the ACMS (Burra) as part of its greater responsibility to the local government region as stipulated in the Goyder Council Development Plan. State planning legislation in South Australia gives powers to Council to approve development and defines activities that require approval when they affect state heritage places, which in the case of the ACMS (Burra) includes all the areas and structures within the boundaries of the place.

Council is also a substantial landowner within the ACMS (Burra), including of key components such as the former mine site, smelter site and the Cemetery, as well as community and residential buildings, such as the Town Hall, Primitive Methodist Chapel and Paxton Square. It is therefore responsible for the conservation of the heritage fabric associated with those sites. Council therefore has an established understanding of the responsibilities and requirements associated with being an owner of heritage places and is an active participant. The Council is also an interested party in encouraging tourism which is seen as an important economic activity for the town. Council however does not currently actively monitor or report on the condition of heritage structures for which it is responsible.

**State Government**
Heritage South Australia (Heritage SA) is located within the Department of Environment and Water and has the responsibility for compliance with the South Australian *Heritage Places Act (1993)*. Heritage experts are employed by the Department to provide advice on behalf of the Minister with respect to proposals that affect state heritage values. The Department has also in the past prepared guidelines for development within the State Heritage Area to assist owners to understand their obligations under the *Heritage Places Act (1993)*.

In the past the Department, in partnership with the Regional Council of Goyder, funded a heritage advisory service to the region but this has since been discontinued and hence the opportunities to monitor the condition of heritage places is ad hoc and infrequent. No regular condition assessment is presently undertaken.

The South Australian Water Corporation (SA Water) is a state government business enterprise that provides and maintains the water supply for the Burra community. It controls land within the ACMS (Burra) including a reserve adjacent to the mine site which, as one of the highest points in the town, has for some time been used to provide pressure for the town's water supply. A lack of understanding of the established heritage values of the mine site and the wider context of the town and landscape resulted in the completion in 2016 of a new water supply tank. Being much larger and taller than the previous tank, this is visually intrusive and has resulted in a negative impact on the ACMS (Burra).



Burra Mine site with Graves Enginehouse in the foreground

### National Trust SA

The National Trust of South Australia is an important land holder in the town with responsibility for key places referenced in the National Heritage values such as the Bon Accord Mine site and the dugouts. It manages Peacock's Chimney and the Malowen Lowarth Cottage at Paxton Square, as well as other important sites within the ACMS (Burra), including the Redruth Gaol, the Burra Police Lockup and Stables and the National Bank. The former Bon Accord Mine site operates as a museum, which is one of the only interpretive facilities associated with the mining activities of the ACMS (Burra). As a charitable organisation, the Trust's ability to resource maintenance and conservation of its numerous sites throughout the State is relatively limited and is largely reliant upon the voluntary efforts of some of its members. In addition to the built structures, it holds a collection of historic objects associated with the Cornish community and the mine.

The on the ground day-to-day management and interpretation of the sites under their control within the area of the ACMS (Burra) relies on the passion of these local volunteers, many being retirees with varying interests and only a relatively small number of individuals are responsible for actual site management. While some of these individuals have a good understanding of the National Heritage values as well as conservation principles, there is a risk that this level of understanding is not shared by all volunteers, while local training opportunities in conservation practice are limited.

The National Trust does not currently actively monitor or report on the condition of heritage structures for which it is responsible.

### Private Owners

The current owners of the individual places mentioned in the National Heritage values, as well as those managing other State listed places may have little, if any understanding of their obligations under the *EPBC Act (1999)*. There is a greater appreciation of the requirements associated with the *Heritage Places Act (1993)* due to the length of time Burra has been acknowledged as a State Heritage Area, the now defunct heritage advisory service, and the long established engagement and focus of the community with heritage tourism which is seen as an important part of the local economy. Through the community engagement process some owners however expressed frustration with the restrictions placed upon their properties due to heritage requirements together with what is perceived to be a complicated development approval process. Therefore there is some risk that inappropriate decisions could occur as a result of the lack of understanding of the obligations under the EPBC Act.

This situation has not been helped by the disbanding of the former regional heritage advisory service run in partnership with the Department of Environment and Water and the Regional Council of Goyder, which provided expert advice to private owners such as those within the ACMS (Burra). Despite the demise of this service, as the ACMS (Burra) is also a State Heritage Area, expert heritage advice is available through Heritage SA. Ideally this should be better understood by private owners.

### Others

There is currently no management involvement with the site by representatives of the indigenous Ngadjuri people. They do not have a presence in Burra, and research has indicated no sites of significance or ongoing practice of their culture within the ACMS (Burra). Notwithstanding that, there is an opportunity for their future involvement with the site. These opportunities are explained later in this chapter, and in the Conservation Management Policy chapter.

### Conclusion

As the majority of the key sites in the ACMS (Burra) are either owned or operated by the Regional Council of Goyder or the National Trust of South Australia, there has for some time been connections between these organisations, although with varying degrees of cooperation. This lack of unity has resulted in different goals and objectives between these organisations, which has resulted in an inconsistent approach or inaction where there should ideally be consistency. It is noted that a closer working relationship between Council and the National Trust in relation to tourism is identified in Council's *Goyder Master Plan 2018 – 2033.*

There would be benefit in forming an advisory committee that represents the community of the ACMS (Burra), including representatives of Council, National Trust and private owners, together with Ngadjuri representation. This could exist as a delegated committee of the Regional Council of Goyder. Involvement of all these groups is likely to result in a sense of community ownership, the creation of shared goals and a unity of objectives to help shape the future of the ACMS (Burra). Such a group should act as the champion for the ACMS (Burra) and could be given tasks such as to monitor and maintain the implementation of the strategy outlined in this document, promote and distribute information about the National Heritage values, and manage the sourcing and distributing grant funding, as well as monitoring and reporting on the state of the National Heritage values.

Private owners should have ready access to expert advice to assist with their own conservation efforts. While this process would likely be best delivered through the reintroduction of a heritage advisory service, in its absence owners should be encouraged to undertake early consultation with the Heritage SA experts to help facilitate the approval process, which could also help to identify if National Heritage referrals are required. There would also be benefit in the upgrading of the existing *Guidelines for development* which was prepared by the Department for Environment and Water for the private owners within the State Heritage Area to also convey information about their obligations under the *EPBC Act (1999)* in the ACMS (Burra).

# 7.4. Cultural Landscape

The unique landscape of the ACMS (Burra) is important and needs to be carefully managed in an integrated manner. This does not only include the remaining built structures, but their context including setting, views, and the surrounding natural environment, as well as the social aspects of the place which together form its National Heritage values. This includes all the elements that contribute to the sense of place, such as sights, sounds, smells and vistas.

**Context**

The existing character of the ACMS (Burra) has been generated as a result of Burra's development history. It is focused on the former industrial sites which were the progenitor of the town. This is comprised of the Mine site contained within a bowl of low hills which originally opened to the east and the smelter site on gently sloping ground on the opposite side of the Burra Creek facing the mine. This bisects the site from west to east while a series of small townships which housed the mining community are located to its south and north along the Burra Creek, with the largest townships of Kooringa to the south and Redruth to the north, acting as two separate town centres. These are surrounded by residential development and outlying primary production areas.

This development pattern is in large part a result of land ownership as the original land survey was organised to contain two sites of mineral potential at either extremity of the land parcel. This meant that the Burra Mine site was at the north edge of the land controlled by the mining company and this allowed for private development north of but in the immediate vicinity of the mine. This was ultimately developed as a series separate townships, the first, Redruth, by the government, but followed by a series of separate private townships. These provided the ability for individuals to own land in comparison to the leasehold arrangements enforced by the mining company at Kooringa to the south. These street patterns and the land division lines are therefore of considerable importance and need to be respected, reinforced and interpreted.

**Mine and Smelter**

Despite the destruction of the earliest areas of the Mine by the 1970s open cut, the remaining pre-1877 mining infrastructure is a transplanting of mining practices from Cornwall, most evident in the remaining Cornish Enginehouses, especially the adjacent Morphett's Pump House and Winding House. These and the other remnant mining and smelting structures are important in transmitting the National Heritage values. The ruined nature of these sites demonstrates the history of abandonment after the closure of the mine while also having aesthetic value. This is reflected in the respect shown towards these sites by the community, suggesting they value them both for their history and their economic potential as a basis for tourism. Care needs to be taken when considering proposals that impact on this aesthetic, and these sites should continued to be managed as ruins with no attempt to reconstruct structures. The exception is Morphett's Winding House which is essentially intact with the exception of its timber elements and where enough is known about their original form to allow these elements to be added without impacting the remaining fabric, as has occurred with the adjoining Pump House.

The Burra Mines Historic Site does however suffer from a number of intrusive elements. The first is the overburden of the modern open cut mine which fills the valley on the east side of the mine which was the original main entry into the site. This has completely changed the original visual and spatial relationships of the various components of the Mine, particularly separating the SAMA Stores from the other mine structures, as well as disrupting the historic spatial and visual relationships with the Burra Creek and between the Mine and the Smelter sites. It also dominates the skyline from various locations within the ACMS (Burra), and has also concealed important Cornish mining infrastructure, primarily the ore processing and concentrating areas, such as the manual jigging grounds, buddle pits, ore floors etc. Ideally this overburden should be removed to restore the historic relationship with the SAMA Stores and Smelter site, as well as allowing for the uncovering of further Cornish mining archaeology not currently represented on the site.



Burra located in the valley of the Burra Creek



Remaining mine structures at the south end of the Mine site



Mine site from the northern lookout

The other major intrusion is the large concrete tank constructed in 2016 on the land within the Burra Mines Historic Site on the hill on the east side of the site. Although a large concrete tank to provide the towns water supply occupied this site for some time, the replacement tank is much larger, particularly in respect of height. As a consequence it is visually intrusive, dominating the vista both from and to the Mine site from most of the ACMS (Burra). While there is little prospect that this tank will be removed in the medium term, it should ultimately be removed and ideally should not be replaced in this location. This would be more appropriately placed in a more discrete location beyond the main viewing lines of the place, ideally to the Council working areas beyond the ridgeline to the west of the mine site. In the short term all effort should be made to screen or reduce its visual dominance, although this is unlike to produce much improvement.

Access to the modern open cut at the Burra Mines Historic Site is controlled by high chainmesh fencing topped with barbed wire, likely a remnant of the 1970s operation of the mine. It is beginning to show its age with areas of rust becoming apparent while maintenance is required in places. It continues to serve an important role in preventing the public from fall risks to the edges of the benches and is mostly discrete, but in some places however it is quite obvious verging on being intrusive. This is most evident where the fence runs around in close proximity of Morphett's Enginehouse, in the foreground at the lookout at the north end of the open-cut and between the Powder Magazine and open cut. It is suggested that this fencing be reworked in these areas to place it in more discrete locations, and ideally it should be completely removed around Morphett's Enginehouses as it is disruptive to the setting of these elements.

**Other Structures**

While the iconic enginehouse structures at the Burra Mines Historic Site are obviously Cornish in origin, the collection of remnant early domestic buildings which housed the miners is not evidently Cornish. This includes amongst the earliest housing erected for a mining company in Australia, comprising the semidetached cottages in Upper Thames Street and the rows of attached cottages at Paxton Square. They reflect the pioneering nature of the development of a mining community in what was then a very remote location, while also representing what many of the miners considered to be the overbearing hand the Mining Company to which many did not wish to be beholden. The dugout, a rent free dwelling constructed by their own hand, comprised of a series of spaces excavated into the clay banks of the Burra Creek, was the Cornish miners unique answer to this situation. When abandon due to flooding and pressure from the Mining Company, those of an independent nature moved to the northern townships. Here they occupied a range of dwelling types from the attached cottages in Truro Street to the freestanding cottages at Hampton. This collection of housing types distinctive to Burra demonstrate the lifestyle of the Cornish mining community together with their ingenuity and independent spirit.

The places of worship, including churches and chapels, and places of celebration and entertainment, primarily the hotels, represent two often opposite aspects of the lives of the Cornish mining community. The early community was renowned for drunkenness and being riotous, but this behavior was transformed into a peaceable and law-abiding community thanks largely due to the work of the churches, primarily the Methodists. The hotels however remain the centre of traditional Cornish entertainments, including wrestling and the celebrations of Cornish holidays. Of the components referenced in this aspect in the National Heritage values, only the Burra Hotel and St Mary's Anglican Church retain their original functions, the others finding alternative uses over time. Thus, while demonstrating the Cornish miners lifestyle as identified in the National Heritage values, only the Burra Hotel retains an ongoing link through the retention of its traditional use, and where possible this use should be encouraged to continue.



View over the Mine site from the Powder Magazine with intrusive chainmesh fencing in the foreground and the water supply tank in the background

## Setting

The Burra Creek is a prominent natural element that links most of the components of the ACMS (Burra). The Creek provided an outlet for the drainage water from the mine and was a water source for the Cornish mining community, as well as the site for forming their dugout homes in the banks. The main townships were also focused along and around this watercourse with their layouts shaped by the resulting topography. The crossing points were also of importance, particularly those around the vehicular entry to the Mine from the east and the link to the Smelter. It was also the cause of hardship to the community when it was subject to flooding. While parts of the Burra Creek have been landscaped, there is an opportunity to create a pedestrian pathway along its length to act as a spine linking the key components of the place while also interpreting the significance of the Creek itself.

There are areas of largely privately owned land within the boundary of the ACMS (Burra), particularly to the north and west, which are zoned for Primary Production and used for agricultural purposes. These regions were always at the periphery of the former industrial and associated residential areas. There is a perceived risk associated with the current use of these areas, being the scale and location of large agricultural buildings, essentially metal clad sheds. These have the potential of negatively impacting upon important vista and views which visually connect components of the place, such as can be seen within the sight lines between Hampton and the Burra Mines Historic Site. As a consequence there needs to be greater controls on the size, location and potential screening of such buildings within these zones to reduce the negative impacts of any visual intrusion.

In addition to this historical, topographic and organisational configuration of the place, much of the character of the ACMS (Burra) is also due to the wider borrowed landscape of the valley of the Burra Creek and the surrounding denuded ridges and hills beyond its official boundaries. These areas are private land generally used for agricultural and primarily pastoral purposes. While there is not any current traditional development pressure that would threaten this landscape, there is the potential for this to be compromised by the growing renewable power industry. This is rapidly developing within the Regional Council of Goyder to harness the abundant renewable wind and solar energy of the region supported by the construction of the new power interconnector to New South Wales which is to terminate at Robertstown. While providing the potential for considerable economic and employment benefit to the community, considerable care and analysis would be necessary in assessing any application for new renewable energy infrastructure, particularly highly visible wind turbines, that will be visible within the landscape to north, south and particularly the east of the ACMS (Burra) as this may have the potential to compromise the National Heritage values.

## Social

While many of the wider Cornish descended community of South Australia and Australia can trace their roots back to Burra, most of the Cornish who were occupied in mining ultimately moved away. While there is considerable evidence of respect for the importance of the Cornish origin of the history of the town in the current Burra community, there is however little evidence of a surviving or living Cornish culture.

There is at present no representation of the Ngadjuri people within this landscape. The relationship between the indigenous people and the mine and the miners is however worthy of reintegration into the cultural landscape of this site supported by further investigation and research.



Looking south along Burra Creek through the centre of Kooringa



Burra Creek between the Mine and Smelts sites

# 7.5. Safety

The size and the nature of the ACMS (Burra) presents a number of safety and security issues for the public accessing the place.

**Fall and collapse hazards**
The previous mining activity has resulted in hazards located throughout the Burra Mine site. The most obvious of these are falling hazards associated with the remaining mine shafts and the edges of the benches of the c1970s open cut and overburden dumps. In addition, there are also ruined buildings which are in danger of collapse, such as the former mine offices. These hazards are however presently well managed with adequate fencing and barriers protecting mine shafts, dangerous drops and areas where there are risks from collapsing structures. The mine shaft where there is the most interaction is Morphett's Shaft, this being protected by a steel cage. This cautious approach has however been at the cost of some of the previous more experiential qualities of the mine site, such as the closure of the former drainage adit at Morphett's shaft. This was previously open to the public and provided a rare opportunity for the public to understand the nature and qualities of the former underground workings.

There are similar risks of collapse associated with the dugouts. Here barriers have been installed within to limit the ability of visitors at access the more potentially hazardous parts of the structures. This has however been at the cost of the quality of the visitor's experience and limits the ability to understand the nature of the residents living conditions.

**Traffic**
While there are many roads through the ACMS (Burra), the most heavily trafficked is the Barrier Highway that links Adelaide to Broken Hill. This is a key arterial road and is used by many vehicles, even though a recent town bypass road has been installed to the west of Burra for heavy vehicles. The Highway transitions into Commercial Street on the approach into Kooringa from the west. This then meets Market Street which runs parallel to the Burra Creek through Redruth to the north before transitioning back into the Barrier Highway at the north end of the township. Footpaths and bike lanes are lacking and inconsistent along parts of Market and Commercial Street which forces pedestrians onto the roadway verge.

There would be advantages in considering a reduction in traffic speeds to provide greater encouragement for walking and cycling. This will allow for a different, slower and deeper experience of the place. It would also be helped by creating greater separation between vehicles and pedestrian/cyclists and providing better designed and controlled crossings where these interact. It would be useful therefore to develop a walking and cycling strategy for the ACMS (Burra) to help to manage this situation and help to better link parts of the place.

**Signage**
There are also inconsistent approaches to both interpretive and directional signage throughout the ACMS (Burra). Legible, consistent and well placed signage is important to help keep people safe and guide the public between key destinations. This is particularly important where there are potential hazards.

There would be advantages in the creation of an overall strategy to improve signage and wayfinding.

**Lighting**
There is limited lighting of existing pedestrian pathways linking key parts of the place which does present risks in traversing some areas, such as the crossings of the Burra Creek. This does restrict night time movement.

Increasing lighting should be considered between key parts of the town to support night time activation and to improve visibility and safety.

## 7.6.  Physical Conservation

The surviving historic fabric of the ACMS (Burra) consists of remnant mining infrastructure, both above and below ground, former industrial processes at the smelts site, and the private and community buildings of the associated Cornish mining community that surrounded these industrial sites in the collection of townships that now form the township of Burra.

Given the National Heritage values of the ACMS (Burra), conservation should be carried out using best practice methods and processes. All remaining original fabric should be conserved in preference to later additions, particularly that which occurred after the closure of the mine in 1877. Several issues have been identified as outlined below.

**Structures**

Many of the structure associated with the centre of the Burra Mines Historic Site (SAHR 10970) were demolished and removed for the creation of the original open cut in 1870, but this left most of the major structures, including the four Cornish enginehouses in place. After the closure of the mine in 1877 the site was essentially abandoned in a relatively intact state, and it was not until 1914 that the remaining mining machinery, such as the engines, and other items of value were removed and sold for scrap, leaving the buildings to deteriorate into ruins. The mine site was further dramatically changed due to the reintroduction of mining in 1971, with the modern open cut requiring the removal of important structures such as Peacock's Enginehouse, whose chimney was rebuilt at the mine entrance. The majority of the remaining structures are in varying degrees of ruination, ranging from there being very little evidence above the ground to relatively complete structures such as Graves Enginehouse and Morphett's Winding House. The exception is Morphett's Enginehouse which is in good condition thanks to the 1986 reconstruction works.

Dismantling for salvage also took place after the closure of the Smelter, although here some of the structures were purposefully demolished much later, such as the Smelter chimney which was blown up in 1953, as a solution to resolve perceived risks created by deterioration. The smelter complex itself is in ruins, although more substantial evidence remains of the Smeltsyard and Storehouse (SAHR 10024).

While the closure of the mine in 1877 led to an exodus from the town, there has not been a great loss in the built fabric associated with the residential and community buildings. This is essentially because the town had evolved over time to also service the farming and pastoral industries instead of being solely reliant on mining. Therefore, the majority of these buildings remained occupied and in use, most continuing their role and serving their original purpose. Most of these building have however been modified to varying degrees, while those that were abandoned, such as the buildings at Hampton, have fallen into ruin and have largely disappeared.

Most of the remaining structures also have survived because they were largely built of reasonably durable masonry, primarily local stone and bricks, with timber confined to roof structures, internal floors and more detailed elements such as windows and doors where these remain. The only exception is the 1840's Timber Dwelling (SAHR 10434), its survival being the more remarkable given the greater fragility of its construction.

Most of the buildings which are referenced in the National Heritage values of the ACMS (Burra) exhibit similar problems, although their level of impact varies from place to place. Typical issues include:

- Rising damp and salt attack, which is more noted in the structures erected before the closure of the mine as these did not include damp courses as part of their construction. This is often exaggerated by poor stormwater disposal, later modifications such as the addition of concrete floors or previous inappropriate repair practices. This problem causes deterioration of mortar joints, stone and brick surfaces immediately above ground level which ultimately can lead to the collapse of the wall. This problem was evident in many buildings, but it is particularly evident at the Powder Magazine (SAHR 10045), Mine Manager's Dwelling and Offices (SAHR 10056), the SAMA Storeman's Yard and Walls (SAHR 10019), the SAMA Storeman's Dwelling (SAHR 10049), the enginehouse ruins of the Engine/Crusher House (SAHR 10445), the Burra Hotel (SAHR 10404), the stone portions of the Miner's Dugouts (SAHR 10050) and the former Mine Hospital, as well as the boundary wall of the Burra Cemetery (SAHR 10432) and the National Bank (SAHR 10007).



Mine Manager's Dwelling and Office (SAHR 10056) – Significant low level deterioration of stone and mortar threatening the remaining walls structural integrity



Former Mine Hospital (Currently not mentioned in the National Heritage Values) – Significant deterioration of stone probably due to internal moisture issues associated with services and concrete floor



SAMA Yard and Walls (10019) – Deterioration of mortar and stone at base of east wall



Powder Magazine (SAHR 10045) – Deterioration of mortar at base of walls



Miners Dugouts (SAHR 10050) – Deteriorated stone to base of walls



Burra Hotel (SAHR 10404) – Deterioration of stone over cement render repair to lower portion of wall

- Penetrating damp, which is a form of salt attack, caused by moisture and salts penetrating horizontally through a wall leading to the deterioration of mortar joints and masonry surfaces. The problem is typically confined to areas below ground or where the structure retains soil, with this being evident in the cellars of the Bon Accord Mine (SAHR 10023), the Burra Town Hall (SAHR 10403) and the Burra Hotel (SAHR 10404), but is also apparent in masonry retaining walls, such as the abutments of the Mine Bridge (SAHR 10021). The degree of the problems observed are quite typical and are not considered to be peculiar to Burra

- Falling damp, which results in the deterioration of softer mortar joints and soiling generally at higher levels and at the top of walls. The degree of the problems observed are quite typical and are not considered to be peculiar to Burra, although it is widespread amongst the ruins at the mine site, particularly the remains of the Mine Manager's Dwelling and Offices (SAHR 10056), but also portions of the boundary walls at the SAMA Store Room, Yard and Walls (SAHR 10019), the former Smeltsyard and Storehouse (SAHR 10024), and the remaining structures at Hampton, as these are without roofs and where the top of the walls are without copings.



Mine Bridge (SAHR 10021) (Currently not mentioned in the National Heritage Values) – Severely decayed stonework due to penetrating damp from retained soil



Burra Hotel Cellars (SAHR 10404) – Deterioration of mortar joints and stone due to soil backfill behind the walls



Kooringa Primitive Methodist Church (10011) – Deterioration of mortar joints to upper walls caused by blocked or leaking gutter



Burra Town Hall (SAHR 10403) – Salt efflorescence on internal wall surface caused by retained soil



SAMA Storeman's Dwelling (SAHR 10049) – Deterioration of pointing to top of wall from earlier leaking gutter

- Structural instability, typically displayed by cracking often through weaker mortar joints but occasionally through masonry units. This is evident in the remaining standing structures at the Smeltyard and Storehouse (SAHR 10024), and to a lesser degree at Graves Enginehouse (SAHR 10054), Winding House (SAHR 10052) and the Redruth Courthouse (SAHR 10027). The stability of some structures are also of concern, such as the remaining full height wall of the Mine Manager's Dwelling and Offices (SAHR 10056) which is leaning and in imminent risk of collapse, parts of the remaining standing walls at Hampton Township (SAHR 10359) where the inner and outer faces of the walls are delaminating, the tall slender walls of the Former Engine/Crusher House (SAHR 10445) which are reliant on the deteriorating timber beams for their stability, and parts of the former SAMA Store Room, Yard and Walls (SAHR 10019) / SAMA Storeman's Dwelling (SAHR 10049) where localised collapse is occurring.



Smeltsyard (SAHR 10024) - Major cracking



Mine Manager's Dwelling and Office (SAHR 10056) – Significant lean to standing wall



Redruth Courthouse (SAHR 10027) (Currently not mentioned in the National Heritage Values) – Cracking to corner

- Roof and gutter deterioration, including missing sections of roof sheeting, flashings and gutters, or blockages in the drainage system that allows water to enter the interior of buildings leading to deterioration, such as is apparent with the Smeltsyard and Storehouse (SHR 10024), and the Burra Town Hall (SAHR 10403). The replacement of the slate roof on Morphett's Pump House in 1986 with corrugated Colorbond is understandable give maintenance complications but nevertheless is unfortunate as it has lost some of its aesthetic qualities as a consequence.

- Metal corrosion, mainly associated with remaining iron components of mine related structures such as holding down bolts for former machinery, shutters for flues from the boilers, straps and fishplates associated with the walls of Morphett's Pump House (SAHR 10053). Corrosion can lead to oxide jacking where the corrosion products created during the process expand jacking masonry opening gaps which allow water entry leading to further corrosion. This can be seen at the top of the Haulage Engine Chimney (SAHR 10046) where there is likely corrosion of an iron reinforcing tie built into the masonry. The level of corrosion apparent at Burra however is not considered to be exceptional.



Smeltsyard (SAHR 10024) – Missing roof sheeting and flashings
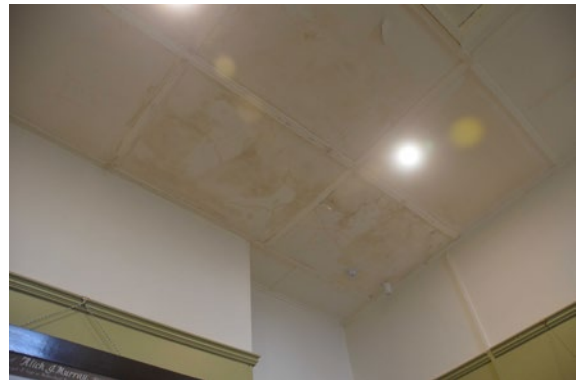


Burra Town Hall (SAHR 10403) – Water damage to ceiling caused by roof leaks



Haulage Engine Chimney (SAHR 10046) – Horizontal gap at the bottom of the chimney coping likely caused by oxide jacking

- Timber weathering, which results in the breakdown of its organic structure. This can lead to its disintegration over time and exposing it to biological attack, such as rot. It is often caused by the deterioration of protective paint surfaces or where unpainted timber has been left exposed due to the loss of roof structures. This is seen in the remaining unprotected timber elements associated with the 1840's Timber Dwelling (SAHR 10434) and in the remaining exposed timber beams which act as structural braces for the surrounding masonry walls within the Engine/Crusher House (SAHR 10445) and the floor joists within the cockpit at Graves Pump House (SAHR 10054) at the Burra Mine site.



1840s Timber Dwelling (SAHR 10434) – Failure of paint finish to door leading to weathering of timber substrate



Former Engine/Crusher house (SAHR 10445) – Deterioration of remaining timber beams bracing external walls



Burra Town Hall (SAHR 10403) - Deteriorated paint finish to fascia leading to weathering of timber substrate



Graves Pump House (SAHR 10054) – Deterioration to timber joists within cockpit



Redruth Courthouse (SAHR 10027) (Currently not mentioned in the National Heritage Values) – Weathering to end of timber wall plate and end of rafter/barge to outbuilding

- Erosion, this being present in a number of forms. Most typically this takes the form of erosion of mortar joints and masonry surfaces on the leeward side of the various chimneys, whether these be of residential buildings or of the remaining tall chimney stacks at the Burra Mines Historic Site (SAHR 10970). This is caused by the negative pressure created by the wind turbulence moving around these tall slender structures. There is nothing unusual about the level of deterioration this has caused at Burra, other than the height of the chimneys at the mine site.

- The other form of erosion which is unique to the Former Miner's Dugouts (SAHR 10050) is the deterioration of the clay surfaces which make up the floor, walls and ceiling of these underground structures. Sharing similarities with penetrating damp, this is caused by moisture from the ground evaporation on the surfaces causing the breakup of the clay matrix turning this to powder. Unfortunately this is a natural consequence of this type of construction and was likely originally addressed through regular whitewashing of the surfaces, noting that the dugouts were only occupied for a few years and were never intended to be long term structures. The stabilisation of this deterioration mechanism presents a difficult conservation challenge which warrants further analysis and research.



Cornish Crusher Chimney/Dressing Tower Complex (SAHR 10047) – Deterioration of pointing and stone surfaces to leeward side



Miner's Dugouts (SAHR 10050) – Deterioration of clay ceiling and wall surfaces



Miner's Dugouts (SAHR 10050) – Deterioration of clay surfaces

- Vegetation growth occurring within the remains of the former mining structures at the Burra Mine site. It is particularly problematic when vegetation grows within or adjacent to masonry elements, as their roots gradually cause the disintegration of remaining structures. The most noted example of this is at the east entrance to the Burra Mine site at the base of the open cut overburden where trees and woody shrubs have established themselves amongst the remains of the waterwheel and the buddle pits present in this area. In this instance this vegetation needs to be carefully removed.

- Pigeons and other birds such as starlings. They find numerous roosting opportunities in the former mine shafts but have also created nesting sites within Morphett's Enginehouse by forming openings in the external timber linings. This leads to accumulations of excrement which has a detrimental impact building fabric. They also nest in sheltered parts of the complex roofs of buildings, causing blockages of box gutters leading to ongoing problems with roof leaks and falling damp. Measures ideally should be taken to help control pigeon and starling numbers, restricting roosting opportunities and sealing of nesting openings, along with more regular maintenance of roofs with a known vulnerability to stormwater issues.

All of these types of issues need to be addressed where they appear at the individual places.

There are several of the built components referenced in the National Heritage values of the ACMS (Burra) that are considered at risk of significant deterioration and loss of integrity. This includes the SAMA Store Room, Yard and Walls (SAHR 10019) and the Smeltsyard and Storehouse (SAHR 10024) where there are portions that are in an advanced state of deterioration with several portions at risk of collapse. These are of considerable importance to the understanding of the values, and it may be prudent to consider the future acquisition of these places to ensure the ultimate protection, which would also have the added benefit of allowing public access to these sites.

Ongoing maintenance is also fundamental to the conservation of these places. Currently this is relatively ad hoc with most of the activity focused on the places that remain occupied and in regular use where the condition is an important part of their attraction, including some privately owned residences. There is little evidence of regular maintenance to many of the other sites, particularly where these are unoccupied or are already in a state of ruin. It will be important to develop a regular maintenance programme which needs to be expanded to significant ruins such as those at the Burra Mines Historic Site (SAHR 10970), as well as associated infrastructure such as interpretation, signage and fencing. Regular maintenance also needs to be suitably resourced.



Structure of the former Waterwheel (Part SAHR 10970) – Vegetation growth within the masonry



Former Buddle Pits (Part SAHR 10970) – Vegetation growth within structures



Morphett's Enginehouse (SAHR 10053) – Holes made by starlings through timber linings to access nesting sites within the roof void

## Archaeology

Much of the original mining areas of the Burra Mines Historic Site (SAHR 10970) have been impacted by previous disturbances, initially by the 1870 open cut but particularly by the later modern open cut operations. This removed most of the early core mining and ore processing areas leaving only the structures around the periphery. As part of the 1970s open cut operation, the overburden created through this process was placed around the east side of the site. In addition to dramatically changing the context of the original entry area to the mine, this overburden has buried most of the remaining areas where ore concentrating occurred, including ore floors, jigging grounds and possibly buddle pits which were an important part of the Cornish mining method.

Despite these disturbances there is evidence in places of likely below ground structures in various locations, where future archaeological work is likely to reveal further information about Cornish mining practices at this site. The modern open cut overburden should ultimately be removed to expose and allow further analysis of this important concealed ore dressing and concentrating infrastructure.

Outside of the mine site, the relatively undisturbed nature of the building ruins associated with the Burra Smelts Historic Site (SAHR 10989) has potential to have retained important evidence of the smelting process of this period which would allow for a better understand of these practices. Other sites with potential include the former SAMA Store Room, Yard and Walls (SAHR 10019), the Smeltsyard and Storehouse (SAHR 10024) and the Hampton Township (SAHR 10359), while there are also a number of areas along the sides of the Burra Creek (SAHR 10050 & SAHR 11187) which were likely once occupied by dugouts, and remain sufficiently undisturbed to possibly reveal evidence of the lifestyles of the Cornish mining community during the earliest phase of the mine.

Sites with archaeological potential need careful and considered planning to prevent actions that may potentially damage the remaining underground evidence. This is particularly the case when considering infrastructure such as new roads and services where excavation may be necessary, or where actions may take place that will change current patterns of stormwater discharge etc. The potential implications can be seen in the configuration of the stormwater discharge from the road infrastructure of a recent subdivision through the former Dugouts Sites (SAHR 11187) into the Burra Creek which has the risk of causing erosion and potential destruction of any potential archaeological evidence – this should be corrected where possible to prevent and damage from occurring.

It is suggested that to avoid future negative impacts on archaeology, a map should be developed to identify areas with both high and low archaeological potential. This will help to inform planning of subsequent infrastructure and development, as well as providing a guide where further investigations might be warranted to help to add in the understanding of the National Heritage values of the ACMS (Burra).

## Below Ground Workings

The central and richest part of the workings were removed by the open cut mining process in the 1870s, and this was further expanded by the more extensive open cut operations in the 1970s. As a result, only the peripheral, deepest workings remain, these being mostly at the south end of the site around Morphett's shaft. As the water table (represented by the water level of the pool at the bottom of the open cut) is relatively low, it is likely that some of the former underground working in this area will be exposed above water level. None of these remaining underground workings are however currently accessible and therefore their condition cannot be determined. To some extent these workings are represented at ground level in the form of the remaining shafts evident at surface level although this is confused by the loss of other above ground infrastructure in the areas impacted by the modern open cut.

As the underground mining process was an integral part of the Cornish hard rock mining system, the presence of underground workings free of ground water does present an opportunity to better understand this part of the process. Ideally the condition of the underground workings should be established if these prove to be accessible. This may be achievable where the horizontal drives were cut at the sides of the benches of the modern open cut and any opportunities for this type of access should be explored. If a safe access point is discovered, the opportunity of exploring the remains of the underground workings should be considered to establish their condition and configuration. Pending these findings, opening these to some form of public access or interpretation should be considered.

There are some concerns about the stability of the timbering installed in 1986 to the upper part of Morphett's shaft. The implications of the risk to public safety is the reason why the former public access through the former drainage adit has been closed as this previously exited through an inclined ladder at the top of the shaft. Inspections and analysis conducted by Groundwork Plus for the Regional Council of Goyder have identified deterioration of the sides of the shaft below the timber lining and a collapse of the shaft at approximately 40m down at the junction with the first level of drives. While this it is not currently considered to be a risk to the structural stability of the adjacent Enginehouse, this could change if deterioration continues. Given the central importance of Morphett's Enginehouse to the National and potential World Heritage values, any such stability risks need to be rectified as soon as possible. An added benefit of the stabilisation would also be the reopening of the drainage adit to the public after repair and replacement of the damaged timber sets and the lining boards, as this previously had an important interpretive role as it is currently the only underground experience available to the public.

While problems of subsidence around abandoned mining shafts is a common problem at many mining sites, this is less of a problem at the ACMS (Burra) due to the limited number of shafts that remain beyond the modern open cut. With the expection of Morphett's shaft, these are in the peripheral areas beyond the parts of the mine site where there is public activity. Where subsidence problems may occur in the future to these shafts, this can probably be addressed by the addition of new safety fencing to keep people out of areas at risk. The shaft of the Bon Accord Mine, which currently has an interpretive role for the public in understanding the depth of this underground infrastructure, needs to have ongoing maintenance of its timbering to ensure its long term stability.

## 7.7. Ngadjuri Heritage

It is acknowledged that the lands of the Ngadjuri people occupy the Mid North region of South Australia. The history of these traditional owners is explored in **2: Historical Outline of Burra: 1845-1877**.

The Ngadjuri were consulted as part of the development of this document through Linking Futures, an Adelaide based organisation that provides professional services facilitating links between clients and Aboriginal communities. Linking Futures also supports companies and government to meet Indigenous procurement targets and enhance their relationship with Indigenous Australians. They assisted by opening contacts with the community and established the structure through which engagement could occur. The Ngadjuri community to date however have expressed no interest in being involved with the management of the site, although this may change in the future.

At present the Ngadjuri culture is not well represented in Burra, and while the broad history of the Ngadjuri has been documented, the interaction between the Ngadjuri and the Burra Mine and the Cornish mining community is not well understood. The research and evidence undertaken as part of the preparation of this document should form the basis for further research and analysis in association with the Ngadjuri people.



*General view of the Burra Burra Mine, Apr. 12, 1847*, ST Gill Source: State Library of NSW (110331555, V*/Sp Coll/Gill/12)

## 7.8.  Interpretation

There is a range of interpretation methods currently in place to help convey the National Heritage values of the ACMS (Burra). These range from signage and interpretation boards at some individual sites, both external and internal, displays at the Bon Accord Mine and Market Square Museum, photographs at the Burra Town Hall, as well as self-guided driving tours to connect the various components and accessing these unmanned sites using a hired key, or passport system, known and the 'The Johnny Green Trail'.

Central to the story of the ACMS (Burra) is the Burra Mines Historic Site and the Burra Smelts Historic Site. These will figure as core elements in a possible future inclusion in the existing Cornish and West Devon Mining Landscape World Heritage Listing, and as such interpretation and associated resources need to be particularly focused on these places. The changes that have occurred to the Mines site as a consequence of the 1970s open cut and the placement of the associated overburden distorted much of the original mine configuration and has confused much of what has been retained. To add to this situation most of what remains at this site and the equally significant Smelter site is in a state of ruination which makes it difficult for the public to readily understand the original importance of these places. Interpretation in these instances is particularly important to help to convey the National Heritage values to the public. There would also likely to be added interpretive and experiential value if consideration were given to the introduction of guided walking tours of these sites where the complexity of the processes and relationships are not immediately apparent. This would help tell the often-complex stories of these places.
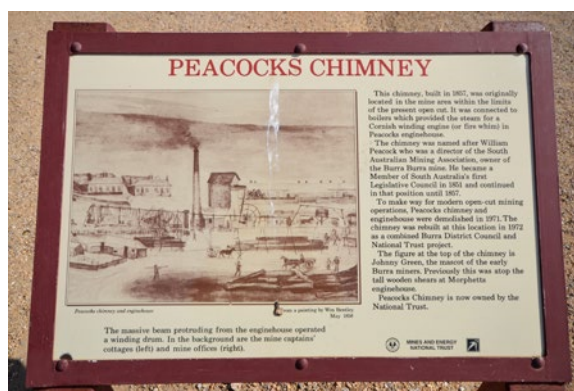
An important part of the Cornish mining process occurred below ground, but these areas are not currently accessible. Interpretation needs to occur of this aspect of the mine in some manner to assist the public to understand this component of the National Heritage values. Ideally investigations should occur to the remainder of the mine workings above the water table level, with the modern open cut providing an opportunity to do so where it cut across the horizontal drives of the original underground mine. The ultimate aim would be to open some of these areas to public access through select guided tours, or where not possible at least be recorded through 3D laser scanning which then might be used in digital interpretation. While not technically part of the underground mine workings, the former drainage adit from Morphett's shaft which was opened to the public as part of the 1986 reconstruction works to Morphett's Enginehouse, did provided members of the public with a memorable experience and provided a sense of this underground aspect of the mine. This however has since been closed due to deterioration of the timber sets and lining as well as concerns about public safety, primarily associated with the exit through Morphett's shaft. In the absence of being able to experience the remaining underground workings of the mine, this provides a reasonable alternative and should be repaired and reopened.

In the absence of an underground experience, other interpretation avenues are needed. It is suggested for example that the historic underground workings of the Burra Mine could be understood and interpreted through the creation of a three-dimensional electronic model.

The Bon Accord Mine Museum at present is one of the few sites focused on interpreting the mining operations of both the Burra and Bon Accord mine and contains a considerable collection of salvaged mining machinery from the mine. It also houses a detailed physical model of the above ground configuration of the mine before the introduction of the open cut in 1870, and interprets the Bon Accord mine shaft through a lighting display which demonstrates its depth which is valuable in furthering the understanding of the extent of the former mining activity. It is one of the few sites which is manned by volunteers and therefore objects are able to be included in the interpretation but the consequence is restrictive hours which means that visitors need to organise their time around access to this site – it is unclear how many visitors miss this site as a consequence. While being a valuable hub for interpretation, many of the displays are showing their age and would benefit from refurbishment and reconfiguration, while there is no interpretation of the collection of mining equipment. It also suffers from a lack of adequate disability access, and lacks a direct physical connection with the Burra Mines Historic Site or the Burra Smelts Historic Site.



Typical external signage panel

Ideally the mining and smelting interpretation which cannot take place on the ground should occur at a venue more directly physically associated with those sites. The logical location is the former SAMA Store (SAHR 10018 & SAHR 10049) which is physically located midway between these two important sites adjacent to the main road connecting the township and at the historic and current entry to the Mine site. This place is currently privately owned and ultimately consideration should be given to acquiring this site. This would assist with its preservation and it could then be used as a base for future dedicated interpretation of these sites. In such a scenario the Bon Accord Mine site could then be used for an alternative compatible purpose.

The ACMS (Burra) however entails more than the Mine and the Smelter, and care needs to be taken to tell the overall story of the place and to help orientate visitors. The Regional Council of Goyder has well advanced plans to create a new visitor and interpretive centre connecting two existing Council facilities, the Town Hall (SAHR 10403) and the Art Gallery (former Post & Telegraph Office, SAHR 10017). This proposed new facility is well located and will be of assistance in providing the opportunity to interpret the overall story and context of the place.

The well supported and positively reviewed passport system originated in Burra and was innovative for its time and remains relatively unique. This relies upon an information booklet combined with a loaned key and supported by signage directing people in private vehicles to the various sites. It provides an excellent way to visit a number of the heritage sites, but while accessibility into and through sites is reasonable, the current experiential quality is poor. This is in part a consequence of having to have the sites unmanned, meaning that nothing can be used to help interpret the places that might be removed as it relies upon an honour system. This leaves most places relying purely upon information panels, and as a consequence they typically feel empty and often sterile. While some of the information conveyed through this system is valuable, such as that at Morphett's Pump House, at others it is lacking and there is currently no way for interested visitors to find out more. The presentation of the information at some of the sites is also tired or in need of maintenance or renewal.

There is an opportunity to refresh and build further upon this established and successful system. Consideration could also be given to the development of a digital 'app' based service which could be unlocked with a code, and this could supplement the guidebook by helping to convey more detailed information about particular sites or images of objects related to those places. This could also use geolocation to assist with orientation and provide alerts when approaching a site of significance and provide the history of the place to supplement traditional wayfinding. Such an approach would need to be supported by adequate mobile phone coverage from a range of providers across the site. Key sites might also consider the introduction of some technology such as projection, lighting and soundscapes to help to convey specific information and enrich the experience.

The current Johnny Green Trail that links many of the key components referenced in the National Heritage values statement has been framed around the use of private vehicles. There is opportunity to broaden this access methodology to include walking and cycling trail to provide alternative access methods. The Burra Creek essentially links most of the components of the ACMS (Burra) and offers a good opportunity to provide a linear walking and cycling trail while also interpreting the importance of the Creek and improving community recreational assets. It is noted that a master plan previously prepared by Woods Bagot for the Burra Creek also identified this opportunity.


Internal interpretation at the Bon Accord Mine Museum
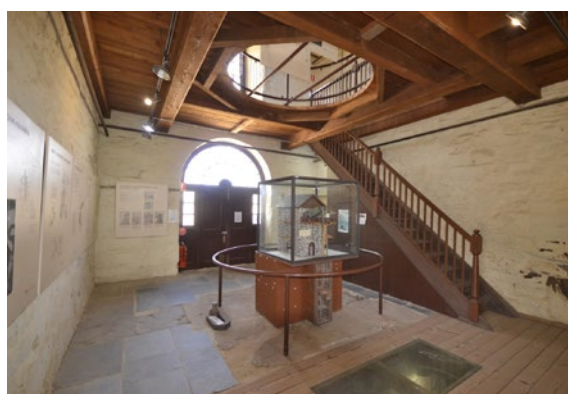

Internal interpretation at Morphett's Pump House

Good functional access, directional signage and wayfinding along with appropriate interpretive signage enhance the understanding of the place and is important in a large and complex place such as the ACMS (Burra). There are inconsistences in the current wayfinding and interpretive signage, while much of this is in a reasonable to poor state of repair. An overall strategy is required to improve and upgrade the current signage and wayfinding to provide a consistent approach across the ACMS (Burra) to assist with the interpretation of the place.

Some of the issues and opportunities outlined above, including expanding bike tracks supported by historic information, better connecting North Burra and South Burra, the creation of a new cultural precinct adjacent to the Town Hall, providing free public Wi-Fi and improving digital connectivity are identified in Council's *Goyder Master Plan 2018 – 2033,* and are considered to be compatible with the National Heritage values.

## 7.9. Tourism

Tourism based on the Cornish mining history of Burra is a long-established focus. It provides an important economic activity for Burra and this is recognised and supported by the Regional Council of Goyder. Many of the ACMS (Burra) places are owned or managed by either the Regional Council of Goyder or the National Trust of South Australia. Both, but particularly the latter, relies on income derived from visitation to support ongoing maintenance and re-investment not only in the tourism infrastructure but also the maintenance of the physical fabric of these places. It is the objective of these organisations to increase visitation to the ACMS (Burra) and this is expressed through existing key studies and strategic documents. Successful tourism is also reliant on visitors development of a good understanding of the history and significance of the place, and hence there is a natural association with the recommendations outlined under **7.8 Interpretation**.

Increasing tourism should however not take precedence over conservation or interpretive objectives given the National Heritage values and the possible future inclusion on the World Heritage list. Tourism opportunities and the associated development can be accompanied by risks to conservation, particularly at fragile sites. Such threats range from damage resulting from erosion caused by visitor numbers, unsympathetic behaviour, and visual intrusion in important landscapes created by car parking, signage and encroachment of visitor facilities. These risks should be acknowledged and assessed, with mitigation strategies developed and implemented depending on the unique characteristics of each individual site to ensure they do not have a negative impact on the National Heritage values, whether these be physical or social. Retention of authenticity is also important when development takes place to support tourist activity, with interpretation of the heritage values needing to remain the focus of any increase in visitation with any commercial and retail consequences carefully managed.

Largely due to the size of the place, movement of tourists around ACMS (Burra) has principally been through the use of private vehicles. While this will remain an important part of accessing the sites, with potentially increasing tourist numbers it may become necessary to restrict vehicle access to some areas, such as to the Burra Mines Historic Site to be replaced by walking. Greater use of walking and cycling will also encourage longer stays and the ability for visitors to develop a better understanding of the place. There are however at present no structured walking (or cycling) trails that connect the key component places. As most of these places are connected by the Burra Creek, this provides an opportunity for a new walking and cycling trail along the Creek with consistent interpretation from the Cemetery through Kooringa, past the Burra Mines Historic Site and the Burra Smelts Historic Site and beyond through to the Bon Accord Mine and Railway Station. Upgrading of existing trails and the development of new trails, particularly where these follow historic movement patterns, such as the original Cornish mining walking path from Kooringa along Commercial Street and Tardis Terrace up to the mine site, should be explored to provide increased options for exploring the place. They should be provided with appropriate signage and interpretation to help convey the National Heritage values.



Burra welcome signage



Burra Passport key entry to the unmanned site at the Powder Magazine

Consideration should also be given to improving visitor facilities within the ACMS (Burra), and it is noted Council is progressing plans for the Burra Cultural Centre which will bring together several functions in addition to the visitor information centre. This will act as the first contact for many visitors and should include overall information and interpretation of the place as well as orientation for visitors. Due to the scale of Burra and the physical separation of National Heritage Listed places, visitor facilities like public toilets, more locations and opportunities for resting, and shelter from the weather should also be considered, particularly if walking and cycling routes are further developed.

Similar opportunities to those outlined above, including expanding bike tracks supported by historic information, better connecting North Burra and South Burra, the creation of a new cultural precinct adjacent to the Town Hall, improving Paxton Square and visitor street parking are identified in Council's *Goyder Master Plan 2018 – 2033*, and these are considered to be compatible with the National Heritage values.

The former open cut at the Burra Mines Historic Site may also provide the opportunity to develop adventure tourism. A diving school already uses the mine pool to teach ADAS diving, and other options which might be considered include rock climbing, abseiling, zip lining, hi-lining etc, as well as mine exploration if some of the former underground mine workings can be made accessible. Such activities if carefully planned and organised could co-exist and be compatible with the National Heritage values. These would attract a different tourist demographic, which would provide the opportunity to expand public appreciation of those values to a younger section of the public.

Collecting visitation data is currently undertaken at a basic level. Greater detail and rigor in the collection of data would provide research material for future planning.



DISCOVERING HISTORIC BURRA

South Australia

Includes Johnny Green's Trail

National Trust of SA Burra Burra Branch
Regional Council of Goyder

# 7.10. Planning Controls

The review of the 1978 Burra Conservation Plan indicates that there has not been substantial change to the ACMS (Burra) over the last 40 years, demonstrating a low demand for new development. There is also an abundance of available undeveloped land outside of the core historic areas but still inside the ACMS (Burra) boundary.

It is noted that a Planning Reform process is currently underway in South Australia and that all Development Plans are being merged into a single online Code based planning system. At the time of preparing this document the transition to the new Design Code is still in progress and as a consequence, the following commentary is based on the current planning system.

**Existing System**

The Regional Council of Goyder administers planning and building regulations for the ACMS (Burra) as part of its greater responsibility to the local government region. Impacts associated with new development and changes to building fabric within the ACMS (Burra) are managed through the *Regional Council of Goyder Development Plan (Consolidated 24 November 2016).* This document is sensitive to potential negative impacts of development on heritage places. The area which makes up the ACMS (Burra) is divided into a series of Planning Precincts, although these do not necessarily reflect the ACMS (Burra) boundaries. The Development Plan also contains a series of Heritage Places and Historic Conservation Areas Objectives and Principles of Development Control, which seek to guide the design process and control future development in a prescriptive and performance-based manner. Further direction is provided in the form of robust Historic Conservation Guidelines for development affecting the existing State Heritage Area.

Generally, the current Development Plan has appropriate controls and guidance to inform sensitive new development to complement the heritage places within the ACMS (Burra), and this can generally be seen in new development within the boundaries of the ACMS (Burra). It should be noted however that the low development pressure has meant the system has fortunately not needed to be fully tested.

There are however notable exceptions. The most significant is the new water supply tank constructed in 2016 on part of the Burra Mines Historic Site which is visually intrusive and mars the context of the place. It is understood however that this tank did not progress through the typical planning process which would have required heritage referrals. This does reinforce the importance of following correct development procedures to avoid damaging negative impacts on the heritage values of the place. New development has also created visual intrusions between the components of the place in the form of the large agricultural support structures erected within the vista between the Burra Mines Historic Site and Hampton, suggesting a gap in the current system.

**National Heritage Implications**

The current Development Plan however does not consider the further layer of responsibility and controls which have resulted from the inclusion of the ACMS (Burra) on the National Heritage List. For example, while approval is required for demolition in the State Heritage Area, demolition of an unsafe structure may still be possible and this could create a conflict with National Heritage values, especially given the ruined nature of some sites. The cultural landscape qualities of the views and vistas of the broader setting which creates the context of the ACMS (Burra) are also inadequately protected, with the existing Historic Conservation Guidelines being focused largely on residential development within the ACMS (Burra). It does not adequately respond to potentially more complex development outside of the residential zones or potentially visually obtrusive development within the borrowed backdrop beyond the boundary of the ACMS (Burra) such as would be created by an adjacent wind farm.

It is important that specific guidelines (such as streetscape design guidelines) are developed to retain the authenticity and setting of the individual places and between individual places identified in the National Heritage values, as well as the setting of the ACMS (Burra) itself. There is also no current acknowledgement of the potential impact of development on sites of potential archaeological significance.



View of the Burra Mine site from the rural landscape to the northwest within the ACMS (Burra), note the water supply tank to the right

**Precincts**

There is also an opportunity to reconsider the 21 town wide precincts established in the 1978 Burra Conservation Plan but which were not implemented in the current Development Plan. These 1978 precincts were set up to reflect the development sequence of the town and seek to spatially separate land uses and functions to allow nuanced policy and guidelines to be developed for each precinct. Based on the research and analysis undertaken for the preparation of this document, it is suggested that an amended version of these 1978 precincts that better reflect the historic development pattern be adopted to provide more specific guidance and actions for implementation at a local scale.

**Innovation**

New digital aerial photography was commissioned for the ACMS (Burra) to inform both the physical investigation and be available for future study and analysis. The mapping component used in the preparation of this document has been undertaken in vector-based software which is then updatable and importable to a GIS based platform. It should be an aim to use this data to produce a three dimensional model of the ACMS (Burra) and its surrounding context to give the ability to search for attributes and amend / update information attached to individual sites to simplify assessment of new development proposals. This will be particularly useful in understanding the likely impact of developments that could potentially have a negative impact on the setting and relationships between components and the wider context of the ACMS (Burra).

This would be timely if this information were made available to integrate into the current Planning Reform process in South Australia. This envisages that all development assessment will be online and all referrals to agencies such as the EPA and Heritage SA will utilise digital overlays based on a GIS platform by 2020.

**Conclusion**

It is noted that there remains plenty of opportunity for sensitive new infill development within the boundaries of the ACMS (Burra) beyond the areas which potentially impact on important components of the place. Where possible, development pressure should be directed into these areas rather than those locations that potentially adversely impact on the places and relationships between places referenced in the National Heritage values of the ACMS (Burra). Any new developments, including those in these areas, must however be assessed on a case by case basis due to the context of each component relative to surrounding heritage places and subject to archaeological investigation.

It is important therefore that the existing planning policies from the Development Plan be reviewed and re-drafted as necessary in response to the assessment of the significance of the heritage places investigated, and to meet the intent of the National Heritage values statement and the requirements of the *EPBC Act 1999*. It is also important that the recommendations, policies and objectives prepared as part of this document should be adopted and included, or at least referenced in the Development Plan. All effort should be made to ensure the policy and objectives created in any future revision of the Development Plan are complementary to, and do not contradict this Conservation Management Plan.

# 7.11. Further Research

The preparation of this document has revealed a number of areas where additional research would be beneficial to further understanding of the National Heritage values of the ACMS (Burra). This includes the below;

- Study of the historic relationships between the Ngadjuri people and the Cornish miners, the mining company, the mines and the changes to the environment that this created to better understand their role, particularly in the early development of the mine and authenticate the inclusion of future indigenous collaboration and interpretation at the ACMS (Burra)

- Study into the details of the operation of the tribute mining system, with specific reference to the management of ore lifted and processed on 'grass' (ground level). The records of the company held by the State Library of SA should be particularly important in this respect.

- Study and research into conservation methods to stabilise the internal clay surfaces of the remaining Miner's Dugouts (SAHR 10050).

- Research for this document has raised questions about the contribution of several places specifically mentioned in the National Heritage values of the ACMS (Burra). It is therefore suggested that further research and analysis take place to better understand the history and role of the following places in respect of the established values;
  - Former Burra Salvation Army Citadel (SAHR 10160)
  - Stone Wall located on east side of Commercial and Ware Streets (SAHR 10435)
  - Stone Wall located on west side of Commercial Street (SAHR 10436)
  - St Mary's Anglican Church (SAHR 10018
  - St Mary's Anglican Church Hall (SAHR10022)
  - Former Smelt's Superintendent's Dwelling and Wall (SAHR 10204)

- Research for this document has suggested that a number of places might also contribute to the understanding of the established National Heritage values, and it is suggested that further research and analysis be conducted on the following to determine if they are worthy of possible future inclusion in the values;
  - Foreman's Residence on Mine site (not currently individually listed)
  - Former Mine Hospital (not currently individually listed)
  - Mine Bridge (SAHR 10021)
  - Redruth Wesleyan Church (not currently individually listed)
  - National Bank of Australasia (SAHR 10007)
  - Former Redruth Police Station, Cells and Stables (SAHR 10014)
  - Former Redruth Courthouse (SAHR 10027)
  - Former Redruth Gaol (SAHR 10042)

While the focus of this document has been the totality of the ACMS (Burra), it should be noted that more detailed analysis and the development of strategic guidance to address site specific issues would be useful for all the individual sites referenced in the National Heritage Values.

# 8.   Conservation Management Policy

## 8.1.   Approach to Heritage Management

The formulation of conservation policy helps to guide the management of the heritage places with the primary objective of protecting the place's cultural significance. In ACMS (Burra) this applies to the individual places of national heritage value and the cultural landscape to ensure future care of the national values. It is intended that this occurs to take account of the conservation issues associated with the place's setting and context and balance these against the practical requirements for sustainable and ongoing use.

The community of the ACMS (Burra) values their heritage resource and has demonstrated their support through volunteering and sponsorship of conservation and tourism activities. As most of the places are privately owned, at times there has been concerns raised amongst the community about the added regulation and the delays occurred in achieving approval for changes. Further opportunities exist for the community in the development of heritage tourism, while providing improvements to the experience for visitors and the local economy. The management of this change and ensuring that the community, particularly private owners, is fundamental to the successful management, conservation, and transmission of the national values.

Places on the National Heritage List are required to have management plans that set out how the heritage values will be managed and protected over time. The policies contained in this section generally follow the National Heritage management principles, as below:

- The objective in managing national Heritage places is to identify, protect, conserve, present and transmit, to all generations, their national Heritage values.

- The management of national Heritage places should use the best available knowledge, skills, and standards for those places, and include ongoing technical and community input to decisions and actions that may have a significant impact on their national Heritage values.

- The management of national Heritage places should respect all heritage values of the place and seek to integrate, where appropriate, commonwealth, state, territory, and local government responsibilities for those places.

- The management of national Heritage places should ensure that their use and presentation is consistent with the conservation of their national Heritage values.

- The management of national Heritage places should make timely and appropriate provisions for community involvement, especially by people who:
  a)  Have a particular interest in, or associations with, the place; and
  b)  May be affected by the management of the place.

- Indigenous people are the primary source of information on the value of their heritage. The active participation of   indigenous people in identification, assessment and management is integral to the effective protection of indigenous heritage values.

- The management of national Heritage places should provide for regular monitoring, review and reporting on the conservation of national Heritage values.

Following from the preceding descriptions of the key issues and opportunities, this chapter of the CMP intends to set out the policies to guide change and to manage and conserve the ACMS (Burra) for current and future generations.

**Chapter Structure**
The policies contained in this chapter are numbered and labelled and the policy statement is shown in italics. Each policy is preceded by a discussion that explains the policy and highlights examples drawn from the place. The policies should be read in conjunction with the preceding explanation.

Policies have been drafted to contemplate compatible development for the future requirements of ACMS (Burra). They provide detailed direction for the conservation and enhancement of heritage places and their contributory setting.

The following policies consider:
- Form and context
- Fabric and setting
- Use
- Interpretation
- Management and Governance
- Future Management of Planning and Redevelopment
- Community Involvement
- Review
- Funding Opportunities

**Definitions**

The following is a list of definitions which are used throughout the subsequent text. These are taken from the Australia ICOMOS Charter for the Conservation of Places of Cultural Significance 2013 (Burra Charter):

- **Place** means the site, area, land, landscape, building or other work, group of buildings or other works, and may include components, contents, spaces, and views.

- **Fabric** means all the physical material of the place including components, fixtures, contents, and objects.

- **Conservation** means all the processes of looking after a place to retain its cultural significance. It may include a number or combination of the maintenance, preservation, restoration, reconstruction, and adaptation.

- **Maintenance** means the continuous protective care of the fabric and setting of a place and is distinguished from repair which involves restoration or reconstruction.

- **Preservation** means maintaining the fabric of the place in its existing state and retarding its deterioration.

- **Restoration** means returning the existing fabric of a place to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material.

- **Reconstruction** means returning a place to a known earlier state and is distinguished from restoration by the introduction of new materials into the fabric. This should not be confused with either re-creation or conjectural reconstructions which are outside the scope of the Charter.

- **Adaptation** means modifying a place to suit proposed compatible uses

- **Compatible** use means a use which involves no change to the culturally significant fabric, changes which are substantially reversible or changes which require a minimal impact.

**Significance**

The cultural significance of a place is defined as the aesthetic, historic, scientific, social or spiritual value for past, present or future generations. It is embodied in the place itself, in its fabric, its setting, its contents, in the associated documents, in its use, and in people's memories and association with the place.

All work encompassing the conservation or future development of ACMS (Burra) should be undertaken based on the following principles, seeking to:

- retain the cultural significance and integrity of the fabric which reflects that significance;

- prevent damage to or deterioration of the significant fabric;

- allow for the future maintenance of the place to ensure its significance is preserved; and

- provide guidance for future appropriate development to support a compatible outcome.

Significant fabric should be conserved where possible, and the current integrity of the place should be maintained and not further diminished in value. The values provided in Chapter 6: Heritage Significance has described the places and precincts in ACMS (Burra) that directly relate to the Cornish mining practices, lifestyle and economy that need to be conserved and enhanced to interpret the linkages between individual sites into the future.

The Statutory National, State and Local Heritage values establish the place's cultural significance and are the basis for future management and conservation of the Australian Cornish Mining Sites: Burra. There is currently no Local Heritage List.

> **Policy 1**  **The Statutory Heritage values are the basis for future conservation and management**
> *The Statutory National, State and Local Heritage values establish the place's cultural significance and are the basis for future management and conservation of the Australian Cornish Mining Sites: Burra.*

# 8.2. Form and context

**Authentic sense of place**

The ACMS (Burra) site is comprised of both natural and built elements, encompassing the natural topography, water courses, surviving natural vegetation, remnants of mining activity and the planned towns that developed around the mine and smelter. The form and context of the site includes the overall character of the area as well as the visual relationships between the individual elements within the broader landscape.

Except for those items identified in the discussion under Key Issues and Opportunities as diminishing the visual landscape, the physical townscape and topographical form of the ACMS (Burra) have not changed substantially since the declaration of the State Heritage Area in 1993. This is primarily due to the State Heritage listing, low pressure for new development, and the provision of professional heritage advice which has guided change and promoted conservation in preference to new development. Whilst new development is apparent in ACMS (Burra), generally the current Development Plan (and previous iterations) contains appropriate controls and guidance to inform sensitive development to complement the heritage places within the site.

There is scope for sensitive new development in the ACMS (Burra) area, but this should only be undertaken where the existing building stock is not able to accommodate the proposed use. New development should be of an appropriate scale to the historic setting and respect the character of the area. It should be sited so that it is does not interfere with important views and vistas and be designed to meet the requirement of the guidelines and policies contained in the Regional Council of Goyder Development Plan.

When considering new routes or pathways, priority should be given to reinstating historic routes where possible. The introduction of new roads and fencing should be avoided, except where required for safety and conservation, or designed to interpret historically fenced boundaries. Visitation to historic sites is by private car or bus and this should be managed so that it does not interfere with the appreciation of the national values.

**Policy 2**    ***The 'sense of place' and the visual setting of ACMS (Burra)***
*The heritage values present through the visual landscape and the historic and spatial relationships at ACMS (Burra) should be sustained, conserved and interpreted.*

**Policy 3**    ***Historic routes***
*The pre-1877 historic system of roads, pathways and boundaries should be conserved, managed, and interpreted.*

**Policy 4**    ***Views and Vistas***
*Views and vistas to, from, and within the Historic Mine Site, and the streetscape contexts forming the settings of individual places of ACMS (Burra) that demonstrate the miners' living conditions and ways of life are of significance to the National Heritage values and should be managed to conserve those views.*

**Policy 5**    ***New Works***
*New development, including new structures, buildings, pathways and routes within ACMS (Burra) should be sited and designed so that they do not impact on the ability to appreciate and understand the area's historic visual connections and the setting of places, nor disturb archaeological remains or underground features. New development should also consider vehicle traffic and the visual impact of associated fencing and car parking so as not to intrude upon significant views and vistas. Wherever proposals are likely to impact on the visual landscape, a Heritage Impact Statement should be prepared, and where required referred under the EPBC Act.*

**Policy 6**    ***Fencing***
*New fencing within the Historic Mine Site should be avoided unless it is necessary for safety or it is designed to interpret an historical boundary.*

**Land ownership**

Land in the ACMS (Burra) is both publicly and privately owned. The majority of the historic mining sites are located on land owned by the Regional Council of Goyder with some in the care of the National Trust. Although this may change in the future, there is currently no compelling reason to otherwise change the current land ownership or these lease arrangements. The leases to the National Trust ensure that public access is available and the historic values are able to be experienced and conveyed.

**Policy 7**    ***Land ownership***
*Land containing sites of National heritage value currently owned by State and Local government should be retained in public ownership to ensure that public access is maintained.*

**Policy 8**    ***Lease agreements***
*The responsibilities for maintenance and the funding of repairs should be considered and included in any lease or tenancy agreement for government owned land, sites, and buildings.*

**Subdivision**

The land division pattern at ACMS (Burra) is a record of the planned settlements and mining pattern, and indirectly it defines the morphology of structures. In general, the land boundaries within the area should be maintained to retain this record and pattern unless further subdivision or amalgamation of titles is of advantage to the conservation of an historic site.

> *Policy 9*    **Subdivision**
> *Subdivision and amalgamation of land within the ACMS (Burra) area should be assessed to ensure that there are no negative impacts on the heritage values.*

**Site security, safety, and vandalism**

There has been little evidence of vandalism and rubbish dumping at historic sites within the ACMS (Burra) and these activities are considered low risk. At many sites, particularly outside the towns, there is little opportunity for casual surveillance to discourage unlawful behaviour and damage, and this remains a risk.

Other safety concerns in the area include general pedestrian safety around the Historic Mine Site. Fencing exists around the open cut mine.

To prevent erosion and provide a safe environment for public access, access should be controlled using signage and barriers where appropriate to sensitive and high-risk sites. Overall visitation and safety would be improved by a reduction in the reliance on private vehicle access.

> *Policy 10*    **Security and vandalism**
> *Implement security and safety measures such as reducing road access, the provision of signage, fencing and security surveillance to protect vulnerable historic sites from vandalism and dumping.*

**Intrusive Items**

Items that have an intrusive effect on the setting of the National Heritage values have been identified in Chapter 5: Place Description. These generally relate to inappropriate development that is incongruent with the natural and historic visual landscape. An example of this is the recently installed town water tank which has had a major impact on the visual landscape. They also include the later open cut mining over-burden. The over-burden has concealed areas of potentially exceptional value such as ore floors and evidence of other structures associated with the refining of ore. It detracts from the visual appreciation of the mine site's form.

At an individual place scale, some intrusive items have been identified in this study but require further detailed assessment. This assessment should be based upon a closer inspection and significance assessment of the place contained in a CMP prepared by a suitably qualified heritage consultant.

> *Policy 11*    **Intrusive fabric and vegetation**
> *Remove infrastructure, structures and vegetation that are intrusive or adversely impact on significant views, elements, and fabric.*

# 8.3. Fabric and setting

**Conservation of built fabric**

The surviving fabric of the ACMS (Burra) is subject to a variety of impacts on its physical fabric from active and natural threats. The fabric is to be conserved in the manner described in the subsequent policies.

The survey sheets (refer Appendix C) identify the provenance, the remaining significant fabric and any alterations or non-significant fabric of the Places of National Value.

> *Policy 12*    **Conservation of significant fabric**
> *The fabric of ACMS (Burra) reflected in the statutory National, State and Local Values should be managed and conserved. All works to significant buildings, structures and ruins should be carried out in accordance with the principles and practices of the Australia ICOMOS Charter for Places of Cultural Significance (the Burra Charter).*

> *Policy 13*    **Best practice conservation**
> *Best practice standards will be implemented for the conservation of significant fabric within the ACMS (Burra). Conservation projects will involve appropriately skilled and trained professionals and tradespeople.*

> *Policy 14*    **Historic layering**
> *Fabric conservation will respect the historic layering of individual buildings, structures, and ruins.*

**Preventing Deterioration**

The physical fabric of historic structures degrades over time with exposure to the impacts of weathering and use. Regular maintenance will mitigate these effects and reduce the rate of deterioration. Lack of regular maintenance often leads to loss of fabric and hence heritage value. In many cases lost fabric cannot be replaced because equal materials are no longer available, traditional manufacturing processes have ceased, or traditional trades lost.

Maintenance can be defined as 'routine work necessary to keep the place and its setting in good order'. Maintenance does not include repair or replacement of fabric. Maintenance would involve regular cleaning of gutters; or refixing a loose roofing sheet without introducing new materials. Replacing the gutter constitutes repair.

A maintenance plan should be developed for each place of National Heritage Value that describes the regular maintenance tasks, programme, and responsibility. The maintenance plan will be tailored to suit the special circumstances of the place and its setting. For instance, the presence of overhanging trees would influence the regularity of gutter cleaning. As a guide, typical maintenance activities would include:

- Cleaning of gutters and check to ensure that the stormwater system is functioning correctly.
- Check of roofing for leaks, damage or corrosion.
- Re-applying oil and wax finishes to timber (not painting).
- Replacing broken glazing, including loose glazing putty.
- Maintenance to existing equipment and services.
- Weed control.

Regular monitoring and inspections should form part of the cyclical programme, particularly focused on ensuring that areas prone to failure such as roofs, gutters and downpipes are functioning correctly.

Note that some maintenance work, such as painting, to a State heritage place is considered Development under the Development Act 1993 and requires development approval.

> **Policy 15    Cyclical maintenance**
> *The significant fabric of the ACMS (Burra) should be conserved through approved programs of regular maintenance and corrective works.*

> **Policy 16    Modern materials**
> *Modern materials will be avoided where they may be likely to impact upon or cause damage to significant original fabric.*

> **Policy 17    Damage to significant fabric**
> *If damage to significant fabric occurs during works, work in the area will cease and appropriate advice will be sought from a suitably trained and qualified heritage expert.*

Objectives:

- Prepare a maintenance plan for all places of National Heritage Value. The maintenance plan will describe maintenance activities, the regularity of activity and responsibility.

**Repairs**

When an element of significant fabric is in such poor repair that it can no longer fulfil its use, repair or replacement may be necessary to support the ongoing use of the place and protect associated fabric. Elements exposed to weather such as roofing will eventually degrade to the point that repair or replacement is needed. Preference should be given to repair, part replacement, and supplementary support over entire replacement of original material. The scarfing in of new timber to a rotted verandah post for example should precede complete replacement.

Expert heritage advice should be sought to fully understand the relative significance of the element and options for repair and supplementary support prior to considering replacement. Repairs should be carried out by appropriately skilled contractors.

When repair involving replacement of significant fabric is required, the conservation principle is to replace the element 'like for like' with fabric to match the original element for form, dimension, material, quality and finish.

> **Policy 18    Repairs to significant fabric**
> *Repair and stabilisation of significant fabric of the ACMS (Burra) should precede replacement. Repairs should be guided by a suitably qualified and experienced heritage specialist such as a heritage architect and be undertaken by contractors sufficiently skilled and experienced in traditional construction.*

> **Policy 19    Replacement of significant fabric**
> *Repair of significant fabric of the ACMS (Burra) involving replacement should closely match the form, dimension, material, quality, and finish of the original. Replacement should be guided by a suitably qualified and experienced heritage specialist such as a heritage architect and be undertaken by contractors sufficiently skilled and experienced in traditional construction.*

**Ruins**

Ruins are recognised as a fundamental part of the history and significance of the ACMS (Burra). They are important relics of the past and demonstrate the history of the site; including the processes that led to the mining structures becoming ruined. Although they may no longer have a functional use, ruins may be the only remaining evidence of an activity at a particular site and have important cultural landscape values.

Careful consideration of the significance of the individual place and analysis of the ruin's social, economic and environmental setting should occur prior to adopting a management strategy. It is generally accepted that a ruin cannot be restored as there is usually insufficient evidence to return the structure to its original state. Even if there is good evidence, the risk is that as more new material is added, the authenticity of the place is reduced.

The aim should be to slow down weathering processes and this may involve techniques such as shelter roofs, structural stabilisation, patch repair, and capping of walls. Caution should be used when considering capping walls as hard dome shaped capping can contribute to scouring of the wall below. Expert advice should be sought prior to undertaking capping work.

Vegetation regrowth at ruins sites is a threat to the stability of standing structures. Recent efforts have been made by National Trust volunteers to remove and clear woody vegetation growing in walls and close to their bases. This work should be encouraged and supported but there is no overall strategy in place for vegetation management and volunteers are not formally trained.

Interpretation is also an important part of ruin conservation and should be implemented at ruin sites so that the values are understood and able to be conveyed. Interpretation may include construction of new structures to gain access to otherwise inaccessible viewpoints such as has occurred at Morphetts Enginehouse. However, an appropriate assessment should be undertaken to ensure that the proposed structure does not negatively impact the values of the ruin. In addition, any new structure needs to be carefully balanced and considered to conserve the ruin's fabric and retain its authenticity.

Interpretation signage is crucial to understanding a ruined structure, but care should be taken so that it does not interfere with the experience of the place.

**Policy 20**   *Ruin retention and conservation*
*All existing ruins of the ACMS (Burra) should be retained and conserved in accordance with the principles and approach in Ruins: A guide to conservation and management (2013).*

**Policy 21**   *Ruin reconstruction*
*Reconstruction and restoration of ruins should be avoided unless essential for physical conservation or is part of an approved interpretative scheme.*

**Policy 22**   *Ruin stabilisation*
*Ruins identified as at risk should be stabilised as a matter of urgency, followed by the development of a ruin management strategy for all existing ruins of national value.*

**Policy 23**   *Vegetation management*
*Vegetation removal should be guided by the ruin management strategy for each site and vegetation regrowth threatening the stability of ruins should be removed. Volunteers undertaking the vegetation removal should be trained in appropriate methods to protect the fabric.*

Objectives:

Undertake urgent works to stabilise the ruins identified as at risk, such as at the Mine Offices. Urgent works constitutes temporary non-intrusive activities such as propping or fencing areas to make the safe / non accessible. Seek advice from a structural engineer with heritage expertise.

- Undertake urgent works to stabilise the ruins identified as at risk, such as the Mine Offices (SAHR 10056) and Crusher House (SAHR 10445).

- Monitor structural stability of those places identified as ruins. Seek advice from a structural engineer with heritage expertise.

- Ensure adequate site drainage.

- Develop a management strategy for the places identified as ruins and places at risk following the best practice guide contained in 'Ruins: A guide to conservation and management' 2013

## Archaeology

ACMS (Burra) is known to contain sub-surface evidence of historic mining-related structures. In some areas such as the Burra Mines Historic Site (SAHR 10970) and the Former Burra Smelts Historic Site (SAHR14319), there are known archaeological deposits that have exceptional scientific research and education potential.

Archaeological investigations have occurred at several sites. Reports on these include the following:

- Bannear, David, *The Burra Smelting Works: A survey of its history and archaeology*, 1990.

- Habitable Places & Phillips + Pilkington Architects, *Burra Mines Storeroom Yard and Wall Conservation Plan*, 1996 (contains an archaeological survey of the yard and recommendations prepared by Austral Archaeology).

- Hartnell, Cameron & Hartnell, Elizabeth, unpublished notes on the Burra Mine buddle pits, 2010.

- Birt, Peter, Whitewash and Red Clay: The Archaeology of the Burra Creek Miner's Dugouts, 2001.

- Mullen, Dean & Birt, Peter, 'Modernity and Tradition: Considerations of Cornish Identity in the Archaeological Record of a Burra Dugout', Australian Archaeology, Number 69: December 2009.

- Bell, Peter, 'Heritage Impact Statement: Thames Street, Burra'. (contains an archaeological assessment of the Pig and Whistle Hotel).

Some of these investigations have tended to come about as a reactive measure to capture archaeological deposits at risk of development activity, but they are an important and useful start to understanding the significance and extent of deposits at the ACMS (Burra). Work to identify the extent, condition and significance of archaeological deposits should be encouraged.

As discussed in Chapter 6: Heritage Significance, the overburden of the modern open cut located within the eastern approach to the Burra mine has buried many of the early surface ore dressing and concentrating areas. Should these areas be uncovered, they are likely to reveal considerable information about early Cornish mining and treatment practices. There are currently no designated places of archaeological significance in the Burra State heritage area. Known sites of archaeological potential such as the Burra Historic Mine site, the Smelts site and the Dugout sites along Burra Creek should be considered for designation.

In South Australia archaeological remains are protected by the *Heritage Places Act 1993*. Under the *Act* a person must not, without a permit from the SA Heritage Council:

- excavate or disturb a State Heritage Place designated as a place of geological, palaeontological or speleological significance; or remove geological, palaeontological or speleological specimens from such a place (section 25)

- excavate or disturb a State Heritage Place designated as a place of archaeological significance; or remove archaeological artefacts from such a place (section 26)

- excavate or disturb any land (not designated as a place of archaeological significance) for the purpose of searching for or recovering archaeological artefacts of heritage significance; or excavate or disturb any land (not designated as a place of archaeological significance) knowing or having reasonable cause to suspect that the excavation or disturbance will or is likely to result in an archaeological artefact of heritage significance being discovered, exposed, moved, damaged or destroyed (section 27).

There are no known sites of Aboriginal heritage significance within the ACMS (Burra) State Heritage Area. The area has generally undergone substantial previous disturbance through the mining and mining related works. It should be recognised however that there may exist pockets of comparatively undisturbed land. The following policies account for the possibility of an unforeseen discovery.

**Policy 24**   ***Archaeological management***
*The archaeological heritage of the ACMS (Burra) should be identified, conserved, and managed. These include relics, ruins and standing structures, as well as subsurface deposits and artefacts.*

**Policy 25**   ***Mapping of archaeological potential***
*An integrated Archaeological Zoning Plan should be prepared for the ACMS (Burra) to document known and predicted areas of archaeological sensitivity and known disturbed areas. The Zoning Plan should be distributed to affected landowners together with materials and resources that ensure they are aware of their statutory obligations and know where to seek further guidance. Discovery of archaeological deposits should be progressively mapped in the Zoning Plan and this documented plan should be made publicly available.*

**Policy 26**   ***Archeological Research***
*Archaeological research at ACMS (Burra) should be encouraged and supported. Preference should be given to research projects that further contribute to the understanding and transmission of the National Heritage values.*

*All archaeological research projects should be approved by permit from the South Australian Heritage Council under Section 27 - Protection of archaeological artefacts of the Heritage Places Act 1993, be supervised by a qualified archaeologist, and follow a Research Design which describes the work method, and how the research will benefit the transmission of the National Heritage values to current and future generations.*

**Policy 27**   ***Excavation***
*Excavation within areas identified as having archaeological potential within the ACMS (Burra), which coincides the State heritage area, should be preceded by an assessment of the potential to disturb archaeological deposits of state and national significance and should be planned and executed in accordance with the advice of the South Australian Heritage Council and with archaeological supervision. In addition, the proposed excavation may require referral under the EPBC Act*

**Policy 28    Archaeology in Development Assessment**
*Assessment of new development in the ACMS (Burra) area should consider the archaeological potential of the subject site with reference to the Archaeological Zoning Plan and provision made for revising the development if findings of major significance are discovered during the works.*

**Policy 29    Unforeseen discovery of historical archaeological remains**
*In the event of an unforeseen discovery of historical archaeological remains, work should immediately cease in the area and the discovery reported to Heritage SA, for advice, prior to continuing work. Heritage SA will determine if a permit may be required under Section 27 of the Heritage Places Act and what actions are required by the applicant to attain a permit. Works must not re-start in the area until confirmation is received from DEW.*

**Policy 30    Unforeseen discovery of an Aboriginal object, site or remains**
*In the event of an unforeseen discovery of an Aboriginal object, site or remains, work should immediately cease in the area and the discovery reported to the Aboriginal Heritage Branch of the Aboriginal Affairs Reconciliation Division (AARD) of the Department of Premier and Cabinet, as required by Section 20 (1) of the Aboriginal Heritage Act 1988 (SA). The Aboriginal Heritage Branch will advise on the appropriate process, which may include recording the site and further action under Sections 12 and/or 23 of the Act. Works must not re-start in the area until confirmation is received from AARD.*

**Policy 31    Unforeseen discovery of human remains**
*In the event of an unforeseen discovery of human remains, work should immediately cease in the area and the discovery should be reported to the Police by telephone on 131 444, as required under Section 28(1) of the Coroners Act 2003 (SA). The Police may visit the site to determine whether the remains are that of an Aboriginal person, and if so, the Police will contact the Aboriginal Heritage Branch. The Aboriginal Heritage Branch will advise on the appropriate process if human remains are found to be that of an Aboriginal person.*

**Moveable Heritage and Collections**

Moveable heritage items associated with mining in the ACMS (Burra) form an essential part of the heritage values and understanding of the Cornish mining influence and technology. The Burra Jinker was the first moveable object to be entered in the SA Heritage Register. This 10-metre long bullock drawn cart was used to transport Cornish engine parts from Port Adelaide and is now housed in the town centre of Burra.

Moveable heritage includes mining equipment such as boilers, pipes, rail cars, pump and engine parts scattered across the ACMS (Burra) site and these form part of the setting of the place. The National Trust Museum at the Bon Accord Mine holds a collection of mining equipment, ore collections and smaller mining related artefacts together with items related to the social life of the Cornish mining community. The collection was not reviewed in the scope of this study.

Most items at the ACMS (Burra) site are large, heavy, and constructed of durable materials. They should be managed and conserved on site in the same way as other ruins to retain their association with the place and its setting. Where items of significance have been moved from a site, the long-term objective should be to locate, record and recover them as they add to the interpretation of the social and technical aspects of the Cornish life and mining. Items held in museum collections should be progressively catalogued and assessed to understand their significance to the National Heritage values.

**Policy 32    Moveable heritage**
*Moveable items that reflect the National Values associated with the Australian Cornish Mining Sites at ACMS (Burra) should be identified and documented.*

**Policy 33    Moveable heritage: mining equipment**
*Moveable items on public land that have been assessed as contributing to the values of ACMS (Burra) such as boilers, ruined mining equipment, and other artefacts should be retained, conserved and interpreted on site.*

Objectives:

- Moveable heritage associated with Cornish mining technology are assessed, recorded and retained on site. Items found not associated with the site should be removed.
- The collection of mining related artefacts at the Bon Accord Mine is assessed and recorded.

**Underground workings**

A legacy of the underground mining process at the ACMS (Burra) is a grid of interconnected vertical shafts, horizontal levels and stopes (larger open areas produced by the extraction of ore), much of which is flooded below the 20 fathom level. The workings will contain abandoned mining machinery including the remains of iron pipes used for pumping, timber drive shafts, timber shoring, ladders, false floors, and loading platforms. While evidence of this part of the place is represented by the open top of many mine shafts, these are only a fleeting reminder of this vast network and associated infrastructure demonstrating the Cornish mining processes, practices and technology which forms a vital component of the National Heritage Values.

The extent of remaining underground form and fabric was not inspected as part of these investigations and the full extent and its condition is unknown. As a result, conservation action is not feasible. The underground workings cannot be readily understood due to this lack of access but should be acknowledged and interpreted as important part of the fabric of the place and its heritage values.

The risk of collapse around Morphetts shaft has been assessed and the shaft will require future stabilisation to remain safe. These works should be guided by a heritage architect or archaeologist to ensure that the authenticity of the place is conserved.

Collapses present a public risk and carefully designed fencing should be used to keep visitors safe. Collapses present an opportunity for future interpretation and this should be considered in the design of fencing and areas of exclusion.

> **Policy 34    Underground workings**
> *Underground workings associated with the ACMS (Burra) should be retained and interpreted.*

> **Policy 35    Stabilisation**
> *Stabilisation works to collapsed underground workings should only occur where the risk to other structures of National heritage value has been determined to outweigh the possible destruction of underground structures or mitigate further loss. The works should be planned and supervised by heritage experts who are suitably trained and qualified such as an archaeologist or architect. No material or process that negatively impacts the heritage values of the site should be used.*

# 8.4.  Use

**Promoting Future Sustainable Development**

The Cornish mining sites and associated places which make up the ACMS (Burra) make a valuable contribution to the character and enjoyment of the greater Burra township, to the local community and visitors.

The ACMS (Burra) is also a place where people live and the viability of the local community in the Burra town is crucial to the ongoing conservation of the place. Increased visitation to the ACMS (Burra) through tourism presents both potential benefits and risks to the Burra community and this should be carefully considered in consultation with the local community. It is essential to engage the local community and community groups such as the National Trust when considering changes to policies that will affect land use and development potential. As land is both privately and publicly owned, opportunities should be sought for partnerships to overcome shared issues. Opportunities should also be considered to support and incentivise private landowners to recognise their contribution to the conservation of structures that contribute to the conservation of the national values. Where a building falls into disuse, adaptive re-use should be promoted, rather than it being left vacant.

> **Policy 36    Sustainable development**
> *Conservation of heritage places and new development should coexist in a hierarchical, sympathetic and sensitive manner to showcase the Cornish mining history of the ACMS (Burra) and benefit the local community and visitors alike.*

Objectives

- Development should occur sensitively within the ACMS (Burra) site to preserve the form, the existing allotment plan and pattern of the townships.
- Adaptive reuse of heritage places is encouraged and preferred over the development of new buildings and sites.
- More prescriptive guidance for development adjacent places of heritage value should be created and be made available to owners and the community.
- All individual heritage places should continue to be protected from insensitive development encroachment and visual intrusion.

**Compatible Use & Future Requirements**

Compatible uses are those that best permit the significance of the ACMS (Burra) to be retained and revealed, and ideally that use should be sufficiently sustainable to support the maintenance works necessary to ensure the longevity of the place. The lack of a viable use is often the prime cause for making a place more susceptible to neglect and therefore threaten its significance. This scenario is possible for some of the places listed within the ACMS (Burra) site, and if such a situation arises in the future, all efforts should be made to provide an alternative use compatible with the significance of the place. Depending upon an assessment of specific proposals, a range of alternatives may be acceptable in maintaining the significance of the place.

It is noted that places entered in the South Australian Heritage Register require Development Approval for any change of use.

> **Policy 37    Ongoing use**
> *Ongoing use of places that comprise the ACMS (Burra) should be encouraged and supported and take preference over new development.*

> **Policy 38    Change of use**
> *Futures uses of the places that comprise the ACMS (Burra) should seek to minimise the effect of a change of use on the place's values and significant fabric. Whenever proposals are likely to impact on heritage values, a Heritage Impact Statement will be prepared by a suitably qualified and experienced heritage expert and where required referred under the EPBC Act to the Australian Department of Agriculture, Water and the Environment.*



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**Tourism**

Tourism associated with the ACMS (Burra) is well established but opportunities exist to better convey the National Heritage Values to the wider community and be an important factor in the future economic sustainability of the place. These opportunities are discussed above in *Key Issues and Opportunities;* however, conservation objectives should take precedence over tourism objectives.

Authenticity is an important factor to consider when assessing tourist development. Care must be taken when investigating tourism opportunities that they don't damage the physical or social fabric – which will then adversely affect the values of the place.

Development in support of tourism should be accompanied by an assessment of risks to heritage values, particularly to fragile sites. Such threats range from damage because of unsympathetic behaviour by visitors to visual clutter caused by car parking, signage and encroachment of visitor facilities. The risks should be acknowledged and assessed, and mitigation strategies enacted when changes are considered to a site. Any tourism development should consider the impacts on the local amenity.

> **Policy 39    Tourism**
> *To maintain investment in the conservation of heritage places of National Value, Heritage tourism centred on ACMS (Burra) should be promoted and supported. However, this should be done with the objective of conveying the National Heritage Values in accordance with the conservation policies of this CMP to retain the authenticity of the place and its setting and amenity to residents.*

> **Policy 40    Marketing**
> *Tourism promotional materials for the town of Burra should enhance the public appreciation of the cultural value of the ACMS (Burra).*

> **Policy 41    Facilities**
> *Provide adequate facilities, safety, and security and interpretation for visitors at publicly accessible sites.*

Objectives

- The historic links with the ACMS (Moonta) should be developed to enhance travel between and interpretation of the two jointly National Heritage Listed Sites.
- Enhance and upgrade tourism facilities and infrastructure within the ACMS (Burra) as a centrepiece for Cornish mining culture nationally and internationally.
- Provide more interpretive information on all heritage places within the ACMS (Burra) site to increase community awareness and educate the public, including tourists, of the importance of the place.
- Provide better infrastructure for walking and cycling to heritage places, and to the town of Burra for residents and tourists.
- Provide a more coordinated suite of signage to aid wayfinding and interpretation throughout ACMS (Burra).
- Development of further interpretation of the importance of the underground mining infrastructure associated with the ACMS (Burra). As this important part of the site is inaccessible this could be carried out by the development of an accessible above ground interpretive facility.

## Adaptation and removal of fabric

Future works may require the removal of portions of fabric to support a compatible use or to conserve more significant portions of the fabric. Ensure works do not negatively impact the heritage values of the site.

Before such change or removal of the fabric occurs, the existing configuration and condition should be recorded. Suitable practices would involve:
Establishing a central records system to hold the information collected in a manner which will be durable and accessible. It is suggested that this information be stored by the Council. Refer also to *Records.*

- Checking of any existing drawings to ensure they accurately reflect the existing configuration, materials and detail of the fabric which will be altered, and if inaccurately recorded provide new measured drawings to reflect the actual situation.

- Carry out a detailed photographic record of the existing fabric, whether external, internal or both depending upon the nature of the proposed change. Digital files should be stored in a central location with prints made on durable stock and copies forwarded to Heritage SA for filing.

- Provision of a brief account of how the fabric or structure was used, possibly supplemented by an oral history where this is available.

- If no other equivalent examples of the fabric being altered or removed remain within the site, that a sample of the material or item be held for future interpretive purposes.

The extent of recording of the fabric will depend upon its relative significance and interest. The development of a streamlined version of the above is suggested to be developed for private owners at the ACMS (Burra) to encourage positive change to support their ongoing residential use.

Any works requiring part removal of any of the existing fabric will require statutory approvals. Refer also to *Fabric and setting* for policies on the treatment of historic fabric and *Management and Governance* later in this chapter for a description of the approvals process.

> **Policy 42**  **Adaptation of heritage places**
> *Alterations and additions should generally be within existing building envelopes. Ensure major adaptations, alterations and additions do not negatively impact the heritage values of the site. External additions may be considered where they support the ongoing use of the building and are not visually prominent, and are visually distinct from the original features, and are reversible.*

> **Policy 43**  **Removal of heritage fabric**
> *Where significant fabric is removed it should be recorded in situ prior to removal and the information collected held in a manner which will be durable and accessible. Items which are not capable of economic replication should be stored safely for future restoration, reuse, or interpretation.*

## Services

Modern services such as electrical wiring, lighting, air conditioning and plumbing are often necessary to maintain a use compatible with the place's significance and should be installed in a sympathetic manner. These service installations should take account of the place's heritage values and an assessment should be made of their impact. There is also an increasing desire by owners to install solar panels and solar hot water heaters.

Externally, surface mounted service runs should be avoided by concealing internally or through existing voids such as ceilings. Chasing of the external masonry walls is not to occur, and as a last resort services may be run in simple circular surface mounted conduit painted in a colour to match the background material to make it as discrete as possible. Minimise the number and size of exposed ducting by the logical placement of outlets and fittings.

Generally new air conditioning systems should be designed to be as inconspicuous as possible, generally be reversible to allow for future evolution in air conditioning technology, while minimising its impact on significant fabric. Pipe runs, condensate lines and associated wiring should be concealed from view but where this is not possible the use of discrete and carefully located risers and bulkheads can be considered. Generally chasing of walls for pipework associated with mechanical systems will not be acceptable. Reverse cycle packaged units installed through walls or windows are not to be used.

To minimise the visual impact to the streetscape, it is desirable to mount services plant, such as hot water services, airconditioners and solar panels where they are not visible. In the case of solar panels this is often easily achieved on roof planes facing away from the street or on additions and outbuildings located behind the building. Such options should be investigated and pursued to eliminate or reduce the potential visual impact.

> **Policy 44**  **Services**
> *Provide carefully installed wired and piped services, where necessary, to ensure that a compatible use for places of value to the ACMS (Burra) is maintained. These service installations should take account of the place's heritage values and an assessment should be made of their impact.*

> **Policy 45**  **Services concealment**
> *Service installations, including solar panels, wiring, piping and ducting should be concealed from the main street fronts wherever possible.*

Objectives
- No chasing will be acceptable to the external masonry walls.
- Chasing of internal walls should be avoided.
- Minimise surface mounted ducting where possible, by running services through floor and ceiling voids.
- Avoid mounting external fittings on buildings where fittings were not previously installed.
- Avoid window mounted air conditioning units.
- Any external air conditioning plant and solar panels should be carefully located so as not to obstruct significant views of the buildings.

**Fire Protection**

Structures of national value should be protected from fire to retain their significance. Fire detection systems to individual buildings should meet the requirements of the National Construction Code. In the event of a major fire, severe damage can occur by the application of water onto hot masonry walls, and the National Trust of SA and Council should implement discussions/training with the CFS to ensure that in such an event walls of buildings will be suitably treated.

Interpretive infrastructure added to the site should use materials and methods that will not negatively impact the fabric in the case of fire at the site.

> **Policy 46   Fire services installation**
> *The structures of national value should be protected from fire to retain the significance of the place.*

Objectives:

- Undertake regular maintenance to ensure that places are not at higher risk of fire.
- Ongoing maintenance of regrowth vegetation in the vicinity of buildings to minimise fire risks.
- Ensure that there is a fire detection system for heritage places where there is a risk of damage through fire.
- Implement discussions and training with the CFS to ensure that in the event of a fire the techniques used will be suitable to protect the significance of the building.

# 8.5.  Interpretation

Interpretation throughout the ACMS (Burra) site is crucial to present and transmit the National heritage values as some sites are disparate and others are ruins that do not immediately convey their former use and association. It is difficult for a visitor with little experience and knowledge to understand their historic association and the totality of the former mining operations and settlement. The ACMS (Burra) is generally well served by multiple levels of interpretation, the major component of which is the Burra Heritage Passport trail.

Interpretive signage is present at some heritage places such as Hampton, the Smelts site, the Mine site and the Bon Accord Mine site to name a few, however it is somewhat dated and in some cases is in a state of disrepair. There is an opportunity to upgrade and provide consistent interpretive signage for the town to increase understanding and awareness of the importance of the Cornish mining influence over the development of Burra. This could take the form of traditional signage at particular sites, but it could also be a digital "app" based service.

Collecting visitation data is currently undertaken at a basic level. Greater detail and rigour in the collection of data about visitation would provide research material for future interpretation planning and academic study.

> **Policy 47   Interpretation Strategy**
> *An Interpretation Strategy should be developed for ACMS (Burra). Consider digital experiences as part of the strategy to increase uptake from younger generations.*

Objectives

- Development of interpretation and signage strategies for the ACMS (Burra).
- Review the coverage of existing mobile networks within the ACMS (Burra) as part of an assessment to determine the potential of a mobile app to help interpret the National Values of the site and associated individual places.
- Develop an access strategy for the ACMS (Burra) to identify and direct alternative opportunities to access and navigate the ACMS (Burra)
- Collect visitation data for future research and planning of interpretation and tourism experiences.

### Aboriginal heritage

The Ngadjuri people's land extends from Angaston and Gawler in the south to Panaramittee and Yunta in the north and includes the Mid North, Clare Valley, Barossa, Burra, Peterborough, Orroroo, Apilla, Booleroo Centre, Jamestown, Willochra Plain, Bimbowrie, Mt Bryan and the Southern Flinders Ranges. Burra lies in the centre of their lands. The Ngadjuri Nation Aboriginal Corporation is the registered Native Title group for Ngadjuri Country and are authorised to conduct business activities on behalf of the Ngadjuri community in all matters Ngadjuri (business, land and heritage). Their promotion and development of culturally appropriate teaching and learning methods for training people in Aboriginal heritage will benefit interpretation opportunities at the ACMS (Burra) which is currently largely absent. This should be addressed in the development of new interpretation, in consultation with the Ngadjuri people.

The Ngadjuri people's history has been documented by Fred Warrior, Fran Knight, Sue Anderson and Adele Pring in their book *Ngadjuri: Aboriginal People of the Mid North Region of South Australia* but little is known about the interaction between the Ngadjuri people and the Cornish miners. Greater research in this area could present future opportunities for interpretation at the ACMS (Burra).

The Ngadjuri Nation Aboriginal Corporation were consulted as part of the development of this CMP.

> **Policy 48** **Aboriginal heritage interpretation**
> *The interpretation of Aboriginal cultural heritage particularly in relation to the interaction with the Cornish miners should be celebrated and supported in consultation with the Ngadjuri Nation. This should co-exist and be integrated with interpretation opportunities for Cornish mining heritage and other cultural heritage values.*

### Accessibility and Wayfinding

Functional access, directional signage and wayfinding along with appropriate interpretive signage helps the public to understand the heritage values of a place, and as such enhances the visitor experience.

Accessibility into and through the ACMS (Burra) site is good and is enhanced by the Burra Heritage Passport key system which provides clear maps and interpretation. Pedestrian and cycling infrastructure is limited. Several walking trails exist but are not widely promoted.

> **Policy 49** **Access Strategy**
> *Develop an access strategy for the ACMS (Burra) to encourage walking and cycling and explore other access options in addition to private vehicle access throughout the site and to link various components.*

> **Policy 50** **Signage Strategy**
> *Develop a signage strategy for the ACMS (Burra) to increase wayfinding to heritage places.*

### Publications

There is an array of current publications which help interpret the Cornish mining heritage significance of the ACMS (Burra) and the town of Burra. A list is provided in the bibliography of this CMP.

Various brochures exist about the mining history of the ACMS (Burra) which generally have only passing reference to Cornish mining influences. It is recommended that when existing publications are reprinted or when new publications are developed that the importance of the Cornish mining influence and significance is highlighted and that the most recent information collected as part of this CMP should be incorporated.

> **Policy 51** **New or Updated Publications**
> *New or updated publications about the ACMS (Burra) and the town of Burra should include the most recent information about the significance of the Cornish mining influence to enhance public appreciation of the cultural value of the Cornish mining technology and way of living.*

**Online / Digital**

Numerous online resources are available to assist with the interpretation of Cornish mining sites, and more broadly the heritage significance of the ACMS (Burra), including the Cornish Association of SA website, the SA Government Department for Environment and Water – Heritage website, and the National Trust website, as well as sources such as Wikipedia.

It is suggested that these websites are updated to reflect the National Heritage values of Cornish mining sites if they have not already done so. Furthermore, when possible this CMP should be linked to relevant websites to provide more information about the Cornish mining history of the ACMS (Burra), and to help explain its significance to the Regional, South Australian, Australian and international community.

> **Policy 52**  **New Online / Digital Resources**
> *New or updated online / digital resources should reflect the National Heritage values of the Cornish mining sites associated with the ACMS (Burra) and should link or reference this CMP.*

In addition, the utilisation of new technologies with low or minimal impact on the fabric of the place to showcase the importance of mining history in a non-traditional and innovative way that will broaden the appeal to younger generations should be encouraged.

> **Policy 53**  **Interpretation and new technologies**
> *Opportunities should be explored utilising new technologies to help interpret and develop a better community understanding of Cornish mining systems and lost fabric. The development of a digital resource exhibiting the underground workings would benefit the understanding of the scale and significance of the mining activity at ACMS (Burra) and be a useful research tool.*

Objectives

- Benchmark the ACMS (Burra) internationally against other heritage places to investigate new innovative opportunities for interpretation of the National Heritage values.

- Investigate new technologies for digital immersive and interactive opportunities to re-create heritage places that are inaccessible, have been demolished or have deteriorated over time.

- Consider building a digital geocached 3D model of Burra Mines and Smelts Site to showcase its development over time.

- Investigate existing mobile phone applications that can be utilised / adapted to help expand the interpretive opportunities and build the demand for more heritage based digital data at the ACMS (Burra).

- Improve mobile phone coverage of the site as part of the infrastructure to assist with the development of digital systems on site.

# 8.6.  Management and Governance

**Burra Charter and best practice conservation**

All decision making, whether planning or physical work, is to be in accordance with the principles established within the ICOMOS Burra Charter (2013). The policies outlined have been based on these principles, and they should form the basis of all future decision-making regarding the ACMS (Burra) to ensure its established cultural significance is not diminished. As a place of national, and potentially world significance, the range of sites that make up ACMS (Burra) are deserving of the highest standard of conservation practice and management.

Where specific issues are not covered within the conservation policies of this CMP, decisions should be based on an understanding of the significance of the place and the principles established by the ICOMOS Burra Charter. Where this situation occurs, it is important for those managing the place to seek expert advice from those who understand and work with principles established by the ICOMOS Burra Charter, such as heritage architects, consultants, engineers and archaeologists etc.

> **Policy 54**  **CMP as basis for decision making**
> *The conservation policy of this CMP should form the basis of all decisions to ensure the cultural values of the ACMS (Burra) are not diminished.*

> **Policy 55**  **Adoption of the Burra Charter**
> *Decisions beyond the scope of the conservation policy in this report should be based on an understanding of the cultural significance of the place and the principles established within the ICOMOS Burra Charter.*

> **Policy 56**  **Expert advice**
> *Expert advice should be sought from suitably qualified and experienced heritage specialists such as heritage architects and archaeologists when considering actions and planning works that may affect the National Heritage values of the ACMS (Burra).*

**World Heritage Assessment**

It is understood that a nomination for World Heritage listing of the ACMS (Burra) is being considered by the Regional Council of Goyder in conjunction with the Copper Coast Council and the South Australian state government. It is recommended that further consideration of such a nomination as an extension to the international Cornish mining heritage sites is undertaken upon the completion, approval and endorsement of this CMP to place the ACMS (Burra) within the world context along with other Cornish mining places.

> **Policy 57**  **World heritage listing**
> *ACMS (Burra) in conjunction with the ACMS (Moonta) should be assessed for World heritage listing as an extension of the Cornwall and West Devon Mining Landscape.*

**Adoption**

To maintain the National Heritage values and consistency with the principles of the Burra Charter, the adoption of this CMP should be preceded by consultation with all relevant stakeholders, seeking their comments and endorsements of policies identified.

This CMP is intended as a guide for the future management and protection of cultural assets and places of National Heritage value. Ownership of the CMP, with support from those involved with its future use and management of the place is the first step to ensuring that this document is fully utilised. A CMP is only effective if its actions are implemented.

As the place is of state, national, and potentially international significance the CMP should be endorsed by the Department of Agriculture, Water and the Environment, Heritage SA & the Regional Council of Goyder as the local planning authority.

> **Policy 58    Adoption of the CMP by Council**
> *This CMP should be reviewed by the Regional Council of Goyder and officially adopted.*

> **Policy 59    Adoption of the CMP by State and Commonwealth agencies**
> *This CMP should be reviewed by Heritage SA and the Department of Agriculture, Water and the Environment and officially endorsed.*

**SA Heritage Places Act**

State heritage protections are essential to retain the ACMS (Burra)'s national heritage value. The state's planning and heritage legislation provides the framework not only for decisions about development affecting the physical fabric and its setting but also to consider the impact on heritage values. Development within the ACMS (Burra) State Heritage Area is referred to Heritage SA for advice, enabling a third-party review of all development within this area and another layer of protection. The state previously contributed to a co-funded heritage advisory service with regular visits being undertaken to Burra by a contractor based in Adelaide. The program was eventually suspended and replaced with an inhouse service by Heritage SA. Every opportunity should be explored to ensure that expert heritage advice is available to landowners in the ACMS (Burra) area and that Heritage SA play an active role in monitoring and reporting on issues that arise.

> **Policy 60    ACMS (Burra) - State Heritage Area**
> *The ACMS (Burra) State Heritage Area should be retained in the South Australian Heritage Register and an integrated approach taken to heritage management through the provision of expert heritage advice.*

**Planning, Development and Infrastructure Act 2016 & Regional Council of Goyder Development Plan**

As custodian of the CMP and the body responsible for compliance with the state's planning and building legislation within the ACMS (Burra), it is a responsibility of the Regional Council of Goyder to ensure that the National Heritage values are protected.

The structure of the CMP is intended to assist and enable the future adoption and implementation of the policies so they can be integrated into the Development Plan in due course.

The Development Plan for the Regional Council of Goyder is sensitive to potential development impacts on heritage places. It contains a series of Heritage Places Objectives and Principles of Development Control, and Historic Conservation Area Objectives and Principles of Development Control, which seek to guide the design process and control future development in a prescriptive and performance-based manner. Further direction is provided in the form of robust Historic Conservation Guidelines for development affecting Historic Conservation areas.

The planning precincts have been reviewed as part of this CMP, and additional planning policy recommended and is included in Chapter 9. The planning policies have been drafted in response to the assessment of the significance of the heritage places investigated, and to meet the intent of the National Heritage values statement and the requirements of the EPBC Act 1999. It is envisaged that the planning policy and guidelines written as part of this CMP are adopted and included, or at least referenced in the Development Plan in the future. All effort has been made to ensure the policy and guidelines created are complementary to, and do not contradict the existing policy in the current Development Plan or this CMP.

It is noted that these planning policies specifically relate to the Cornish mining influence on the ACMS (Burra) and it is acknowledged that other cultural influences exist and have contributed to the development and heritage characteristics of the ACMS (Burra) site.

> **Policy 61    Transfer of CMP policies to statutory controls**
> *The policies contained in this CMP should be integrated into future planning documents including future statutory planning controls to enable an integrated approach to the management of heritage values and for them to be actioned.*

## Statutory obligations and approvals - National Heritage Listing

The Burra State Heritage Area which is included in the South Australian Heritage Register pursuant to the Heritage Places Act 1993 coincides with the boundaries of the National Heritage Listing of the ACMS (Burra) under the EPBC Act.

Statutory obligations and penalties for noncompliance arise from protection under these Acts. Owners, asset managers, Council employees and tenants of significant places should be made aware of the protections that apply and processes for seeking approval when proposing activities that may affect the values of the place, including its setting.

Approval under the EPBC Act is required for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of the National Heritage place.

According to the *Significant Impact Guidelines 1.1* developed by the Australian Government, an action is likely to have a significant impact on historic heritage values of a National Heritage place if there is a real chance or possibility that the action will:

- permanently remove, destroy, damage or substantially alter the fabric of a National Heritage place in a manner which is inconsistent with relevant values;

- extend, renovate, refurbish or substantially alter a National Heritage place in a manner which is inconsistent with relevant values;

- permanently remove, destroy, damage or substantially disturb archaeological deposits or artefacts in a National Heritage place;

- involve activities in a National Heritage place with substantial and/or long-term impacts on its values;

- involve the construction of buildings or other structures within, adjacent to, or within important sight lines of, a National Heritage place which are inconsistent with relevant values; and

- make notable changes to the layout, spaces, form or species composition of a garden, landscape or setting of a National Heritage place in a manner which is inconsistent with relevant values

The person appointed with the responsibility for a proposed action needs to undertake a 'self-assessment' to decide whether a proposed action is likely to have a 'significant' adverse impact on the National Heritage values of the place. If so, that action must be referred to the Minister of the Environment for a decision.

The National Heritage Management Principles however recognises existing state level requirements for heritage management. Minor activities within the ACMS (Burra) such as painting, and repair are unlikely to have a significant impact on the National Heritage values but require approval under the South Australian legislation. On the other hand, major development that will have a significant physical and or visual impact on the place should be referred. An approval under the state requirements could be used as a guide to the threshold of self-assessment for minor works. Development that proposes changes to ACMS (Burra)'s visual landscape or effects the physical fabric or setting of places are examples of activities that are likely to require referral to the Minister of Environment.

More guidance on approvals can be found at the Department of Environment and Energy website at the following link:

https://www.environment.gov.au/heritage/management/national

Advice can also be obtained from Heritage SA and the Regional Council of Goyder when planning changes to a National Heritage place.

> **Policy 62    Compliance with legislation**
> *The owners, asset managers and tenants of the national heritage Cornish mining sites at ACMS (Burra) should be made aware of and comply with the obligations that arise from the protections under the EPBC Act, the Planning Development and Infrastructure Act and Heritage Places Act, including the provisions related to archaeology.*

> **Policy 63    EPBC Act approvals**
> *Approval under the EPBC Act is sought for any action occurring within, or outside, a National Heritage place that has, will have, or is likely to have a significant impact on the National Heritage values of ACMS (Burra).*

Objectives:

- Owners, asset managers and tenants of the National Heritage Cornish mining sites at ACMS (Burra) are made aware of their obligations under the *EPBC Act* and seek advice when planning works to the physical fabric of heritage places, or new development in the visual setting in which the heritage place is situated.

- Regional Council of Goyder officers responsible for the governance of heritage places, and those responsible for providing advice to private owners are made aware of actions that are likely to have a significant impact on the National Heritage values and the processes for achieving approval.

- Development of support documents to help private owners to understand their obligations and outline the process for obtaining approval for proposed works to places.

**Records and further research**

This CMP forms a depositary of information about the history, condition and significance of the ACMS (Burra). The last time a study of this magnitude was conducted was the Burra Conservation Study in 1978 by Lester Firth & Murton, forty years ago.

Currently records are held by Heritage SA, Regional Council of Goyder and the National Trust and the State Library of SA.

To assist with subsequent future reviews of this document, it is recommended that all decision making, changes and maintenance works to places of significance should be documented and maintained in a logical and easy to find manner. This should include an accurate log or register of works undertaken, supplemented by dated photographs, drawings and sketches, etc. This will provide an invaluable record for future reference and will assist in identifying areas where conservation work has been undertaken. It is suggested that the Regional Council of Goyder should be responsible for holding records about the history and management of the place.

Future research on the history and social context of the Cornish mining influence at ACMS (Burra) should be encouraged and supported as it will not only add to the understanding of the place but assists in transmitting its value.

The following are examples of where additional research would be of benefit:

- There is little current understanding about how the Cornish tribute mining system was managed and operated in practice, such as how the individual tribute holders worked around the site, both above and below ground. Given the extensive nature of the company records, it is possible that future research will provide a better understanding of how this uniquely Cornish mining system which is central to the National Heritage values of the ACMS (Burra) operated in practice.

- The interaction between the Ngadjuri people and the Cornish miners.

- The mine hospital would be better understood in the historical, social and political context of similar institutions in Cornwall and other mining colonies of the Cornish diaspora.

- The social history and origin of the spatial arrangement of Burra Creek dugouts is also not well understood. Future archaeological studies will reveal further information about these places and the operation and history of the mines, the miners and their families.

Ongoing publication of research and study related to the ACMS (Burra) would sustain and promote this place's historical importance to Australian and international communities.

**Policy 64    Records**
*The Regional Council of Goyder should maintain accurate and consolidated records associated with any works and maintenance associated with the ACMS (Burra).*

**Policy 65    Further Research**
*The Regional Council of Goyder, the National Trust, History SA, the State Library of South Australia, and Heritage SA should encourage and support further research into the history and significance of the ACMS (Burra) to enhance the understanding of the place's value and foster the transmission of the National Heritage values to new audiences and future generations.*

Objectives:

- Identify or establish a consolidated and publicly accessible institution as a central deposit of records pertaining to the history and research about the Cornish mining influence at ACMS (Burra).

- Support greater access to primary resources by publishing them online and providing increased physical access to them.

- Burra and Moonta to become a national centre of research for Cornish mining history and related fields of study.

## 8.7. Monitoring and Future Management of Planning and Development

The heritage places within the ACMS (Burra) site are currently owned and managed in a variety of ways. They include private ownership (on freehold and lease arrangement); sites owned and managed by the Regional Council of Goyder; those owned and managed by the Minister for Sustainability (Crown land); and sites owned and managed by the National Trust of South Australia. As such, there is no central authority to provide consistent management and care across all places of National Heritage value within the site.

Conservation of the heritage values of privately-owned places depends upon owners being informed and complying with statutory obligations. Nonetheless, the care of these places is entirely reliant on the owners' investment in maintenance and repair. Many private owners lease their properties on long term rental or for short-term holiday accommodation ensuring their ongoing viability. Public access to the interiors of these places is often limited to holiday stays. Private ownership and occupation is less suitable for places of exceptional value such as the Mine Stores (SAHR 10049) to which greater oversight and public access would benefit the national values.

Public access and security to Council owned sites, and those owned by the National Trust of South Australia, is through either volunteer attendance at the site, or via the 'Burra Heritage Passport': a self-guided tour with a key hire system which provides a guide booklet and a return key for access to nine locked and unattended historic sites, including sites of national value: the Burra Mine Historic Site, including the Former Morphetts Pump House, a display miner's cottage at the Paxton Square Cottages, the Former Redruth Gaol, and the Former Redruth Police Station. The system has been in continuous operation for over 30 years, is well managed and staffed by Council. The availability and training of staff and volunteers should be managed and monitored to ensure that repairs to places are appropriate, and future staffing levels are adequate to maintain security.

Those involved in the management of planning and development at ACMS (Burra) should understand the significance of the place. This is because without such an appreciation there is the potential for inappropriate decisions which could diminish the heritage value and authenticity of the place. It is therefore recommended that the Regional Council of Goyder instigate a method of minimising this risk through the development and application of suitable protocols or strategies. The appointment of a staff member to be responsible for heritage management and reporting would benefit coordination of conservation efforts. All Council and Heritage SA staff should undertake training to ensure the protocols around heritage and the structure of this Conservation Management Plan are suitably understood and proactively implemented.

Regular monitoring of the condition and integrity of the national values is essential for the management of existing risks, and to identify any new threats so that these can be quickly addressed.

**Policy 66**   *Active management*
*The Regional Council of Goyder should develop and implement a management system for decisions which might impact on the heritage value of the ACMS (Burra).*

**Policy 67**   *Training of staff and volunteers*
*Council staff, contractors and volunteers engaged in the management of places of national value at the ACMS (Burra) should be trained to understand the place's national heritage value, the obligations arising from national heritage listing, and when to seek expert advice.*

**Policy 68**   *Monitoring of CMP implementation*
*Council staff should report annually to Heritage SA and to the Regional Council of Goyder on the implementation of the priority recommendations of this CMP. The report should include a summary of conservation activities undertaken in the year, changes in the state of repair of places identified as at-risk, the effectiveness of planning policies in the ACMS (Burra) State Heritage Area affecting the National Heritage values and planned future conservation activities.*

**Policy 69**   *Monitoring condition and integrity*
*The condition and integrity of the ACMS (Burra) site and its heritage values should be monitored and reported upon annually to the Regional Council of Goyder, or its delegated committee. The report should identify any new threats to the condition of values in addition to an assessment of those already identified in this plan so that strategies can be formulated to respond to potential adverse impacts. Only persons with appropriate skills, qualifications and experience in heritage management should be engaged to carry out inspections and monitoring.*

**Policy 70**   *Structures at risk*
*Structures and ruins identified as at risk in this plan should be monitored according to engineering advice so that further deterioration or movement can be addressed immediately.*

Objectives:

- The security of sites and arrangements for public access should be regularly reviewed for its effectiveness so that unwanted damage does not occur.

- Management and heritage advice is easily accessible through the Regional Council of Goyder. This may be in the form of an officer appointed by Council to provide advice to owners, and coordinate and report on the CMP implementation.

- Regular training of Regional Council of Goyder and Heritage SA officers is undertaken to ensure an integrated approach to the management of the National heritage, state, and local community values.

# 8.8. Community Involvement

To harness and empower the community it is recommended that the Regional Council of Goyder establishes a committee through their powers under the Local Government Act 1999. This should have an advisory role to Council on the conservation, heritage management issues and opportunities for the places associated with the ACMS (Burra). The constituency of this committee should include designated positions for the Council, the National Trust, private owners, Indigenous representatives and other community groups.

This committee should help to improve the involvement and support of the local community in the management and conservation objectives of Cornish mining sites at ACMS (Burra). A terms of reference should be established that details the purposes and functions the committee should fulfil including:

- Champions of the ACMS (Burra)

- Manage and maintain the strategy recommended in this CMP

- Management of any grant scheme developed for the ACMS (Burra)

- The committee is to promote the exchange of information about, and raise awareness of, issues involving the local community, indigenous culture and heritage that involve the management and conservation of the ACMS (Burra) site.

- To facilitate communication between the committee and the local community, and to provide a forum to exchange information relevant to site issues and local community views and concerns.

- To give the local community an avenue to discuss local issues and to work towards identifying and resolving local concerns.

- To provide a mechanism, including helping to source funding, for the active participation of the local community in conservation and tourism actions and activities associated with the ACMS (Burra) site.

- To monitor the effectiveness of conservation actions.

> **Policy 71**    **Establishment of an Advisory Committee**
> *The Regional Council of Goyder should establish an advisory committee, including owner and indigenous representation, to improve the involvement and support of the local community in the management, conservation, and monitoring of Cornish mining sites at the ACMS (Burra).*

**Aboriginal heritage**

Although Aboriginal heritage is not a central theme of the National Heritage values, it is acknowledged that Burra is within the traditional lands of the Ngadjuri Nation and that all Aboriginal sites and objects are protected under the *Aboriginal Heritage Act 1988* whether they are listed in the central archive or not. In December 2019 a formal request was made to the Department of Premier and Cabinet – Aboriginal Affairs and Reconciliation (DPC-AAR) for information on registered sites within the ACMS (Burra) State Heritage Area. On 14th February 2019 DPC-AAR responded to advise that the Register of Aboriginal Heritage Sites and Objects had no entries for the subject area.

The Regional Council of Goyder currently does not have policies directly relating to Indigenous culture, but notwithstanding this, it is pertinent to support collaboration with the Aboriginal community in the application and use of this CMP.

It is recommended that Council undertakes a Reconciliation Action Plan (RAP) to assist with the engagement of the Ngadjuri Nation across the Regional Council of Goyder, and to celebrate their culture. The RAP is a strategic document that supports an organisation's business plan. It includes actions that will drive an organisation's contribution to reconciliation internally and in the community. RAP's can inform various Council policies such as Arts and Culture, Tourism, Heritage and Community Consultation and Engagement which are all relevant to this CMP. As a valuable part of the community, Aboriginal people should be a part of the future ongoing management, maintenance of cultural heritage places in Burra and should participate in cultural heritage discussions relating to this CMP.

> **Policy 72**    **Aboriginal reconciliation**
> *The Regional Council of Goyder should prepare a Reconciliation Action Plan to guide future relationships with, and meaningful opportunities for Aboriginal people in Burra and across the Council area, including the ACMS (Burra), and to celebrate their culture. The Reconciliation Action Plan should inform amendments to existing Council policies, inform a future ACMS (Burra) Interpretation Strategy, and facilitate participation in future cultural heritage matters for Aboriginal people.*

> **Policy 73**    **Access to Country**
> *The publicly accessible areas of the ACMS (Burra) site should continue to be available for use by the traditional owners, the Ngadjuri Nation, to maintain their cultural traditions.*

> **Policy 74**    **Sensitive information**
> *The Ngadjuri People should be consulted to identify and develop suitable management practices and protocols for information associated with the ACMS (Burra) site that are secret, sacred, or contain sensitive information.*

> **Policy 75**    **Publication of materials**
> *Permission should be obtained from the traditional owners before publishing any material which relates to their cultural heritage. They should be consulted on how the community will be attributed and approve the way in which the material is used.*

Objectives:

- A cultural heritage agreement is reached with the Ngadjuri people to enable Aboriginal people to be involved in decisions that affect their cultural heritage in the context of European, and specifically Cornish mining heritage associated with the ACMS (Burra).

## 8.9.  Review

This CMP should be reviewed every 5 years in accordance with Section 324W of the *EPBC Act 1999*. This is to ensure that the document remains relevant to the community's evolving perception of value and cultural significance, and in case the National Heritage values are altered or if major changes are proposed to the place.

The review should include an update to the physical condition survey to monitor the effectiveness of conservation actions and provide essential information for future decision making.

> **Policy 76**  **Review of CMP**
> *The statement of significance and associated conservation policy of this document should be reviewed every five years, or sooner should major change occur in the interim.  The review should also include a survey to monitor the effectiveness of conservation actions and an update to conservation management policies where warranted in consultation with owners, the Indigenous community, stakeholders, and community interest groups.*

Objectives:

- To ensure that the ACMS (Burra) CMP reflects the current state of repair of places of National Heritage value and contains relevant management policies and actions.
- Owners, Department of Agriculture, Water and the Environment, the Regional Council of Goyder, Heritage SA, other State government agencies, and relevant community groups are consulted on proposed changes to the CMP policies. Community groups may include the Ngadjuri people, the Cornish Association of South Australia and the National Trust of SA.

## 8.10. Funding Opportunities

Individual owners and tenants of places are generally responsible for the maintenance and upkeep of historic places that comprise the ACMS (Burra). In addition to the places that it owns, the Regional Council of Goyder is responsible for general management and maintenance of the public realm: roads, footpaths, and associated street infrastructure. Countless volunteer hours have gone into the maintenance of National Trust leased or owned assets. Maintenance and capital works funding for works associated with ACMS (Burra) is not managed or coordinated in an integrated way. Generally, there are not sufficient resources available to adequately address the key issues and threats identified in this report.

A future advisory body, as discussed above, should pursue funding opportunities to implement the capital and corrective works recommended by this CMP. The establishment of a Heritage Fund would incentivise and support private owners to undertake essential conservation work and seek out expert heritage advice.

The funding for future work should consider the prioritised maintenance, conservation and longer-term management of the place.

Allowance should be made for:

- Cyclic works to existing heritage places – repainting, cleaning gutters etc.
- Conservation works - repair of broken or missing sections etc.
- Interpretive works to inform and educate people on heritage places.
- Provide better access to heritage places – signage, footpaths, cycle ways and other associated infrastructure.
- Conservation Management Plans for individual places. Master plans for larger precincts.
- Possible future acquisitions of other places of significance identified in this CMP.

> **Policy 77**  **Prioritisation of funding**
> *The prioritised capital and maintenance works recommended by this CMP should form the basis of a works programme.*

> **Policy 78**  **Heritage Fund**
> *Council should establish a heritage fund to assist private owners to conserve heritage listed properties.*

**Financial Assistance**

At the time of the preparation of this document there are limited opportunities for financial assistance to help with the ongoing conservation of the heritage listed places. However, more recently there has been an increasing focus in support of cultural heritage tourism at both State and Federal levels.

Possible sources of funding and assistance include:

**Department for Environment and Water / History Trust of SA (State Government)**
Grants for Heritage Places are eligible to owners of State heritage places in South Australia. Grants can be for conservation projects including conservation of significant building fabric or reinstatement or protection of significant features, such as verandahs, new roofs, guttering, window frames, damp treatment, underpinning and repointing. SA Heritage Grants also has a focus on community projects, such as works that support adaptive re-use of heritage places, or that promote the development of heritage tourism or skills in heritage trades, so the fund is a good fit for historical organisations.

**Department of the Environment and Energy (Australian Government)**
In 2018 the Australian Heritage Grants were announced as a budget measure with funding of up to $21.4 million available between 2018-19 to 2021-22 to strengthen recognition, management, conservation and public engagement on/of Australia's National Heritage List places. From 2022-23 ongoing funding of up to $5.7 million per annum will be provided.

**National Trust**
The National Trusts Partnership Program provides on-going funding to the Australian Council of National Trusts to support activities that increase public awareness, understanding and appreciation of Australia's cultural heritage, and enhance and promote its conservation and assist the Trusts to advocate and work for the preservation and enhancement of Australia's cultural heritage.

**Community Heritage Grants (National Library of Australia)**
The Community Heritage Grants (CHG) program provides grants of up to $15,000 to community organisations such as libraries, archives, museums, genealogical and historical societies, multicultural and Indigenous groups. The grants are provided to assist with the preservation of locally owned, but nationally significant collections of materials that are publicly accessible including artefacts, letters, diaries, maps, photographs, and audio-visual material.

The types of projects supported include significance assessments of collections, preservation needs assessments of collections, conservation activities and collection management, and training workshops.

**Department of Communications and the Arts (Australian Government)**
The National Cultural Heritage Account helps Australian public cultural organisations buy significant objects that they could not otherwise afford. The National Cultural Heritage Account keeps Australian protected objects in Australia so they can be preserved and made available to the public. Cultural organisations that can care for and provide permanent public access to Australian protected objects have a priority for funding.

**South Australian Tourism Commission (State Government)**
The Regional Events and Festivals Program provides financial support towards marketing and public relations for events that promote South Australia and its regions as tourism destinations.

**Tourism Australia (Australian Government)**
Building Better Regions Fund - The government is supporting the tourism sector with $45 million in grants through the Building Better Regions Fund (BBRF) to help move tourists beyond the major cities. These funds will support projects in regional areas and encourage more visitors and expenditure in regional locations, creating more tourism jobs for Australians.

**PIRSA (State Government)**
The Regional Growth Fund has been established to unlock new economic activity in our regions, to deliver critical economic infrastructure to create direct benefit across regional industries, and to strengthen regional communities. Through the Regional Growth Fund, the State Government is committing $150 million over 10 years to support regional South Australia as part of the Recharging Our Regions policy. The Regional Growth Fund is a $15 million per annum fund and projects will be selected based on the following principles: support for new economic activity that would not otherwise occur, the activity can be sustained without further intervention by government after the funding has been provided, the activity creates benefit for multiple entities, including entities not directly associated with the application, the activity contributes to the scale of an industry or sector, and finally the application has a connection to and has vested interest in a specific regional community.

*Policy 79*    *Financial assistance*
*Avenues for financial assistance should be pursued as part of the resourcing requirements for the ongoing conservation and management of heritage places in the ACMS (Burra).*

# 9.  Planning Precincts

## 9.1.  ACMS (Burra) Current Planning Policy

It is noted that a Planning Reform process is currently underway in South Australia and that all Development Plans are being merged into a single online Code based planning system. At the time of writing this CMP the transition to the new Design Code is still in progress. Given this, the commentary and guidance below is based on the current planning system and the existing Development Plan.

The Development Plan for the Regional Council of Goyder (Consolidated 24 November 2016) contains a series of Heritage Conservation Objectives and Principles of Development Control, and Heritage Places Objectives and Principles of Development Control which seek to guide and control future development in a sensitive way. Further direction is provided in the form of robust Design Guidelines for development in the Burra State Heritage Area.

The zoning associated with the town depicts the evolution of Burra as a series of townships. Kooringa and Redruth show as two separate town centres (zoned DTCe and TCe respectively) surrounded by residential development, with the mine site and Smelts site in between.

The current zoning for the town of Burra is shown on the following page.

It is envisaged that the policy and guidelines written as part of this document are adopted and included, or at least referenced in the Development Plan in the future. All effort has been made to ensure the policy and guidelines created are complementary to, and do not contradict the existing policy in the current Development Plan. In addition, the policies written in this document specifically relate to the Cornish mining influence on Burra and it is acknowledged that other cultural influences exist and have contributed to the development and heritage characteristics of Burra.

A hierarchy of conservation planning objectives and policies have been drafted in response to the assessment of the significance of the heritage places investigated, and to meet the intent of the National Heritage values statement and the requirements of the *EPBC Act (1999)*. This hierarchy is set out as a series of overarching town wide objectives with a subset of precinct policies that spatially respond to conservation and enhancement opportunities across Burra by geographic area.

Rec

PrPro

PrPro

PrPro

In

OS

BH

R

OS

TCe

R

Rec

HM

HM

In

Rec

PrPro

R

DTCe

R

PrPro

RuL

# Zoning

0    200                    1000m
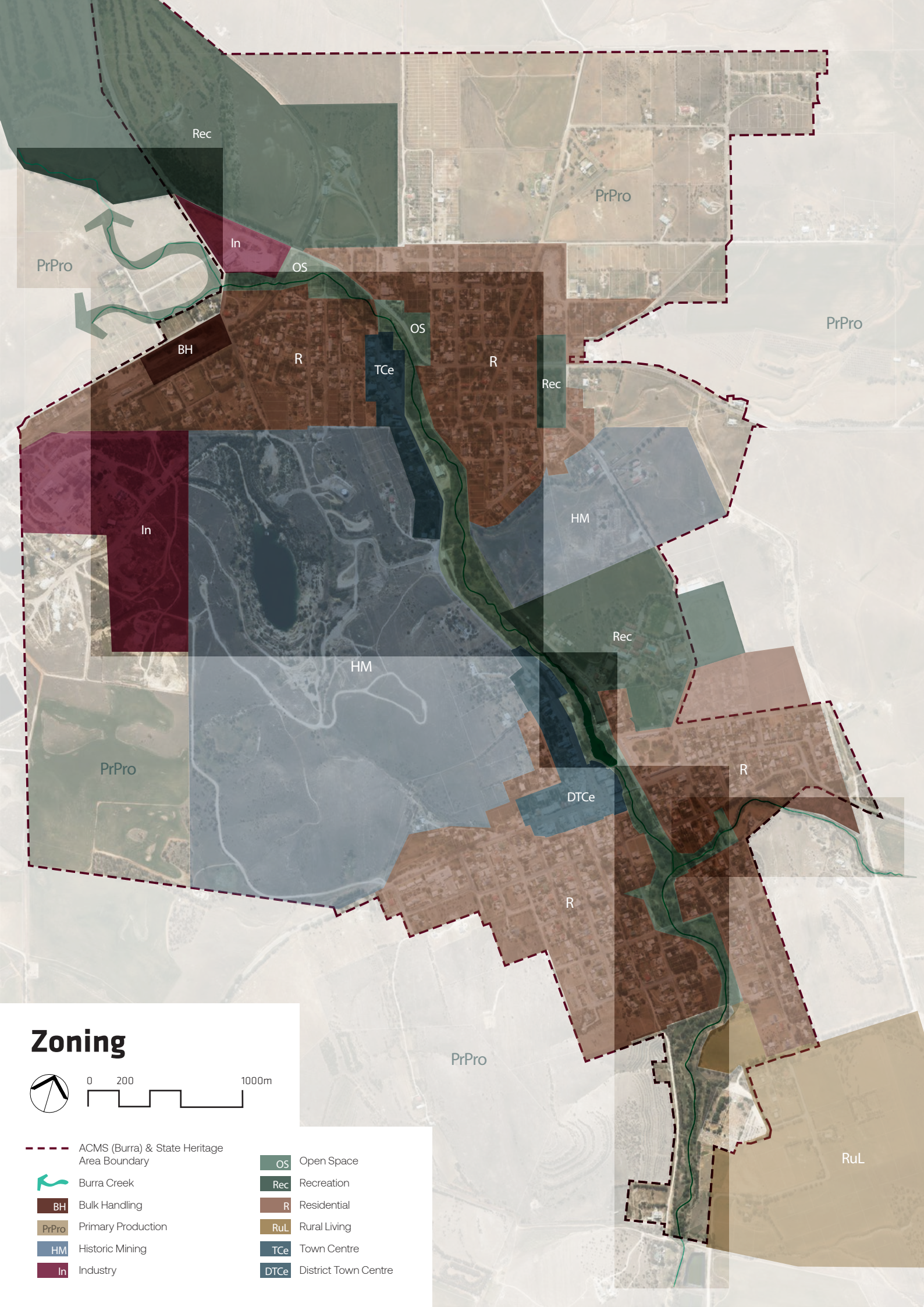
ACMS (Burra) & State Heritage
Area Boundary

Burra Creek

BH    Bulk Handling

PrPro  Primary Production

HM    Historic Mining

In     Industry

OS    Open Space

Rec    Recreation

R      Residential

RuL    Rural Living

TCe    Town Centre

DTCe   District Town Centre

# 9.2. ACMS (Burra) Site Wide Planning Policy

Burra's town form and character are derived from its valley setting surrounded by hills along the Burra Creek. The physical townscape of the ACMS (Burra) includes the overall character of the area as well as the visual relationships of individual elements within the broader landscape. The townscape has evolved as a result of a series of villages established to support the development of the Burra mine, surrounded by contrasting pastoral lands.

In review of the 1978 Lester Firth and Murton Pty Ltd study, the physical townscape and topographical town form have not changed substantially in Burra over the last 40 years. This is primarily due to the slow demand for new development and the abundance of land inside the town boundary within the existing State Heritage Area available for new development. Whilst new development is apparent in the town, generally the current Development Plan (and previous iterations) has appropriate controls and guidance to inform sensitive new development to complement the heritage places within the town.

The open visual context of the Burra Mine site and Burra Smelts site are of significance to the National Heritage values.

**Future Desired Character**

The ACMS (Burra) needs to be preserved as a place of historic and archaeological significance relating to Cornish mining influences. The open visual context of the Burra Mine site and Burra Smelts site are central to the National Heritage values.

Future development should carefully consider the influence on Burra's visual landscape and the historic and spatial relationships of individual places of National Heritage value.

Future conservation activities should be considered and undertaken in a coordinated manner to preserve the desired character of the place and uphold the National Heritage values. There is opportunity to capitalise on the conservation works in order to strengthen tourism, visitation, safety and interpretation across the ACMS (Burra) in a sustainable and coordinated manner without detracting from the heritage fabric or National Heritage values.

The following town wide objectives relate to the entire town and its setting. They are intended to provide a framework to support the conservation of heritage places relating to the Cornish mining in Burra and should be incorporated into the objectives in statutory development controls for the town.

Town Wide Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Protect the town form of Burra as a series of interconnected villages
- Protect and enhance the Burra Creek as the central uniting element which links the villages and provides a recreational spine through Burra
- Reinforce Burra as a town within a rural pastoral landscape
- Conserve the Burra Mines Historic Site and the Burra Smelts Historic Site as the core of the National Heritage values.
- Conserve the built and natural forms of heritage places within Burra
- Protect views to and from heritage places within Burra
- Better define the town entrances to Burra
- Enhance the character and amenity within Burra through conservation of heritage places and their setting.
- Reinforce the unique streetscape typology where appropriate in the town.
- Increase interpretation opportunities across ACMS (Burra) through the development and implementation of a coordinated interpretation strategy.
- Promote and encourage walking and cycling through the development and implementation of a walking and cycling strategy for the ACMS (Burra).
- Increase wayfinding through the development and implementation of a signage strategy for the ACMS (Burra).
- Places most at risk should be given conservation priority over those that are not.

The townscape and topographical town form of Burra are depicted on the following pages.
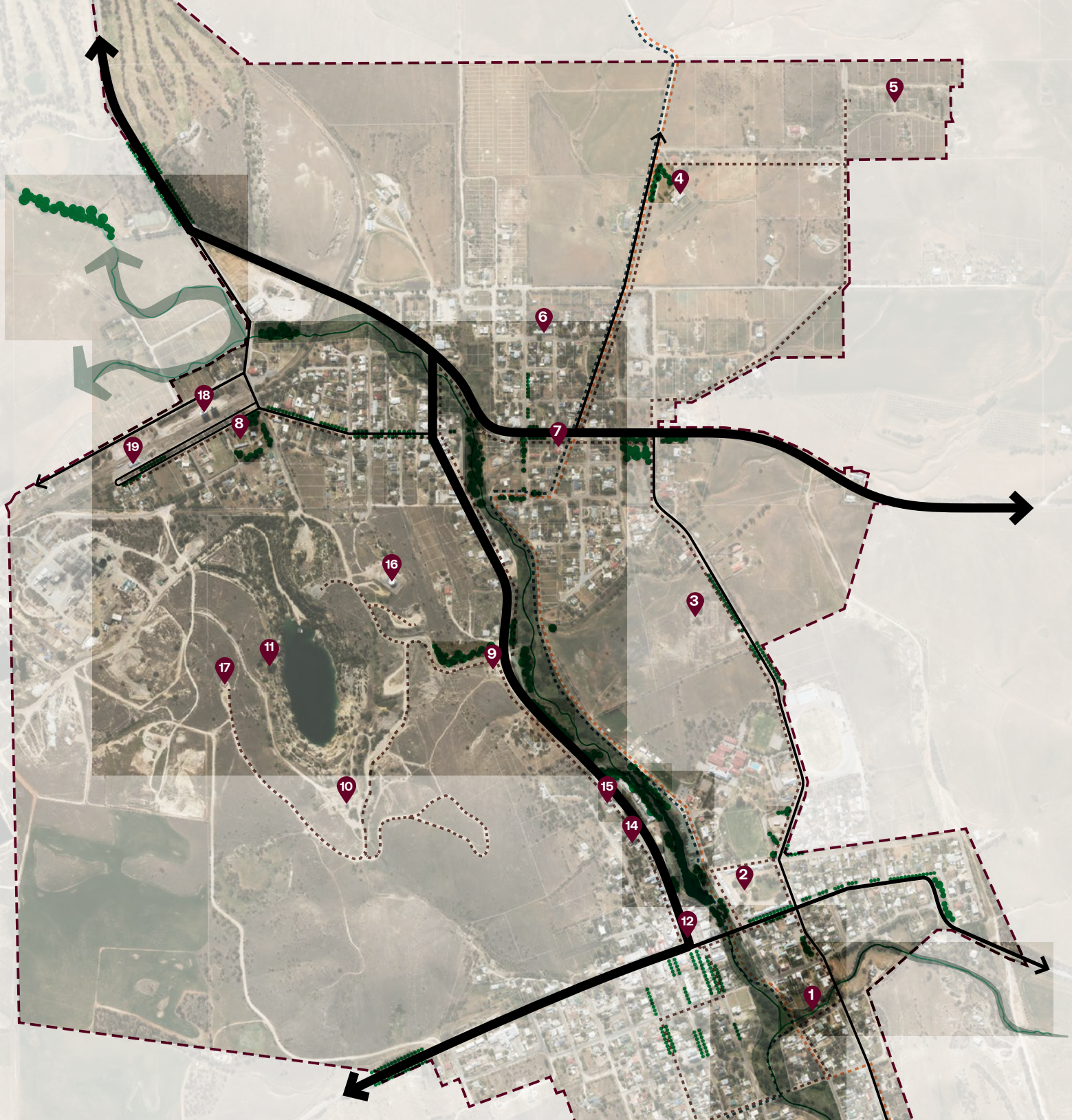
# Townscape

0  200  1000m

**Landmarks, Buildings and Structures**

1. Miner's Dugouts
2. Paxton Square Cottages
3. Smelts Paddock
4. Redruth Gaol
5. Hampton Township
6. Tiver's Row Cottages
7. Redruth Police Station, Cells & Stables
8. Bon Accord Mine
9. Peacock Chimney
10. Morphett's Enginehouse
11. Graves Enginehouse
12. Market Square
13. Burra Cemetery
14. Catholic Church
15. St Mary's Anglican Church
16. Water Tank
17. Former Powder Magazine
18. Grain Silos
19. Train Station

- - - ACMS (Burra) & State Heritage Area Boundary

〜 Burra Creek

⟵ Major Vehicle Pathways

······ Heysen Walking Trail

······ Mawson Bike Trail

······ Johnny Green Trail

●●● Important Tree Groupings & Street Trees

# Town Form

**N** — 0  200  1000m
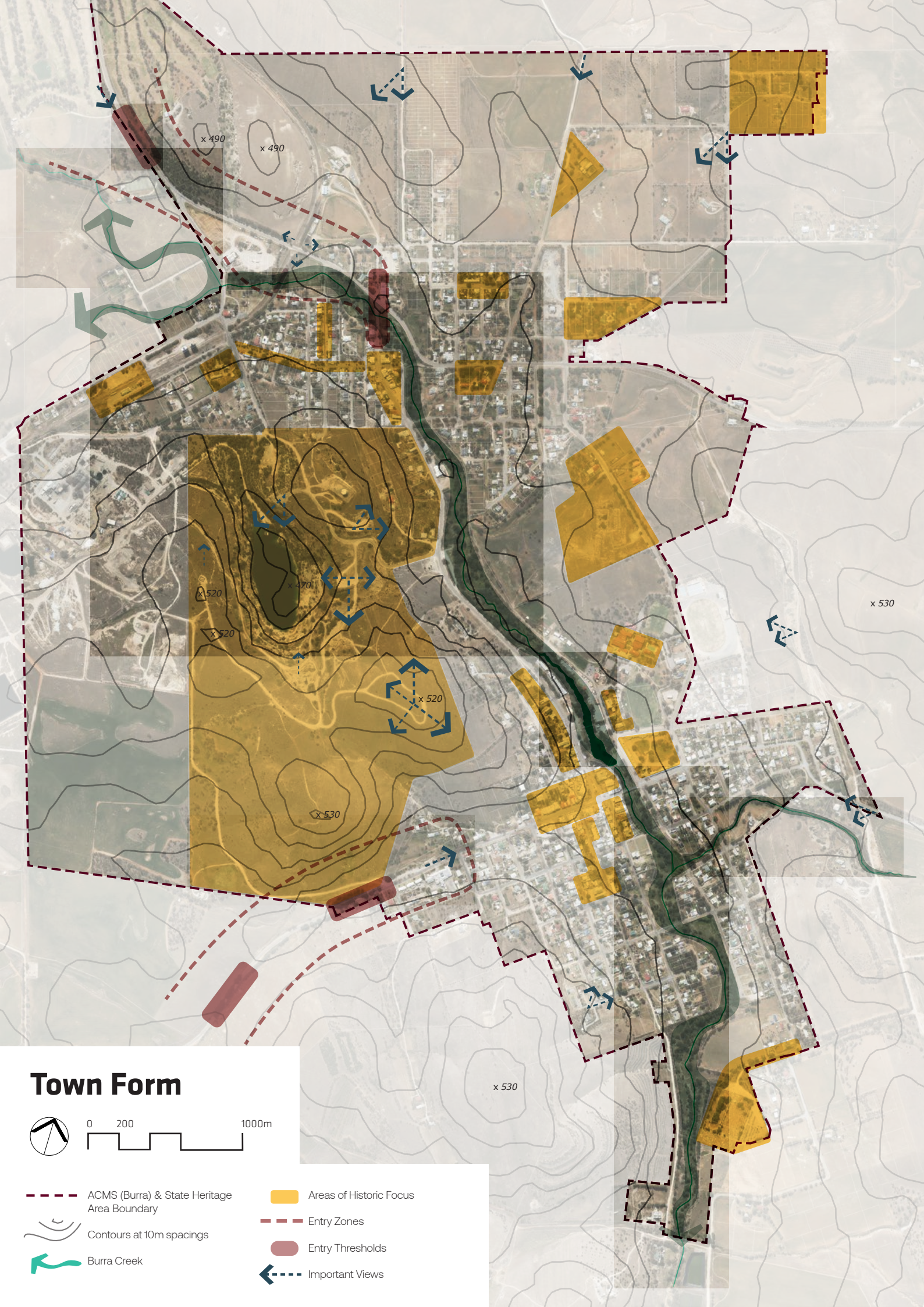
- - - - - **ACMS (Burra) & State Heritage Area Boundary**

〰️ **Contours at 10m spacings**

➤ **Burra Creek**

🟨 **Areas of Historic Focus**

- - - - - **Entry Zones**

⬭ **Entry Thresholds**

◄-- **Important Views**

x 490

x 490

x 520

x 520

x 470

x 520

x 530

x 530

x 530

# 9.3. ACMS (Burra) Precinct Policies

The 21 precincts identified by Lester Firth and Murton Pty Ltd in the 1978 Burra Conservation Study have been re assessed and reconfigured into 15 precincts based on the research and analysis undertaken in the preparation of this document. Where possible an attempt has been made to keep precincts identical as this provides the opportunity to directly trace policy and outcomes into the future for strategic planning, and retrospectively for historical reference purposes for when the next review of this document occurs.

The Precinct Policies are written to be complementary to the Principles of Development Control within the Regional Council of Goyder Development Plan. It is intended that they are adopted and written into the Development Plan (or Planning Code equivalent given the planning reform process underway in SA) in the future.
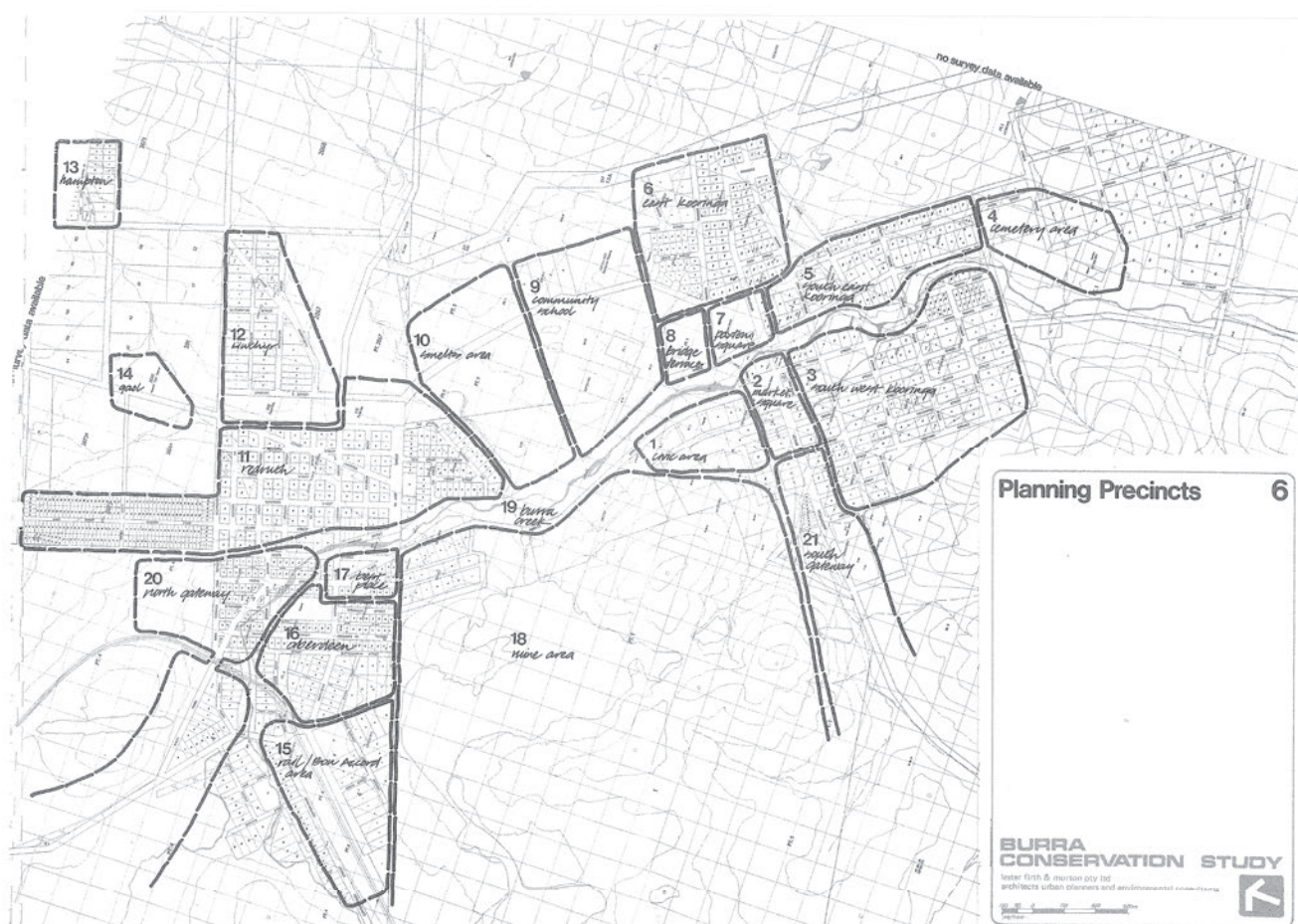


Proposed Precincts, 1978 Burra Conservation Plan

# Planning Precincts

8 hampton

9 gaol

15 north gateway

6 redruth

7 llwchyr

10 rail/Bon Accord area

11 aberdeen

12 bests place

S.A.M.A. Section 1

5 smelts area

14 burra creek

4 community school/ bridge terrace

13 mine area

3 east kooringa

1 kooringa

2 cemetery area

0   200        1000m
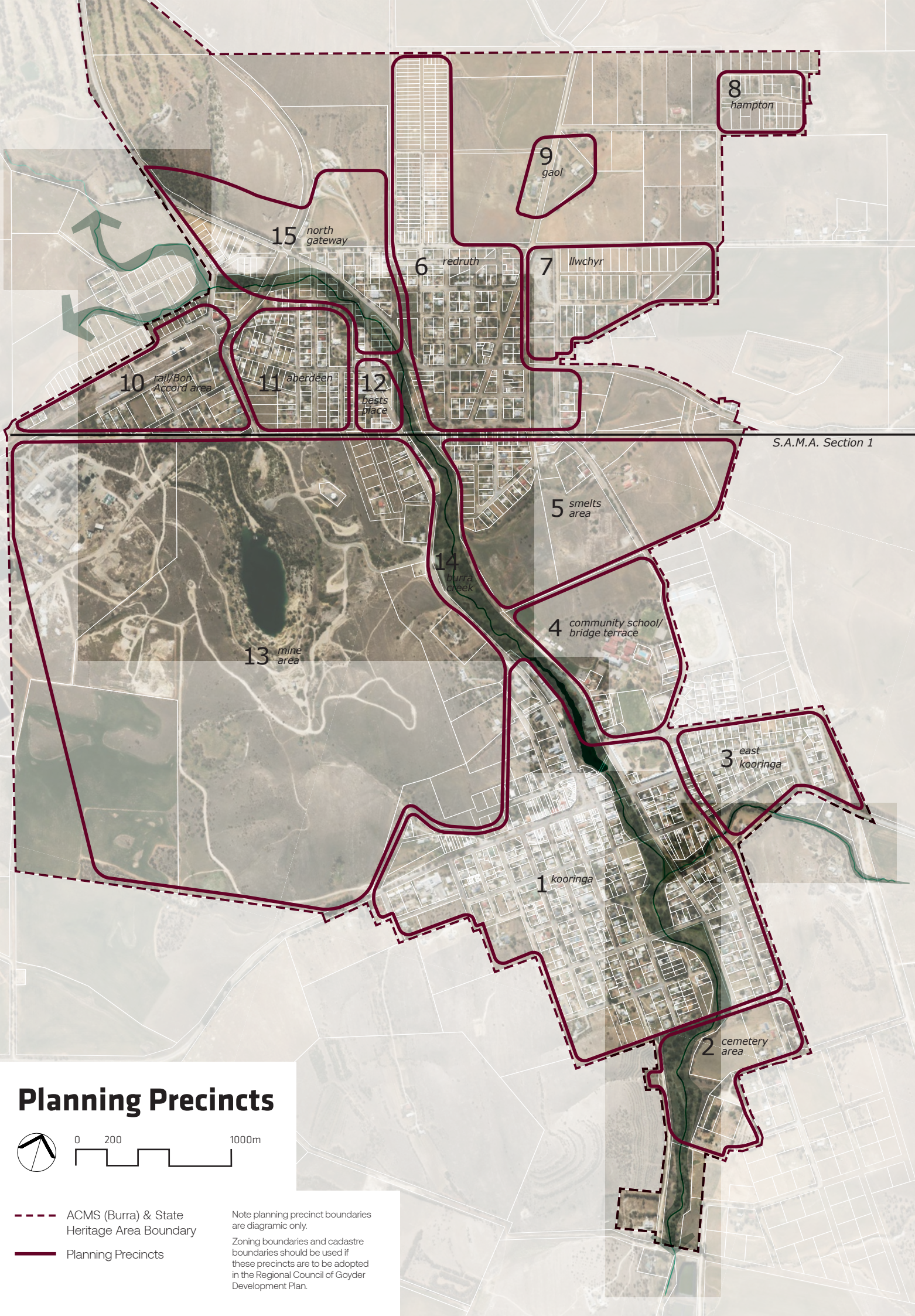
- - - ACMS (Burra) & State Heritage Area Boundary

—— Planning Precincts

Note planning precinct boundaries are diagramic only.

Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.

**Kooringa**

The Kooringa precinct is an amalgamation of the Civic Area, Market Square, South Gateway, South West Kooringa, South East Kooringa and Paxton Square from the previous Lester Firth and Murton Pty Ltd study. This precinct reunites Kingston's original settlement expansion plan for the township of Kooringa and is of high importance to the overall development of Burra, being the first company township in Australia. Kooringa was the central business centre for the mining townships and continues to be the civic and business heart of Burra today.

Kooringa also acts as the arrival point to the town from Adelaide along the Barrier Highway. A number of transition points are evident on the outskirts of this precinct, including a series of two planted Pine "portals" outside of the town boundary, and then the town arrival point opposite the Burra Hospital, where the road name changes to Commercial Street and the enclosing hills can be seen in the background.

Future Desired Character
Kooringa should continue to function as the central business district and civic heart of the town of Burra, along with early residential cottages and detached residences in the surrounding streets. The amenity and character of this precinct should be protected and reinforced limiting development to civic, community and landscape enhancement and the conservation of heritage listed places. New development in this precinct should strictly comply with the Regional Council of Goyder's Urban Design Guidelines.

The southern approach to the town is characterised by a series of "portals" of planted Pine trees before entering onto Commercial Street, these should be retained and enhanced in the future. The vista along Commercial Street looking towards Market Square with the undeveloped hills in the background showcases the town form and should be retained and enhanced.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

- Kingston's original settlement expansion plan for Kooringa should be preserved with no further subdivisions.

- New residential and commercial development within this precinct should be subject to compliance with the Regional Council of Goyder's Urban Design Guidelines with the highest level of scrutiny undertaken at the development application stage.

- Develop a master plan for the rejuvenation of Market Square as the main focus for commercial and civic activity with consideration of traffic management and returning road space to green / pedestrian space.

- Reinstate the street typology cross section with street trees wherever possible in all streets apart from Commercial Street and Market Street.

- Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

- Link the dugouts sites along the banks of Burra Creek to Market Square along a Burra Creek town walk.

- Identify current market trends and research from the tourism strategy to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in this precinct, in particular Commercial and Market Streets.

- Encourage existing businesses and new developments to front onto the Burra Creek wherever possible.

- Improve permeability across the Creek to the School and Caravan Park and Paxton Square through new / upgraded bridges.

- Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

- Develop a signage strategy for the town to increase wayfinding through this precinct.

- Consider an entry statement at the southern approach to Kooringa to highlight the entrance to the town.



Entry portal into Kooringa



Current Town entry signage



Commercial Street looking east - important view of town form

## Analysis & Opportunities

A. Develop a master plan for the rejuvenation of Market Square as the main focus for commercial and civic activity
B. Improve permeability across the Creek to the School and Caravan Park and Paxton Square through new / upgraded bridges
C. Consider an entry statement at the southern approach to Kooringa to highlight the entrance to the town
D. Link the Dugouts sites along the banks of Burra Creek to Market Square along a proposed Burra Creek town walk
E. Extend proposed Burra Creek town walk through Dugouts to connect to Cemetery
F. Develop interpretive signage for remnant Dugouts and upgrade streetscape
G. Reintroduce the Cornish mining walking path trail from Kooringa to the mine site

## Key Places

1. Miner's Dugouts
2. Paxton Square Cottages
3. Thames Street
4. Market Square (including Burra Hotel)
5. Town Hall
6. St Mary's Anglican Church

*1 kooringa*

# 1 Kooringa

0   200              1000m

- - - ACMS (Burra) & State Heritage Area Boundary

——— Planning Precincts

——— Historic Sub-Precincts

● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)

← Major Vehicle Pathways

← Burra Creek

●●● Important Tree Groupings and Street Trees

····· Heysen Walking Trail

····· Mawson Bike Trail

····· Johnny Green Trail

····· Proposed Trail

**Cemetery Area**

The Cemetery precinct is located to the south of Kooringa and consists of the current Cemetery site (1850 onwards) on the east side of the Burra Creek and the original Kooringa Cemetery (1845-1850) located on the west side of the Creek. The original Kooringa Cemetery was abandoned as it was prone to flooding from the gully which runs through it and there were reports of human remains being uncovered. Both sites provide a valuable resource for those interested in Cornish mining history (and the history of other cultures that assisted in the formative development of the town).

The ongoing community work at the original Kooringa Cemetery is noted in reinstating headstones and planting and maintaining landscaping, along with the interpretive signage erected to inform visitors on the history of the site.

A Conservation Plan for the Burra Cemeteries was prepared by McDougall & Vines in 1991. The Conservation Policies and Recommendations from this report are still valid and should be implemented.

In particular, the poor condition of original headstones in the current Cemetery is noted with many in a state of decay resting against the Cemetery wall.

Future Desired Character

Both the original and current Cemetery sites should be conserved as passive places for reflection, memorial and interpretation for descendant families and visitors to Burra.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

▪ The 1991 Conservation Plan by McDougall & Vines should be updated including reviewing the original reports recommendations.

▪ Develop a linkage between the old and new Cemetery across Burra Creek

▪ Provide interpretive signage at the new Cemetery

▪ Use the Cemetery as a terminus for a Burra Creek town walk

▪ Increase wayfinding to the new and original Cemetery from the heart of the town

▪ Develop a coordinated interpretation strategy for this precinct



Current Cemetery - original headstones in a state of decay



Original Kooringa Cemetery Interpretive Signage

Original Kooringa Cemetery - head stones



Current Cemetery - cleared headstones



Current Cemetery - noted conservation work on the stone wall surrounding the Cemetery

**Analysis & Opportunities**

A. Cemetery to be the terminus for the proposed Burra Creek town walk
B. Develop a linkage between the old and new cemetery across Burra Creek

**Key Places**

1. Burra Cemetery
2. Original Kooringa Cemetery

# 2 Cemetery

0    200                    1000m

2 *cemetery area*

- - - - ACMS (Burra) & State Heritage Area Boundary

——— Planning Precincts

——— Historic Sub-Precincts

● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)

← Major Vehicle Pathways

↜ Burra Creek

●●● Important Tree Groupings and Street Trees

····· Heysen Walking Trail

····· Mawson Bike Trail

····· Johnny Green Trail

····· Proposed Trail

**East Kooringa**

East Kooringa is located to the east of the original Kooringa settlement beyond Welsh Place and Paxton Square, and is primarily residential in nature with some more recent infill development which is incongruous with the early settlement development. A Housing Trust subdivision exists north of Paxton Terrace and in-between the school oval. This is located outside of the State Heritage area boundary.

Future Desired Character

East Kooringa provides an opportunity for complementary infill development and rejuvenation of previously developed incongruous development. In addition, there is opportunity for the continued conservation of heritage listed places within this precinct.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Reinstate the street typology cross section with street trees wherever possible in all streets.
- Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

**Community School and Bridge Terrace**

This precinct is an amalgamation of the Community School precinct and the Bridge Terrace precinct from the previous Lester Firth and Murton Pty Ltd study. This precinct brings together education and community facilities for the town including the community school, library, kindergarten / preschool sporting ovals, playground and the caravan park.

Future Desired Character

This precinct should continue to grow and develop as a community hub into the future. The amenity and character of this precinct should be protected and reinforced limiting development to community and landscape enhancement and the conservation of heritage listed places.

The caravan park does make a significant economic and social contribution to the town and rather than relocating it, the extent of the park could be reduced to enable public access to the Burra Creek frontage. The caravan park could then extend further north along Bridge Terrace, or over Bridge Terrace to the eastern side.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Develop a master plan for the rejuvenation of the caravan park to increase amenity and de privatise the creek edge- offset this with increased space north along Bridge Terrace and / or over Bridge Terrace.
- Encourage adaptive reuse of heritage places on Bridge Terrace including the Unicorn Brewery site for community or commercial uses.
- Continue conservation works on all heritage places including the stone walling to the recreation field on Paxton Terrace.

**Analysis & Opportunities**

General opportunity for complementary infill development and rejuvenation of previously developed incongruous development

3 *east kooringa*

# 3 East Kooringa

0  200  1000m

- – – – ACMS (Burra) & State Heritage Area Boundary
- ──── Planning Precincts
- ──── Historic Sub-Precincts
- State Heritage Listed Place

- State Heritage Listed Place (National Values Statement)
- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees

- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

## Analysis & Opportunities

A. Develop a master plan for the rejuvenation of the caravan park to increase amenity and de privatise the creek edge
B. Encourage adaptive reuse of heritage places on Bridge Terrace including the Unicorn Brewery site for community or commercial uses
C. Continue conservation works on all heritage places including the stone walling to the recreation field on Paxton Terrace

## Key Places

1. Burra Caravan Park
2. Burra Community school

4 *community school/ bridge terrace*

# 4 Community School/ Bridge Terrace

0   200          1000m

| | |
|---|---|
| --- ACMS (Burra) & State Heritage Area Boundary | State Heritage Listed Place (National Values Statement) |
| Planning Precincts | Major Vehicle Pathways |
| Historic Sub-Precincts | Burra Creek |
| State Heritage Listed Place | Important Tree Groupings and Street Trees |

Heysen Walking Trail
Mawson Bike Trail
Johnny Green Trail
Proposed Trail

**Smelts Area**

The Smelts precinct sits opposite the mine site and in-between the two townships of Kooringa and Redruth. It extends from Burra Creek east to the extents of the town and presents as a barren and exposed landscape with the dark blue / grey slag heaps and remains of former stone buildings present. Views into the site and from the site towards the mine site and beyond are good at depicting the overall town form and the harsh environment the Cornish miners would have endured and been exposed to.

The Burra Smelts Historic Site remains as an important archaeological site as described in the previous Lester Firth and Murton Pty Ltd study. It is acknowledged that investment has been made in securing the site and providing interpretive signage and wayfinding to enhance visitor understanding of the site.

The Smeltsyard and Storehouse require urgent conservation works due to their state of decay and risk of collapse.

The Smelts area boundary has been adjusted for this document to incorporate the subdivision in the northwest corner of the site. This realignment brings the boundary back to the original SAMA Section 1 boundary, and the area contains residences associated with the Smelting operations including the Smelts Manager's Residence and Office.

Future Desired Character

This precinct is important in showcasing the National Heritage values of the ACMS (Burra) and in particular Welsh smelting practices.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Following the preparation of an archaeological zoning map, designate the Smelts area a place of archaeological significance under the *Heritage Places Act 1993* to further protect the site.
- Prepare a conservation strategy for the Smelts area to interpret its National Heritage values and to conservation of its fabric.
- Reinstate the former Smelts site boundary
- Investigate the long-term strategic acquisition of the Smeltsyard and Storehouse for conservation and future interpretation
- Develop a coordinated interpretation strategy for this precinct.



Smelt's Site - barren and exposed landscape



Smelt's Site - barren and exposed landscape



The Smelt's yard and store house and the surrounding former stables are of particular significance



The Smelt's yard and store house and the surrounding former stables are of particular significance

## Analysis & Opportunities

A. Prioritise a strategic master planning process for the Smelts area to realise its full potential as a site relating to Cornish mining interpretation in South Australia, and for broader tourism possibilities.

B. Reinstate the former Smelts site boundary

C. Investigate the long-term strategic acquisition of heritage places of significance identified in this Conservation Management Plan including the Smelts yard and stone house and surrounding former stables for conservation and future compatible interpretive use

D. No connection between Mine and Smelt sites

E. No interpretation of Smelts site along Burra Creek

## Key Places

1. Smelts Historic Site
2. Former Burra Smeltsyard and Storehouse
3. Smelts Office & Manager's Residence
4. Former Smelts Superintendent's Dwelling & Wall

# 5 Smelts Area

0    200              1000m

- – – –  ACMS (Burra) & State Heritage Area Boundary
- ——  Planning Precincts
- ——  Historic Sub-Precincts
- ● State Heritage Listed Place

- ● State Heritage Listed Place (National Values Statement)
- ← Major Vehicle Pathways
- ∿ Burra Creek
- ●●● Important Tree Groupings and Street Trees

- ·····  Heysen Walking Trail
- ·····  Mawson Bike Trail
- ·····  Johnny Green Trail
- ·····  Proposed Trail

**Redruth**

The township of Redruth was laid out by the South Australian Government in 1849 as a freehold development in response to the SAMA's private leasehold township of Kooringa. It sits at the northern extremity of Burra beyond the SAMA Section 1 boundary on the eastern side of Burra Creek. It is primarily residential in nature and contains many fine examples of attached row housing and small-scale cottages.

Tivers Row Cottages on Truro Street are the finest example of these attached cottages, and Truro Street as a precinct presents as a relatively intact precinct within Redruth with historic and visual importance.

Other civic buildings, including the Redruth Primitive Methodist Hall and the Redruth Police Station, cells and stables, and the Redruth Courthouse contribute to understanding the lifestyle of early Cornish migrants.

Newer development at the northern and eastern extremities of Redruth (including the later subdivision of Milerton), along with infill development is inconsistent with the historic residential building typology. This has had a negative effect on the visual character of the township and is intrusive to the Truro Street precinct in particular.

Future Desired Character
The amenity and character of Redruth should be protected and reinforced limiting development primarily to residential use and landscape enhancement, with further conservation of heritage listed places. New development in this precinct should strictly comply with the Regional Council of Goyder's Urban Design Guidelines to reinstate the village feel and the title of "Little Cornwall" as described in previous Lester Firth and Murton Pty Ltd study.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

▪ New residential development within this precinct should be subject to compliance with the Regional Council of Goyder's Urban Design Guidelines with the highest level of scrutiny undertaken at the development application stage.

▪ Reinstate the street typology cross section with street trees wherever possible in all streets of Redruth apart from Ludgvan Street.

▪ Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

▪ Continue conservation works on all heritage places.

▪ Identify current market trends and research from the tourism strategy to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in this precinct.

▪ Improve permeability across the Creek to Bests Place and the Mine site through new / upgraded bridges.

▪ Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

▪ Develop a signage strategy for the town to increase wayfinding through this precinct.



Tiver's Row Cottages



Example of conservation work

Redruth Streetscape



Example of good infill development which incorporates a hip roof form and integrated verandah structure



Example of poor infill development

## Analysis & Opportunities

A. Important pedestrian trail node – Heysen, Mawson, & Burra Creek crossing point
B. Improve permeability across the Creek to Bests Place and the Mine site through new / upgraded bridges

## Key Places

1. Tiver's Row Cottages
2. Truro Street Cottages
3. Redruth Police Station, Cells & Stables
4. Former Redruth Courthouse
5. Former Redruth Wesleyan Church

# 6 Redruth

| | | |
| 0 | 200 | 1000m |

- - - - ACMS (Burra) & State Heritage Area Boundary
——— Planning Precincts
——— Historic Sub-Precincts
● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)
← Major Vehicle Pathways
← Burra Creek
●●● Important Tree Groupings and Street Trees

···· Heysen Walking Trail
···· Mawson Bike Trail
···· Johnny Green Trail
···· Proposed Trail

**Llwchyr**

Llwchyr is located northeast of Redruth and is separated with parklands planted with Eucalypts. It is primarily residential in nature but has a distinctly different character from Redruth with few remaining buildings yet extensive original stone walls.

Future Desired Character
Due to its physical parkland separation from Redruth, Llwchyr has good development opportunities for new residential development without strict application of the Urban Design Guidelines.

It should be noted though that sensitive design responses are still encouraged that consider hip roof forms, integrated verandahs and complementary materials for roof and facade treatments.

The relatively intact stone walling however should be conserved and reinstated wherever possible as a unique element of the precinct.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

- New residential development within this precinct is encouraged but not in strict accordance with the Regional Council of Goyder's Urban Design Guidelines.
- Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.
- Amend zoning to Residential from Primary Production to enable future residential development.

**Hampton**

The township of Hampton was surveyed and laid out in 1857 and sits separately from the rest of Burra to the north east beyond the Gaol. It sits prominently above the rest of the town and good views are noted looking back towards Burra and to the mine site from Hampton.

Little change is noted from the previous Lester Firth and Murton Pty Ltd study. Hampton remains as a collection of ruins, with continued deterioration of remnant stone cottages, stone walls and outbuildings. One exception is the reconstruction of Jacka House using traditional materials and construction techniques to stabilise the cottage.

Some interpretive signage is evident naming each of the remnant cottages, and it is noted that Hampton is in the custodianship of the National Trust providing increased protection from vandalism, uncontrolled access and further neglect.

Future Desired Character
Hampton needs to be preserved as an intact township of historic and archaeological significance relating to the lifestyles of the Cornish mining community at Burra. There is opportunity to improve interpretation.

Hampton could serve as a place for traditional trade training in heritage building construction as exemplified by the current works to Jacka House.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

- Investigate Hampton as a place of archaeological significance under the *Heritage Places Act 1993* to further protect the site.
- Prepare a conservation strategy for Hampton to prioritise conservation actions at heritage places at risk.
- Amend zoning to Historic Mining to protect the site and heritage places within it.
- Develop a coordinated interpretation strategy for this precinct.

7 *llwchyr*

# 7 Llwchyr

0   200                    1000m

- - - ACMS (Burra) & State Heritage Area Boundary
—— Planning Precincts
—— Historic Sub-Precincts
● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)
← Major Vehicle Pathways
← Burra Creek
Important Tree Groupings and Street Trees

····· Heysen Walking Trail
····· Mawson Bike Trail
····· Johnny Green Trail
····· Proposed Trail

## Analysis & Opportunities

A. Hampton remains as a collection of ruins, with continued deterioration of remnant stone cottages, stone walls and outbuildings.

B. Hampton could serve as a place for trade training in heritage building works based on the conservation and reconstruction of Jacka House which is seen as an exemplary benchmark for heritage conservation and interpretation.

C. Opportunity to capitalise on visitation and interpretation at Hampton given its location as part of the Johnny Green Trail.

## Key Places

1. Jacka House Reconstruction

# 8 Hampton

0    200                    1000m

- - - ACMS (Burra) & State Heritage Area Boundary

——— Planning Precincts

——— Historic Sub-Precincts

● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)

⬅ Major Vehicle Pathways

↩ Burra Creek

●●● Important Tree Groupings and Street Trees

⋯ Heysen Walking Trail

⋯ Mawson Bike Trail

⋯ Johnny Green Trail

⋯ Proposed Trail

**Gaol**

The Gaol is located north of the township of Redruth on Tregony Street. Built in 1856 it was the first gaol to be built outside of Adelaide. It is a site contributing to the lifestyle and regulatory function of the town during the Cornish mining period.

The Gaol is owned and maintained by the National Trust and is one of Burra's most visited heritage places and was used as a location for the movie *Breaker Morant* during the 1970's.

<u>Future Desired Character</u>
The Gaol should continue to function as one of Burra's most visited heritage places into the future and further tourism opportunities should be sought based on previous success.

<u>Strategic and Planning Objectives</u>
The following are suggested in addition to the existing objectives:

- Continue conservation works on the Gaol to maintain its level of conservation and interpretation.

- Investigate longer term strategic tourism opportunities for the Gaol based on previous achievements.

- Develop a master plan for the rejuvenation of the Gaol environment around the building to consider car parking, access and movement, landscaping, shade and other amenities for tourists and visitors.

## Analysis & Opportunities

A.  Develop a master plan for the rejuvenation of the Gaol environment around the building to consider car parking, access and movement, landscaping, shade and other amenities for tourists and visitors

## Key Places

1.  Redruth Gaol

**9** *gaol*

# 9 Gaol

0      200                    1000m

- - - - ACMS (Burra) & State Heritage Area Boundary

——— Planning Precincts

——— Historic Sub-Precincts

● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)

← Major Vehicle Pathways

← Burra Creek

● Important Tree Groupings and Street Trees

···· Heysen Walking Trail

···· Mawson Bike Trail

···· Johnny Green Trail

···· Proposed Trail

**Rail/Bon Accord Area**

This precinct sits north of the Burra Mine site and is bound by Copperhouse Street and West Street. The precinct contains a collection of heritage places including the Bon Accord Mine site, the Burra railway station and the Bon Accord Hotel which are all popular tourist attractions. The more recently added silos (1962) provide a defining visual element for this precinct and can be seen throughout the town- most notably from the northern gateway.

The precinct is somewhat secluded from the town centre with key access via Morehead Street and a number of directional fingerboard signs attached to the Morehead Street sign at the Bests Place intersection.

The Bon Accord Mine site is owned and managed by the National Trust. It contains a valuable collection of Cornish mining artefacts (and other memorabilia) on display in an open area museum, and within buildings. Tours are available of the displays, and a working blacksmith demonstration studio. It is noted that the site and the tourist offerings are looking dated and in need of further funding to modernise and refresh the site.

The 1859 Manager's Residence has had recent conservation and adaptation works undertaken and it is used as bed and breakfast accommodation, which is supported as a means of generating income to assist in further conservation and interpretive works at the site.

The Burra railway closed for passenger services to Adelaide in 1986, and then for grain transportation in 1999. However, the station has a very active community group (Friends of the Burra Railway Station) who have strategically and progressively sought funding and government support to undertake conservation works on the station building. This work is ongoing and at the time of writing this report conservation work is underway on the reconstruction of the arched roof station canopy and the restoration of EDIE a 1917 Commonwealth Railways kitchen and dining car, with works due to be completed in time for the 150th commemoration of the arrival of Burra's first train in 2020.

The professionalism and effort given by this community group to the railway station is commendable and serves as a good model for other community groups leveraging funding for heritage conservation works. The adaptive reuse of the station as a bed and breakfast, interpretive centre, and future function centre is supported.

Future Desired Character
The Bon Accord Mine site and the Burra railway station should continue to contribute to tourism in Burra with further interpretation and adaptive reuse work to increase the quality of the offering to tourists. This should be the focus of new development in the precinct.

The Bon Accord Mine site, under the care and custodianship of the National Trust should consider how to support the Burra Mine in showcasing the Cornish mining history of Burra in a coordinated and complementary way.

Travel between this precinct and the Burra Mine site (and the town centre) should be improved for walking and cycling, along with appropriate wayfinding.

Increased amenity for tourists and visitors needs to be considered in this precinct with new landscaping and shade trees and the retention of the tall stand of Pine trees at the entrance to the Bon Accord Mine site as a landmark feature.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

- Prepare a conservation strategy for the Bon Accord Mine site to conserve its fabric, review its interpretive role in telling the story of the Burra Mine and broader opportunities and uses.
- Develop a master plan for the Burra railway station environment to consider car parking, access and movement, landscaping, shade and other amenities for tourists and visitors.
- Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.
- Develop a signage strategy for the town to increase wayfinding through this precinct.
- Develop a coordinated interpretation strategy for this precinct

**10** *rail/Bon Accord area*

## Analysis & Opportunities

A. Travel between this precinct and the Burra Mine site (and the town centre) should be improved for walking and cycling, along with appropriate wayfinding.

B. Prioritise a strategic master planning process for the Bon Accord Mine site to realise its full potential as a contributory tourism asset to complement the Burra Mine site as the centrepiece for Cornish mining interpretation in South Australia, and for broader tourism and interpretation opportunities across the Bon Accord site.

C. Develop a master plan for the rejuvenation of the Burra railway station environment to consider car parking, access and movement, landscaping, shade and other amenities for tourists and visitors.

## Key Places

1. Former Bon Accord Mine Site
2. Bon Accord Hotel
3. Railway Station

# 10 Rail/ Bon Accord Area

0   200        1000m

## Legend

- – – – ACMS (Burra) & State Heritage Area Boundary
- —— Planning Precincts
- —— Historic Sub-Precincts
- ● State Heritage Listed Place
- ● State Heritage Listed Place (National Values Statement)
- ← Major Vehicle Pathways
- ← Burra Creek
- ●●● Important Tree Groupings and Street Trees
- ····· Heysen Walking Trail
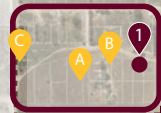- ····· Mawson Bike Trail
- ····· Johnny Green Trail
- ····· Proposed Trail

**Aberdeen**

Aberdeen is located in between Bests Place and the Bon Accord Mine and north of the Burra Mine site. It is primarily residential in nature, but former shops are located along Morehead Street which are referenced in the Lester Firth and Murton Pty Ltd study in 1978 when the Burra railway line was still operational. It seems that the closure of the railway line may have contributed to the closure of these shops.

The area is characterised by a number of good quality terrace, detached cottages and dwellings, some of which have been upgraded and turned into tourist accommodation.

Future Desired Character
The amenity and character of Aberdeen should be protected and reinforced limiting development primarily to residential use and landscape enhancement, with further conservation of heritage listed places. New development in this precinct should strictly comply with the Regional Council of Goyder's Urban Design Guidelines.

Morehead Street is an important link between the town centre and the Bon Accord Mine site and the Burra railway station. It should be a focus of future residential development, landscape enhancement and commercial development in the adaptive re use of old shops.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

- New residential development within this precinct should be subject to compliance with the Regional Council of Goyder's Urban Design Guidelines with the highest level of scrutiny undertaken at the development application stage.

- Reinstate the street typology cross section with street trees wherever possible in all streets of Aberdeen.

- Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

- Encourage conservation works on all heritage places.

- Identify current market trends and research from the tourism strategy to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in this precinct particularly along Morehead Street.

- Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

- Develop a signage strategy for the town to increase wayfinding through this precinct.

**11** *aberdeen*

# 11 Aberdeen

0    200              1000m

| | |
|---|---|
| – – – – ACMS (Burra) & State Heritage Area Boundary | State Heritage Listed Place (National Values Statement) |
| —— Planning Precincts | Major Vehicle Pathways |
| —— Historic Sub-Precincts | Burra Creek |
| ● State Heritage Listed Place | Important Tree Groupings and Street Trees |
| | Heysen Walking Trail |
| | Mawson Bike Trail |
| | Johnny Green Trail |
| | Proposed Trail |

**Bests Place**

Bests Place is strategically located at the intersection of Young, Morehead and Ludgvan Streets. It presents as a secondary town centre for Burra North and is called as such in the 1978 Lester Firth and Murton Pty Ltd study. This is supported in the Town Centre zoning of this precinct. However, it seems that vehicle movement patterns have changed in Bests Place between 1978 and today with the reconfiguration of the junction of the Barrier Highway and the Goyder Highway taking through traffic behind Bests Place on the other side of the Burra Creek. This change (as well as the closure of the Burra railway station) is likely to have had a negative impact on the commercial viability of businesses.

The bridge linking Morehead Street east over the Burra Creek to Ludgvan Street has been closed to all vehicular traffic further disconnecting Bests Place from Redruth. The bridge is of the same design as the bridge linking Commercial Street to Kingston Street and is of heritage value.

The buildings on the corner of Morehead Street and Bests Place, in particular the Royal Exchange Hotel and Sara's ("Tivers Corner") are of fine quality and present well, however more recent development south of this intersection do not complement the architectural qualities of these buildings, do not present well to the street and are incongruous with the precinct.



Former road bridge linking Redruth to Bests Place

Future Desired Character

Bests Place should be conserved and rejuvenated as a secondary town centre to complement and support Market Square. Efforts should be made to encourage new commercial businesses to open in Bests Place, particularly at the intersection of Morehead Street. Incongruous development should be rejuvenated or removed from this precinct.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

▪ Develop a master plan for the rejuvenation of Bests Place as a secondary town centre to Burra with the main focus on stimulating commercial and civic activity with consideration of traffic management and returning road space to green / pedestrian space and improved shade and amenity.

▪ New commercial development within this precinct should be subject to compliance with the Regional Council of Goyder's Urban Design Guidelines with the highest level of scrutiny undertaken at the development application stage.

▪ Screen incongruous and intrusive development from streets using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

▪ Encourage conservation works to all heritage places.

▪ Amend zoning to Historic Mining from Town Centre at the southern extent of Bests Place to consolidate the Town Centre zone and protect other mine related heritage places on the western side of Bests Place / Market Street.

▪ Identify current market trends and research from the tourism strategy to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in this precinct in particular for Tivers Corner.

▪ Encourage existing businesses and new developments to front onto the Burra Creek wherever possible.

▪ Improve permeability across the Creek to Redruth through upgrading and reopening the bridge over the Burra Creek to Redruth.

▪ Link Bests Place along the banks of Burra Creek to Market Square along a Burra Creek town walk.

▪ Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

▪ Develop a signage strategy for the town to increase wayfinding through this precinct.



Sara's (Tivers Corner)

## Analysis & Opportunities

A. Bests Place is strategically located at the intersection of Young, Morehead and Ludgvan Streets. It presents as a secondary town centre for Burra North.

B. Develop a master plan for the rejuvenation of Bests Place as a secondary town centre to Burra with the main focus on stimulating commercial and civic activity.

C. Improve permeability across the Creek to Redruth through upgrading and reopening the bridge over the Burra Creek to Redruth.

D. Amend zoning to Historic Mining from Town Centre at the southern extent of Bests Place to consolidate the Town Centre zone and protect other mine related heritage places on the western side of Bests Place / Market Street.

## Key Places

1. Morehead Street bridge over Burra Creek
2. Former Tivers Railway Store & Royal Exchange Hotel

# 12 Bests Place

0    200                    1000m

| | |
|---|---|
| – – – ACMS (Burra) & State Heritage Area Boundary | ● State Heritage Listed Place (National Values Statement) |
| —— Planning Precincts | ← Major Vehicle Pathways |
| —— Historic Sub-Precincts | ↜ Burra Creek |
| ● State Heritage Listed Place | ●●● Important Tree Groupings and Street Trees |

| | |
|---|---|
| ⋯⋯ Heysen Walking Trail | |
| ⋯⋯ Mawson Bike Trail | |
| ⋯⋯ Johnny Green Trail | |
| ⋯⋯ Proposed Trail | |

**Burra Historic Mine Area**

The mine site sits centrally in Burra between the original townships of Kooringa and Redruth to the west of Burra Creek. Many other State Heritage places are located within its boundaries.

Due to the later open cut operations the physical landscape of the site has been altered through the ill considered placement of the overburden within the valley forming the entrance to the site, though this has created good viewing locations across the town.

Recently a large water tank has been placed on the hill within the Mine site that is visible from within the Mine site and across Burra. This is visually intrusive and compromises the visual amenity of the Mine site and the town.

Future Desired Character

The Mine site and its associated elements need to be conserved as the core of the National Heritage values of the ACMS (Burra). It has the potential to become a site of international significance with careful planning and curation.

The Mine site also has the capacity for broader tourism opportunities utilising the open cut.

The overburden within the valley at the mine entry should ultimately be removed to return the mine to its original topography and to expose the former historic mine infrastructure concealed below.

The unfortunate siting of a large water tank within the Burra Mine site on top of the open cut overburden and adjacent several landmark State Heritage Places is visible from across Burra and from the town approaches. Although the tank is essential infrastructure for the town, it constitutes intrusive development on this Nationally Listed Heritage Place and has had adverse effects on the visual amenity of the town. In the short term actions should be investigated to reduce its intrusive qualities. A longer-term action could be to relocate the tank to a less sensitive site or put the tank underground on the same site.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Prepare a conservation strategy for the Mine site to realise its potential as the key place for the interpretation of Cornish mining as outlined in the National Heritage values and the conservation of its fabric.

- Investigate the Mine site as a place of archaeological significance under the *Heritage Places Act 1993*

- Reinstate the former Mine site boundary (prior to the subdivision of Graham in the northeast corner of the site).

- Amend zoning to Historic Mining from Town Centre to reconnect the site and protect other mine related heritage places.

- Investigate the long-term strategic acquisition of the former SAMA Storeman's Dwelling (SAHR No. 10049) and former SAMA Storeroom, Yard and Walls (SAHR No. 10019) for conservation and future interpretive use.

- Prepare a long-term strategy for the removal of the open cut overburden to unearth and interpret buried mine infrastructure such as the jigging grounds, buddle pits and ore floors and return the geographic townscape back to a "pre-open cut" state.

- Exclude any new mining activities on the mine site.

- Reduce the visual impact of the new water supply tank, with the untimate aim of its removal to a less intrusive location.

- Develop a coordinated interpretation strategy for this precinct.



Former Foreman's Residence



Burra Mines Historic Site (SAHR 10970)



SAMA Storeroom (Part of SAMA Storeroom, Yard and Walls SAHR 10019)
SAMA Storeman's Dwelling (SAHR 10049)

## 13 Mine Area

0 — 200 — 1000m

**Analysis & Opportunities**

A. Reinstate the former mine site boundary (prior to the subdivision of Graham in the north east corner of the site). Amend zoning to Historic Mining from Town Centre to reconnect the site and protect other mine related heritage places.
B. Future high value interpretive site/education site relating to the mine
C. Screen or remove water tank
D. Open cut mine should be utilised for multiple uses, including recreation use and tourism
E. Reintroduce the Cornish mining walking path as part of the Johnny Green Trail including recreational use.
F. Improve connections for walking and cycling to the Bon Accord Mine.

**Key Places**

1. SAMA Storeman's Dwelling, Storeroom, Yard & Walls
2. Peacock's Chimney
3. Morphett's Pump House, Boiler House & Winding House
4. Grave's Pump House
5. Powder Magazine

| | | |
|---|---|---|
| - - - | ACMS (Burra) & State Heritage Area Boundary | |
| —— | Planning Precincts | |
| —— | Historic Sub-Precincts | |
| ● | State Heritage Listed Place | |
| ● | State Heritage Listed Place (National Values Statement) | |
| ← | Major Vehicle Pathways | |
| ← | Burra Creek | |
| ●●● | Important Tree Groupings and Street Trees | |
| ···· | Heysen Walking Trail | |
| ···· | Mawson Bike Trail | |
| ···· | Johnny Green Trail | |
| ···· | Proposed Trail | |

**Burra Creek**

The Burra Creek is an important visual element and forms the spine of Burra linking the former townships together as one. It functions as the community's main green open space and contains artefacts relating to the Cornish mining history such as the abutments of the bridge connecting the Mine and Smelter, as well as being used as the dugout homes for the Cornish miners.

The playground and picnic / park area between Paxton Square and Market Square has a high amenity value and is popular with visitors and the community, as is the highly manicured landscaping south of the Commercial Street bridge.

Both the Heysen Trail and Mawson Trail run beside Burra Creek, and the Johnny Green Trail traverses the creek to reach various heritage places across the town. There is a variety of different signs along the creek which need a review, update and better coordination for wayfinding.

Paths along the Burra Creek for walking and cycling are limited and vary in quality. It is also noted that lighting is sparse and generally poor along the creek.

Permeability across Burra Creek is limited to several historic bridges which are not Disability Discrimination Act compliant. It is noted that the pedestrian bridge linking Bridge Street West to Bridge Street East next to the Bowling Club is currently closed and in need of repair.

Artefacts such as the Jubilee Fountain, bridge abutments and Dugouts need conservation and interpretation.

Public art offerings, as demonstrated by the ephemeral art displays located on the edge of Burra Creek are a good way of activating the creek and providing points of interest which celebrate the cultural history of the town.

The work of the Burra Revegetation Group is acknowledged in conjunction with the Council in maintaining and revegetating the creek with native species in line with the Revegetation Action Plan produced by EBS Ecology in 2013. This is supported as a way of re-engaging the community with the creek and promoting its use.

It is noted that La Pecora Nera (The Black Sheep) restaurant on Upper Thames Street has built a rear deck which overlooks the Burra Creek, taking advantage of views across and along the creek. This is supported as a means of activating the creek edge and providing passive surveillance. This is in contrast to other existing development such as the caravan park, Burra Motor Inn, Burra SA Ambulance Service and Burra Discount Tyres that have privatised and blocked access to Burra Creek. Note that the latter two developments are built outside of the Town Centre zone in the Opens Space zone.

Finally, it is noted that good work has been conducted by Council and various Community Groups to make better use of the Burra Creek, but this seems to have been done in an ad hoc way. A landscape master plan for the Burra Creek was prepared in 1994 by Woods Bagot suggesting a holistic upgrade of the creek from the Golf Course to the Cemetery, but this does not seem to have been implemented.

Future Desired Character

Burra Creek should be the centrepiece of the town's community recreation and open space system. It will provide a high-quality environment for residents and visitors with a good walking and cycling network and coordinated wayfinding to connect the town centre to other heritage places in Burra. It should also provide interpretive information on the Cornish mining history of the town and the Burra Creek as a supporting and complementary element to the Mine site and Smelter site in particular, but also to the Dugouts and to other places of significance.

Future development adjacent to the Creek, should allow for public access and take advantage of views over and along the creek to assist in activating and providing passive surveillance.

The amenity and character of this precinct should be protected and reinforced limiting development to civic, community and landscape / biodiversity enhancement and the conservation of heritage listed places and other artefacts.

Finally, this precinct crosses over with or is adjacent to most other precincts in the town hence the policy provided overlaps with some policy from other precincts.

Strategic and Planning Objectives

The following are suggested in addition to the existing objectives:

- Prepare a masterplan for the Burra Creek based on previous work undertaken (Woods Bagot Landscape Concept Plan and EBS Ecology Revegetation Action Plan) to provide a link between the various places within the ACMS (Burra), while providing interpretive information.

- Investigate the Burra Creek (Open Space Zone) as potentially a place of archaeological significance under *Heritage Places Act 1993*.

- Prioritise conservation actions at heritage places at risk - particularly the Dugouts.

- Develop a Burra Creek town walk to link significant places together across and along the banks of Burra Creek from the Cemetery to the northern gateway and beyond to the Burra railway station.

- Remove incongruous and intrusive development adjacent Burra Creek over time including Burra SA Ambulance Service and Burra Discount Tyres that block access to Burra Creek and return to open space.

- Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

- Develop a signage strategy for the town to increase wayfinding through this precinct.

- Develop a coordinated interpretation strategy for this precinct considering significant archaeological sites along Burra Creek including the Dugouts and collapsed Dugouts west of Mitchell Flat Road.

**Key Places**

1. Miner's Dugouts
2. Kooringa Bridge
3. Smelts Bridge
4. Morehead Street

**Analysis & Opportunities**

A. Existing bridge in poor condition with limited pedestrian amenity. Opportunity for new town entry with new gateway bridge.
B. Existing creek trail terminates at Young Street.
C. Improve permeability across the Creek to Bests Place and the Mine site through new / upgraded bridges.
D. Creek trail ends, pedestrians directed along street network. Important pedestrian trail node - Heysen, Mawson, & Burra Creek crossing point.
E. Remove incongruous and intrusive development adjacent Burra Creek over time including Burra SA Ambulance Service and Burra Discount Tyres that block access to Burra Creek and return to open space.
F. Opportunity for picnic and parking node with amenities alongside creek adjacent Mine entry.
G. Proposed connection between Mine and Smelt's sites.
H. No representation of Smelt's site along Burra Creek.
I. Upgrade pedestrian access, safety, wayfinding and amenity between North and South Burra.
J. Develop a Burra Creek town walk to link significant places together across and along the banks of Burra Creek from the Cemetery to the northern gateway and beyond to the Burra railway station.
K. Poor pedestrian amenity along Young and Market Street.
L. Creek banks in town centre have potential to be more better utilised and activated.
M. Caravan park inhibits permeability along creek.
N. Thorough lighting scheme required for central creek and surrounding pedestrian spaces.
O. Northern pedestrian bridge experiences high traffic but is narrow, in poor condition and not DDA compliant.
P. Businesses do not utilise creek frontage views.
Q. Disused pedestrian bridge in need of repair.
R. Prioritise conservation actions at heritage places at risk of decay and collapse- particularly the Dugouts.
S. Existing creek trail ends, pedestrians directed along street network.
T. Extend walking trail to Cemetery.
U. Develop a linkage between the old and new Cemetery across Burra Creek.

*14 Burra creek*

# 14 Burra Creek

0    200         1000m

- - - ACMS (Burra) & State Heritage Area Boundary
—— Planning Precincts
—— Historic Sub-Precincts
● State Heritage Listed Place

● State Heritage Listed Place (National Values Statement)
← Major Vehicle Pathways
← Burra Creek
●●● Important Tree Groupings and Street Trees

···· Heysen Walking Trail
···· Mawson Bike Trail
···· Johnny Green Trail
···· Proposed Trail

**North Gateway**

This gateway encompasses the arrival point into the town from the north along the Barrier Highway. The Burra Golf Course provides a green sense of arrival along with heavy planting of Pine trees along the Barrier Highway. A town bypass along West Street then onto Copperhouse Road directs through traffic around the town and past the Burra railway station. Further south towards the town, the embankment where the former rail bridge over the Barrier Highway ran is still evident. This was classed at the town gateway in the 1978 Lester Firth and Murton Pty Ltd study.

The Burra Creek and green edge of the town provides high amenity and glimpses through vegetation to the former rail bridge on the southern side of the road along with the town backdrop (and the highly visible water tank). On the northern side of the road the Showground's are evident followed by some unattractive industrial commercial businesses which need screening.

The junction of the Barrier Highway with the Goyder Highway at Young Street presents as a logical town entry point. The bridge at this location over Burra Creek could be an iconic entry statement into Bests Place. The condition of this bridge is poor and pedestrian / cycling amenity is poor. It is noted that the Burra Revegetation Group are active in this area and could assist Council further in improving the amenity of this north gateway.

Future Desired Character
The northern approach to the town is characterised by a green sense of arrival provided by the Burra Golf Course and the heavy planting of Pine trees along the Barrier Highway, these should be retained and enhanced in the future.

The bridge to Bests Place over Burra Creek at the junction of the Barrier Highway and the Goyder Highway should be upgraded as the town's northern entry statement. Furthermore, it is understood that a former hotel and croquet club was demolished adjacent to this bridge when the Goyder Highway bypass was built. Remnant stone walls still exist in this location and could be incorporated into some form of town entry statement with feature lighting.

Strategic and Planning Objectives
The following are suggested in addition to the existing objectives:

▪ Screen incongruous and intrusive development from the town entry using landscaping, street trees and new fencing in accordance with the Regional Council of Goyder's Urban Design Guidelines.

▪ Develop a walking and cycling strategy for the town to encourage walking and cycling in this precinct.

▪ Develop a signage strategy for the town to increase wayfinding through this precinct.

▪ Consider an entry statement to highlight the northern entrance to the town.


Burra Creek is an important visual element in the town


The work of the Burra Revegetation Group in conjunction with Council is evident with new planting being undertaken along the creek line


Walking and cycling paths through Burra are inconsistent. A walking and cycling strategy is recommended for the town to provide better accessibility throughout Burra

Current creek crossings are narrow


Current creek crossings are not DDA compliant


The skatepark requires further work to complete the project


Permeability across Burra Creek is limited to several old bridges some of which are in a state of disrepair.


Artefacts like the Jubilee Fountain need conservation and interpretive work done.


Current signage and wayfinding is inconsistent. A signage strategy is recommended for the town to provide better direction and interpretation for residents and tourists.

Public art is a good way of activating Burra Creek and providing points of interest which celebrate the cultural history of the town.



The highly manicured cottage garden south of the Commercial Street bridge has a high amenity value and is popular with visitors and the community.



The playground and picnic / park area between Paxton Square and Market Square has a high amentity value and is popular with visitors and the community.



Good interpretive signs exist, however the quality varies

The Burra Golf Course provides a green sense of arrival to the town



The existing town entry sign needs upgrading



The former rail bridge provides some visual interest at the northern edge of Burra



The bridge over Burra Creek could be an iconic entry statement into the town

**15** *north gateway*

# 15 North Gateway

0    200         1000m

| | | |
| --- | --- | --- |
| – – – ACMS (Burra) & State Heritage Area Boundary | ● State Heritage Listed Place (National Values Statement) | ⋯ Heysen Walking Trail |
| —— Planning Precincts | | ⋯ Mawson Bike Trail |
| —— Historic Sub-Precincts | ← Major Vehicle Pathways | ⋯ Johnny Green Trail |
| ● State Heritage Listed Place | ← Burra Creek | ⋯ Proposed Trail |
| | ●●● Important Tree Groupings and Street Trees | |

# 10. Implementation

This Chapter recommends actions to ensure the National Heritage Values are protected, proposes a priority in which these should be executed, identifies the timeframe for implementation and seeks to identify who will be responsible for their implementation.

## 10.1. Responsibilities

An assessment of the roles and responsibilities of different parties, along with some recommendations and policy actions have been conducted in Section **8.6 Management and Governance**.

As the ownership of the ACMS (Burra) is currently disparate and is managed in a variety of ways, there is no central authority to provide consistent management and care across all of the places that are recognised in the National Heritage values. The implementation of the recommendations of this document therefore will need to be actioned by a number of different parties as outlined below:

- Private landowners
- Regional Council of Goyder
- ACMS (Burra) Advisory Committee (recommended to be established by Council)
- National Trust of South Australia
- Heritage SA (Government of South Australia)
- Department of Environment and Water (DEW) (Government of South Australia)
- Department of Agriculture, Water and the Environment (Federal Government)

Where possible responsibilities have been allocated in the following prioritised actions, noting that some actions will require multiple parties to be involved.

## 10.2. Priority Actions

The following provides an outline of the work recommended based on the principles established within **Chapter 8: Conservation Management Policy, Chapter 9: Planning Precinct Policy** and the nature of works described in **Chapter 7: Key Issues and Opportunities**.

Works have been divided into three priorities, namely:

**Priority A - Work to be completed in the next two years.**
- Immediate maintenance or stabilisation work required to ensure the National Heritage values of the place is not lessened.
- Immediate strategy / planning / design work required to establish a framework for funding, procurement and delivery to protect the National Heritage values and conserve associated fabric of the place.

**Priority B - Work to be completed in the next five years.**
- Work necessary to ensure the longevity of the fabric of the place but not immediately required.
- Intermediate strategy / planning / design work required to establish a framework for funding, procurement and delivery to protect the National Heritage values and conserve associated fabric of the place.

**Priority C - Work to be completed in more than five years.**
- Desirable work to reveal the significance of the place, primarily removing accretions and provision of new capital works.
- Longer term strategy / planning / design work required to establish a framework for funding, procurement and delivery to protect the National Heritage values and conserve associated fabric of the place.

### 10.2.1 Priority A

The following priorities are recommended.

**Site Wide Priorities**

- Facilitate endorsement of this CMP for the ACMS (Burra). Responsibility: Regional Council of Goyder, Department for Environment and Water (Government of South Australia), Department of Agriculture, Water and the Environment (Federal Government).

- Establish an Advisory Committee to advise and report independently back to Council on the management of the ACMS (Burra) site and on the implementation of the recommendations contained in this CMP. Responsibility: Regional Council of Goyder.

- Prepare a Development Plan Amendment to integrate the objectives and recommendations of this CMP into the planning policy of Council's Development Plan (or planning code equivalent given the planning reform process underway in SA). Responsibility: Regional Council of Goyder.

- Training of Heritage SA officers on the requirements and obligations under the EPBC Act 1999 to allow Heritage SA to understand the National Heritage values, together with the preparation of a guide for their internal use to help facilitate this understanding. Responsibility: Department of Environment and Water (Government of South Australia).

- Develop an archaeological map to identify areas of high and low potential for undisturbed sites. Responsibility: Department for Environment and Water (Government of South Australia).

- Updating of the existing *Guidelines for development* to include information about the obligations of owners within the ACMS (Burra) under the *EPBC Act (1999)*. Responsibility: Department for Environment and Water (Government of South Australia), Department of Agriculature, Water and the Environment (Federal Government).

- Facilitate training of those responsible for the management of the ACMS (Burra) to highlight obligations under the EPBC Act and the recommendations outlined in this document. Responsibility: Regional Council of Goyder, National Trust of SA, Department for Environment and Water (Government of South Australia), Department of Agriculture, Water and the Environment (Federal Government).

- Facilitate training of state government business enterprises with a presence within the ACMS (Burra) to highlight obligations under the EPBC Act and the recommendations outlined in this document. Responsibility: Department for Environment and Water (Government of South Australia).

- Review and audit all tourism strategies and proposals to ensure the authenticity of the ACMS (Burra) is not compromised. Responsibility: Regional Council of Goyder.

- Prepare a Reconciliation Action Plan and develop Indigenous policies to enable authentic collaboration, engagement and celebration of Ngadjuri culture alongside Cornish and western culture. Responsibility: Regional Council of Goyder.

- Develop a walking and cycling strategy for the ACMS (Burra) to encourage walking and cycling opportunities. Responsibility: Regional Council of Goyder, ACMS (Burra) Advisory Committee.

- Develop a coordinated interpretation strategy to increase the public understanding of the National Heritage values of the ACMS (Burra). Responsibility: Regional Council of Goyder, ACMS (Burra) Advisory Committee, National Trust of SA.

- Develop a signage strategy for the ACMS (Burra) to increase wayfinding through the place and to assist with linking the individual components. Responsibility: Regional Council of Goyder, ACMS (Burra) Advisory Committee.

**Precinct Wide Priorities**

- Prepare a conservation strategy for the Burra Historic Mine site (SAHR 10970) to realise its potential as the key component for the interpretation of Cornish mining practices represented at the ACMS (Burra), and conservation of its significant components to minimise the risk of further deterioration. Responsibility: Regional Council of Goyder.

- Redefine the former Burra Historic Mine site (SAHR 10970) boundary (prior to the subdivision of Graham in the north east corner of the site) in the SA State Heritage Register. Responsibility: Regional Council of Goyder, Heritage SA.

- Amend zoning to Historic Mining from Town Centre to reconnect the mine site and protect other mine related heritage places. Responsibility: Regional Council of Goyder.

- Prepare a conservation strategy for the Burra Smelts Historic Site (SAHR 10989) and the Burra Smeltsyard and Storehouse (SAHR 10024) to realise its potential as a key component for the interpretation of Welsh smelting technology and processes represented at the ACMS (Burra), and conservation of its significant components to minimise the risk of further deterioration. This should include the review of the actions recommended in the 1990 Bannear Plan. Responsibility: Regional Council of Goyder.

- Redefine the former Smelts site boundary in the South Australian Heritage Register. Responsibility: Regional Council of Goyder, Heritage SA.

- Undertake master planning for the Burra Creek based on previous work undertaken (Woods Bagot Landscape Concept Plan and EBS Ecology Revegetation Action Plan) to realise its potential as a recreational space and as a pedestrian/cycling link for the components of the ACMS (Burra) supported by interpretation on its significance to the National Heritage values. Responsibility: Regional Council of Goyder.

**Site Specific Place Priorities**

- Stabilise places identified as being at risk of collapse, specifically:
  - Mine Offices (SAHR 10056)
  - Former Engine/Crusher House (SAHR 10045)
  - SAMA Store Room, Yard and Walls (SAHR 10019)
  - Smelts Stableyard and Storehouse (SAHR 10024)

The work should be followed by the development of a conservation strategy for each of these places that addresses their long-term management. Responsibility: Regional Council of Goyder.

- Develop a master plan for the caravan park to increase amenity and to de privatise the Creek edge- offset this with increased space north along Bridge Terrace and/or over Bridge Terrace. Responsibility: Regional Council of Goyder.

### 10.2.2   Priority B
The following priorities are recommended.

**Site Wide Priorities**

- Investigate opportunities for the inclusion of the ACMS (Burra) as part of existing world heritage listing for the Cornwall and West Devon Mining Landscape. Responsibility: Regional Council of Goyder, Department for Environment and Water (Government of South Australia), Department of Agriculture, Water and the Environment (Federal Government).

- Develop a maintenance programme for the major components of the ACMS (Burra), including buildings, ruins, fencing and interpretation. Responsibility: Regional Council of Goyder, ACMS (Burra) Advisory Committee, National Trust of SA.

- Establish a Heritage Grant Scheme for the ACMS (Burra) to enable funding for heritage conservation works. Responsibility: Regional Council of Goyder, Department for Environment and Water (Government of South Australia).

- Catalogue and assess the heritage significance of moveable heritage within the ACMS (Burra), including items on the ground, and a review of mining related artefacts held by the National Trust which are associated with the site. Responsibility: National Trust of SA, ACMS (Burra) Advisory Committee.

- Undertake a site safety and security audit of all places at risk of collapse or potential falling hazards, sensitive/fragile sites requiring fencing for actioning to improve safety and amenity across ACMS (Burra). Pending its completion, this should include immediate works to repair existing barriers/fencing at existing mine shafts. Responsibility: Regional Council of Goyder, National Trust of SA, Department for Environment and Water (Government of South Australia).

- Assess market trends from the Tourism Strategy and the Goyder Master Plan to identify key places and future social and community needs that could support the adaptive re use and conservation of vacant places in the ACMS (Burra). Responsibility: Regional Council of Goyder.

- Consider entry statements at the southern and northern approaches into the ACMS (Burra) to better highlight the entrances to the town. Responsibility: Regional Council of Goyder.

- Develop a strategy for the ACMS (Burra) to be used as a base for training in conservational based skills, including archaeological training, building upon the existing association created by the Burra Charter. Responsibility: Regional Council of Goyder, Heritage SA, National Trust of SA, Department for Environment and Water (Government of South Australia).

**Precinct Wide Priorities**

- Relocation of chainmesh site fencing around the open cut at the Burra Mines Historic Site to remove visually intrusive sections, particularly around the Morphett's Enginehouses. Responsibility: Regional Council of Goyder.

- Develop a Burra Creek Walk to link key components of the ACMS (Burra) together along the banks of Burra Creek from the Cemetery (SAHR 10432) in the south to the northern gateway and beyond to the Burra railway station with interpretation at key points. Responsibility: Regional Council of Goyder.

- Development of maintenance schedules for the Burra Mines Historic Site (SAHR 10970) and the Burra Smelts Historic Site (SAHR 10989). Responsibility: Regional Council of Goyder.

**Site Specific Place Priorities**

- Carry out stabilisation of the Morphett's shaft along with repairs to the timber lining to the top of the shaft and the drainage tunnel to allow this to be reopened to public access. Responsibility: Regional Council of Goyder.

- Prepare a conservation strategy for the Bon Accord Mine site (SAHR 10023) to conserve its significant components to minimise the risk of further deterioration, to improve disability access and to consider broader tourism and interpretation opportunities. Responsibility: National Trust of SA.

- Develop a master plan for the Burra railway station environment to integrate car parking, access and movement, landscaping, shade and other amenities for tourists and visitors. Responsibility: Regional Council of Goyder.

- Explore options to screen or otherwise reduce the visual intrusion of the water supply tank on the Burra Mine Historic Site. Responsibility: Regional Council of Goyder.

- Research and analysis to determine suitable conservation methodologies for the stabilisation of the Miner's Dugouts (SAHR 10050). Responsibility: Regional Council of Goyder.

- Rectify inappropriate stormwater drainage through the Dugouts Site, Burra Creek (SAHR 11187). Responsibility: Regional Council of Goyder.

### 10.2.3   Priority C
The following priorities are recommended.

**Site Wide Priorities**

▪ Reinstate the street typology cross section with street trees in all streets where possible. <u>Responsibility</u>: Regional Council of Goyder.

**Precinct Wide Priorities**

▪ For the Burra Mines Historic site (SAHR 10970), prepare a long-term strategy for the removal of the open cut overburden to unearth and showcase buried mine infrastructure such as the Jigging Grounds, Buddle Pits and Ore Floors and return the topography of this area back to its original form. <u>Responsibility</u>: Regional Council of Goyder.

▪ Remove incongruous and intrusive development adjacent Burra Creek over time including Burra SA Ambulance Service and Burra Discount Tyres that block access to the Creek and return it to open space. <u>Responsibility</u>: Regional Council of Goyder.

▪ Prepare a conservation strategy for Hampton (SAHR 10359) to ensure its conservation and interpretation. <u>Responsibility</u>: Regional Council of Goyder.

**Site Specific Place Priorities**

▪ Prepare a conservation strategy for the Burra Cemetery to ensure its conservation and interpretation, including the review and integration of the recommendations of the 1991 Conservation Plan by McDougall & Vines. <u>Responsibility</u>: Regional Council of Goyder.

▪ Relocate the water tank on the Burra Mines Historic site (SAHR 10970) to a less sensitive site or put the tank underground on the same site. <u>Responsibility</u>: Regional Council of Goyder.

▪ Develop a conservation strategy for the Redruth Gaol (SAHR 10042) to ensure the conservation of its fabric, explore strategic re-use and interpretation options, as well as considering the upgrading of its immediate environment, car parking, access and movement, landscaping, shade and other amenities for visitors. <u>Responsibility</u>: Regional Council of Goyder, National Trust of SA.

▪ Develop a master plan for the rejuvenation of Bests Place as a secondary town centre to Burra with the main focus on stimulating commercial and civic activity, and consideration of traffic management, returning road space to green pedestrian space with improved shade and amenity. <u>Responsibility</u>: Regional Council of Goyder.

▪ Investigate the longer-term strategic acquisition of key places that relate to the Cornish mining practices of the National Heritage values of the ACMS (Burra). These places include:
  - Former SAMA Store Room, Yard and Walls (SAHR 10019) & SAMA Storeman's Dwelling (SAHR 10049)
  - Former Burra Smeltsyard and Storehouse (SAHR 10024)
    <u>Responsibility</u>: Regional Council of Goyder.

# Endnotes

1 Gohman, Sean, "Cornish Periphery Analysis", Readings in the History of Technology, http://www.academia.edu/9097419/Cornish-Periphery_Analysis_Contextualizing_Invention_Innovation_and_the_Diffusion_of_Technological_Practice_in_the_Mid-Nineteenth_Century_Copper_Mining_Districts_of_South_Australia_and_Michigan, accessed 1 October 2018, p9.

2 Mining in Cornwall, State Library of South Australia, http://www.slsa.sa.gov.au/BSA/Mining%20In%20Cornwall.htm, accessed 1 October 2018.

3 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

4 Mining in Cornwall, State Library of South Australia, http://www.slsa.sa.gov.au/BSA/Mining%20In%20Cornwall.htm, accessed 1 October 2018.

5 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

6 UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

7 UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

8 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

9 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p14.

10 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p14.

11 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

12 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

13 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

14 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

15 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p21.

16 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

17 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p22.

18 Britannica website, https://www.britannica.com/biography/James-Watt, accessed 1 October 2018.

19 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

20 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* (Hawthorndene: Investigator Press Pty. Ltd., 1986), p195.

21 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

22 Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

23 UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

24 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p14.

25 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

26 Todd cited in Gohman, Sean, "Cornish Periphery Analysis", Readings in the History of Technology, http://www.academia.edu/9097419/Cornish-Periphery_Analysis_Contextualizing_Invention_Innovation_and_the_Diffusion_of_Technological_Practice_in_the_Mid-Nineteenth_Century_Copper_Mining_Districts_of_South_Australia_and_Michigan, accessed 1 October 2018 p10.

27 Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

28 UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

29 UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

30 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p3.

31 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p13.

32 South Australian Mining History website, http://www.samininghistory.com/wp-content/uploads/2014/03/kapunda-mine-cmp.pdf, accessed 1 October 2018.

33 Cooper, Barry, "Geologists and the Burra Copper Boom, South Australia, 1845-1851", *History of Research In Mineral Resource*s, pp193-200, http://www.samininghistory.com/wp-content/uploads/2014/02/cooper2011_burracopperboom.pdf, accessed 1 October 2018, p196.

34 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p114.

35 Warrior et al, 2005:67 cited in Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

36 Burra SA, http://www.burrasa.info/pages/burraaborigines.html, accessed 1 October 2018.

37 Ngadjuri South Australia, http://www.ngadjuri.com.au/country.html, accessed 1 October 2018.

38 Ngadjuri Walpa Juri Lands and Heritage Association, *Ngadjuri: Aboriginal People of the Mid North Region of South Australia*, (Adelaide: SASOSE Council Inc., 2005), p71.

39 Ngadjuri Walpa Juri Lands and Heritage Association, *Ngadjuri: Aboriginal People of the Mid North Region of South Australia*, p67.

40 Cunneen and Libesman 1995 in Warrier et al, 2005:73 cited in Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

41 Marsden, Susan, "The Lower North of South Australia - a short history," www.sahistorians.org.au/175/bm.doc/tower-north-history.doc

42 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p58

43 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p54

44 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p34.

45 Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, (Adelaide: Rigby Limited, 1969), p11.

46 Auhl, Ian, and Finch, Perry, *Burra in Colour,* (Adelaide: Rigby Limited, 1973), p1.

47 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

48 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877.*

49 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

50 Auhl, Ian, and Finch, Perry, *Burra in Colour*, p1.

51 Ngadjuri South Australia, http://www.ngadjuri.com.au/country.html, accessed 26 March 2020.

52 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", in Smith, Claire; Wobst, H. Martin (eds.). *Indigenous Archaeologies: Decolonising Theory and Practice*. (Routledge, 2004), p250.

53 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p250.

54 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", pp249–264.

55 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p250.

56 Australian Heritage Database website, http://www.environment.gov.au/cgi bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 26 March 2020.

57 Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 26 March 2020.

58 "Old Identities", *Burra Record*, 21 February 1917, p2.

59 "Kooringa", *The South Australian Advertiser*, 8 January 1861, p3.

60 "Kooringa and Redruth", *The South Australian Advertiser*, 3 February 1866, p3.

61 Burra Aborigines, Burra SA, https://burrasa.info/pages/burraaborigines.html, accessed 26 March 2020.

62 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", pp250-251.

63 Ngadjuri South Australia, http://www.ngadjuri.com.au/country.html, accessed 26 March 2020.

64 J.B. Wood cited in Ngadjuri Walpa Juri Lands and Heritage Association, *Ngadjuri: Aboriginal People of the Mid North Region of South Australia*, p87.

65 State Records GRG51/1/1892/270 cited in Ngadjuri Walpa Juri Lands and Heritage Association, *Ngadjuri: Aboriginal People of the Mid North Region of South Australia*, p91.

66 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p249.

67 Ngadjuri South Australia, http://www.ngadjuri.com.au/country.html, accessed 26 March 2020.

68 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p249.

69 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p249.

70 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p250.

71 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p251.

72 Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", p249.

73 Waterton, Emma, Staiff, Russell, Bushell, Robyn & Burns, Emily, (2019) "Monster mines, dugouts, and abandoned villages: a composite narrative of Burra's heritage", *Journal of Heritage Tourism*, 14:2, 85-100.

74 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

75 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

76 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p18.

77 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p15.

78 Keith Johns, R., "The Cornish at Burra, South Australia", *Journal of Australasian Mining History*, Vol.4, September 2006, p180.

79 Payton, Philip, "1848 and all that", *Journal of the Historical Society of South Australia*, No 42, 2014, p18.

80 Payton, Philip, "1848 and all that", *Journal of the Historical Society of South Australia*, No 42, 2014, p18.

81 Monument Australia, http://monumentaustralia.org.au/themes/technology/industry/display/50529-%22johnny-green-%22--peacocks-chimney accessed 25 April 2019.

82 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

83 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines,* p15.

84 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

85 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p4.

86 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p3.

87 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p2.

88 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

89 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p5.

90 Gohman, Sean, "Cornish Periphery Analysis", Readings in the History of Technology, http://www.academia.edu/9097419/Cornish-Periphery_Analysis_Contextualizing_Invention_Innovation_and_the_Diffusion_of_Technological_Practice_in_the_Mid-Nineteenth_Century_Copper_Mining_Districts_of_South_Australia_and_Michigan, accessed 1 October 2018, p20.

91 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

92 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* pp195-196.

93 Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p23.

94 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

95      Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p9.

96      Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

97      Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p32.

98      Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p11.

99      Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p67.

100     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p202.

101     Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p84.

102     Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p39.

103     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p198.

104     Auhl cited in Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p91.

105     Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p68.

106     Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p100.

107     Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p41.

108     Refer diagram. Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p82.

109     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

110     Bell, P. and McCarthy, J. "The Evolution of Early Copper Smelting Technology in Australia", *Journal of Australian Mining History,* Vol. 8, September 2010, p3.

111     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p166.

112     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p169.

113     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

114     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

115     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p173

116     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.

117     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.

118     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

119     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

120     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp187, 246.

121     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

122     *Sydney Morning Herald* quoted *Register* 16.6.1851 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p175

123     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p174.

124     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p1.

125     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p3.

126     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p122.

127     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p124.

128     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p123.

129     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p129.

130     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p126.

131     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

132     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p133.

133     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

134     Auhl, Ian, and Finch, Perry, *Burra in Colour,* no page no.

135     Langmead, Donald, *George Strickland Kingston: Pioneer and Architect*, PhD Thesis, Flinders University of South Australia, May 1983. This paragraph is based on Langmead's research.

136     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

137     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p114.

138     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

139     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

140     Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

141     Langmead, Donald, *George Strickland Kingston: Pioneer and Architect*, May 1983 PhD Thesis, Flinders University of South Australia.

142     Langmead, Donald, *George Strickland Kingston: Pioneer and Architect*, May 1983 PhD Thesis, Flinders University of South Australia, Fig xx.4, no page number.

143     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

144     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

145     URPS, "Kapunda Historic Mine Site Conservation Management Plan", September 2008, pp20,22.

146     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*,p117.

147     "Burra Hotels", Burra History Group pamphlet, (compiled by Julian Ratcliffe), 2008.

148     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

149    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

150    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

151    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

152    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p129.

153    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

154    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p117.

155    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p120.

156    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p120.

157    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

158    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

159    SRSA, GRG54/210 (Unit 1) Register of prisoners and charge books - Redruth Gaol, from 1861

160    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

161    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p120.

162    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp120-121.

163    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

164    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p121.

165    Newcrest Mining Website, http://www.cadiavalleyheritage.com.au/, accessed 19 March 2019.

166    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p176.

167    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p121.

168    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

169    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

170    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p121.

171    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

172    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

173    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

174    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

175    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

176    "Meetings: South Australian Mining Association", *The Register*, 16 June 1914, p4.

177    Government of South Australia 2014c and Heritage Perth 2011 cited in Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place-detail;place-id=106304 accessed 1 October 2018.

178    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

179    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

180    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

181    Australian Government, National Heritage Places website, http://www.environment.gov.au/heritage/places/national/australian-cornish-mining-sites, accessed 1 October 2018.

182    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p58

183    Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, p41.

184    Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, p27.

185    Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, p27.

186    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p54.

187    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p34.

188    Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, p11.

189    "Friday 3rd November", *South Australian Gazette and Mining Journal*, 4 November 1848, p4

190    Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

191    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*.

192    Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

193    Auhl, Ian, and Finch, Perry, *Burra in Colour*, p1.

194    Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_ detail;place_id=106304, accessed 1 October 2018.

195    Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p18.

196    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p15.

197    Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

198    Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p2.

199    Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

200     Gohman, Sean, "Cornish Periphery Analysis", Readings in the History of Technology, http://www. academia.edu/9097419/Cornish-Periphery_Analysis_ Contextualizing_Invention_Innovation_and_the_ Diffusion_of_Technological_Practice_in_the_MidNineteenth_Century_Copper_Mining_Districts_of_South_ Australia_and_Michigan, accessed 1 October 2018, p17.

201     "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

202     "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

203     Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

204     Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_ detail;place_id=106304, accessed 1 October 2018.

205     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp195-196.

206     Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

207     Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p41.

208     *Austral Examiner*, 11 April 1851 cited in Regional Council of Goyder, "The Burra Jinker 1851", on site heritage signage.

209     "Local News", *South Australian Gazette and Mining Journal*, 29 January 1852, p3.

210     Regional Council of Goyder, "The Burra Jinker 1851", on site heritage signage.

211     "The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

212     "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

213     "The Burra Burra Mines", *South Australian Register*, 21 March 1855, p2.

214     Refer diagram. Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p82.

215     Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p83.

216     "Meetings: South Australian Mining Association", *The Register*, 16 June 1914, p4.

217     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

218     Australian Government, National Heritage Places website, http://www.environment.gov.au/heritage/places/national/australian- cornish-mining-sites, accessed 1 October 2018.

219     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p286.

220     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p286.

221     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p286.

222     "The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

223     "The Burra Burra Mines", *South Australian Register*, 21 March 1855, p2

224     URPS, "Kapunda Historic Mine Site Conservation Management Plan", September 2008, pp20,22.

225     ANU Australian Cornish Mining Heritage Site : Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p6.

226     Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.

227     Bell, P. and McCarthy, J. "The Evolution of Early Copper Smelting Technology in Australia", *Journal of Australian Mining History*, Vol. 8, September 2010, p3.

228     Habitable Places & Phillips and Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", February 1996.

229     "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

230     "The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

231     Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, pp590-591.

232     Habitable Places & Phillips and Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", February 1996, p3.

233     Johns,Keith R, "The Cornish at Burra, South Australia", *Journal of Australasian Mining History*, Volume 4, September 2006, p.173.

234     Johns, Keith R. 'The Cornish at Burra', *Journal of Australasian Mining History*.

235     Cornwall Council website, https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/mining-characters-andsociety/work-life/, accessed 11 August 2020.

236     Pike, Douglas, *Paradise of dissent- South Australia 1829-1857*. (Longman, Green, 1957); p334.

237     "Kadina", *The Wallaroo Times & Mining Journal*, 23 June 1866, p5.

238     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321.

239     Dr. Henry Chambers was reportedly a nephew of Captain Matthew Flinders. He arrived to South Australia in 1849, but returned to England a few years later. On returning to South Australia he settled in Adelaide and was for some time in charge of the Adelaide Hospital and City Coroner. Refer: "CONCERNING PEOPLE" *The Register*, 23 June 1913, p6.

240     SLSA Map C41 and C316.

241     Keith Johns, R, "The Cornish at Burra, South Australia", *Journal of Australasian Mining History*, Volume 4, September 2006, p.172.

242     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321.

243     "THE REVENUE AND EXPENDITURE." S*outh Australian Register*, 5 February 1869, p2.

244     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321.

245     "Waterspout at Kooringa", *Adelaide Times*, 17 May 1851 p3.

246     "Another Munificent Gift", *South Australian Register*, 5 July 1875, p.5.

247     "The Burra Hospital", *South Australian Register*, 24 May 1878, p6.

248     "Friday 3rd November", *South Australian Gazette and Mining Journal*, 4 November 1848, p4.

249     "The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

250     "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

251 "The Burra Burra Mines", *South Australian Register*, 21 March 1855, p2.

252 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p3.

253 Burra Burra Mine plan, dated c.1852, C 178, State Library of SA (SLSA).

254 Burra Burra Mines plan, dated 1867, Department of Energy and Mining, SARIG website, Photo No. 039747, www.sarigbasis.pir.sa.gov.au, accessed 19 October 2019.

255 Plan of the township of Graham, the property of the South Australian Mining Association, dated 1875, C41, SLSA.

256 "The Late Mr M.H. Furniss", *Adelaide Observer*, 29 June 1895, p30.

257 "Dinner to Mr. M.H. Furniss, at Kooringa", *The Express and Telegraph*, 28 August 1874, p2.

258 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p235.

259 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p235.

260 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p371.

261 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp244-245.

262 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p386.

263 Burra Burra Mine plan, dated c.1852, C 178, SLSA.

264 South Australian Register, 16 June 1851 cited in Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p89.

265 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p89.

266 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p89.

267 *Adelaide Observer*, 25 June 1870, and ML, BRG 22 961, 13 October 1870, cited in Drew, Greg, and Connell, J.E., Cornish Beam Engines in South Australian Mines, p89.

268 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p7.

269 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p7.

270 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p91.

271 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p91.

272 Auhl 1986 cited in Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p91.

273 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*

274 Mines and Energy Burra Mine Museum, "Morphetts Enginehouse", on site heritage signage.

275 Mines and Energy Burra Mine Museum, "Morphetts Windinghouse", on site heritage signage.

276 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p4.

277 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p100.

278 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p4.

279 Drew, Greg, and Connell, *J.E., Cornish Beam Engines in South Australian Mines*, p41.

280 *The Register*, 10 December 1867, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10021.

281 Burra Heritage Plaque.

282 "Obituary", *South Australian Register*, 4 November 1872, p7.

283 *The Register,* 8 May 1868, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10021.

284 "Kooringa", *The South Australian Advertiser*, 3 July 1868, p3.

285 Heritage SA Bridges and Stone walls, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

286 Burra Heritage Plaque.

287 Mines and Energy Burra Mine Museum, "Graves Enginehouse", on site heritage signage.

288 Mines and Energy Burra Mine Museum, "Graves Enginehouse", on site heritage signage.

289 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", 2014 *South Australian Engineering Heritage Conference: Transactions,* p7.

290 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", 2014 *South Australian Engineering Heritage Conference: Transactions,* p7.

291 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p3.

292 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", 2014 *South Australian Engineering Heritage Conference: Transactions,* pp8-9.

293 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p3.

294 Mines and Energy Burra Mine Museum, "Ore Dressing Tower c.1875", on site heritage signage

295 Mines and Energy Burra Mine Museum, "Dressing Tower", on site heritage signage.

296 Mines and Energy Burra Mine Museum, "Dressing Tower", on site heritage signage.

297 Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", p7.

298 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p5.

299 ANU Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (Draft 2.0) Appendix A, July 2014, p5.

300 David S. Macmillan, 'Morehead, Robert Archibald Alison (1814–1885)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/morehead-robert-archibald-alison-2478/text3329, published first in hardcopy 1967, accessed online 28 June 2019.

301 "MINES AND METALS." *Adelaide Observer*, 11 December 1847, p4.

302 Royal South Australian Almanack for 1848. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10023.

303 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* p120.

304 "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

305 Auhl, Ian, The Story of the 'Monster Mine': *The Burra Burra Mine and Its Townships 1845-1877*, pp120-121.

306 "GENERAL TRADE LIST." *The Shipping Gazette and Sydney General Trade List* (NSW : 1844 - 1860) 15 June 1857: 145.

307 "THE BON ACCORD MINING COMPANY." *Adelaide Times* (SA: 1848 - 1858) 10 June 1857: 3.

308 "Kooringa", *Adelaide Observer*, 19 November 1859, p1.

309 "REDRUTH:" *South Australian Weekly Chronicle* (Adelaide, SA: 1858 - 1867) 29 August 1863: 2.

310 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp120-121.

311 Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.

312 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

313 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

314 "Local Intelligence", *Adelaide Observer*, 16 December 1848, p3.

315 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.

316 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.

317 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.

318 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

319 Mines and Energy South Australia, District Council of Burra Burra, "The Smelting Houses", on site heritage signage.

320 "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

321 Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.

322 Burra SA Website , http://www.burrasa.info/pages/kooringaward.html, accessed 30 July 2020.

323 Burra Heritage Plaque.

324 Burra Heritage Plaque.

325 Burra Heritage Plaque.

326 Auhl, Ian, "Burra Conservation Study: Historic Buildings and Areas Survey", (1978). p44.

327 Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10989.

328 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

329 Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.

330 "The Burra Burra Mines", *South Australian Register*, 21 March 1855, p2.

331 Austin, J.B., "The Burra and Port Smelting Works", in *The Mines of South Australia, including also an account of the Smelting Works in that colony, together with a brief description of the country and incidents of travel in the bush*, (C. Platts, 1863), pp100-101.

332 *South Australian Register*, 29 August 1849, p4.

333 "Saturday, 15 June", *South Australian Gazette and Mining Journal*, 20 June 1850, p4.

334 "No. XXII, Kooringa", *Adelaide Observer*, 12 July 1851, p6.

335 "Patent Copper Company", *South Australian Register*, 12 July 1851, p4.

336 "Advertising", *South Australian Register*, 14 September 1854, p1.

337 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p185.

338 "The Burra Burra Mines and Smelting Works", *South Australian Register*, 21 March 1855, p2.

339 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p176.

340 Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p124.

341 Burra History Group. Photograph from the Martin Dunstan Collection described as "John Dunstan's residence at Redruth, Burra, in 1886".

342 No 830. Refer to: http://www.burrasa.info/pages/kooringaward.html accessed 25 July 2019.

343 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

344 Auhl, Ian, and Finch, Perry, *Burra in Colour*, no page no.

345 Langmead, Donald, "*George Strickland Kingston: Pioneer and Architect*", PhD Thesis, Flinders University of South Australia, May 1983. This paragraph is based on Langmead's research.

346 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p114.

347 Langmead, Donald, *George Strickland Kingston: Pioneer and Architect*, PhD Thesis, Flinders University of South Australia, May 1983. This paragraph is based on Langmead's research.

348 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p114.

349 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

350 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

351 "A Visit to the Northern Mines of South Australia", *South Australian Register*, 28 November 1846, p4.

352 "Visit to the Burra Burra", *South Australian Register*, 9 June 1847, p2.

353 "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

354 Auhl, Ian, The Story of the 'Monster Mine': *The Burra Burra Mine and Its Townships 1845-1877*, p109.

355 "A Trip to Kooringa", *Adelaide Observer*, 28 December 1850, p4.

356 "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

357 "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

358 Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

359 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.

360 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, Fig xx.4, no page number.

361 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

362 URPS, "Kapunda Historic Mine Site Conservation Management Plan", September 2008, pp20,22.

363 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.

364 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p589.

365 "BURRA BURRA MINES." *Burra Record* (SA : 1878 - 1954) 31 July 1907: 2.

366 South Australian, 17.12.1847 cited in Auhl, Ian, T*he Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

367 The Burra History Group, 10 Thames Street, on site heritage signage.

368 The Burra History Group, 10 Thames Street, on site heritage signage.

369 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

370 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

371 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, Fig xx.4, no page number.

372 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

373 Bell, Peter, "Continuity in Australian Timber Domestic Building: An Early Cottage at Burra", *Australian Journal of Historical Archaeology*, 1990, pp3-12.

374 Burra SA website, http://www.burrasa.info/pages/kooringaward.html 3, accessed 30 June 2020.

375 SLSA Map C40, 1914.

376 ANU Australian Cornish Mining Heritage Site, July 2014, p16.

377 Australian Heritage Database, Paxton Square Cottages.

378 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

379 "Paxton Square, Burra, SA", Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10159.

380 Paxton square, on site heritage signage.

381 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

382 "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

383 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p122.

384 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p124.

385 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p123.

386 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p129.

387 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p126.

388 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage- areas/Burra, accessed 1 October 2018.

389 "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

390 "The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

391 "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

392 Mines and Energy, National Trust, "Miners Dugouts", on site heritage signage.

393 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p133.

394 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

395 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p130.

396 Mines and Energy, National Trust, "Miners Dugouts", on site heritage signage.

397 'Primitive Homes', News, 17 June 1928, p8.

398 Burra History Group, "Miners' Dugouts Burra", p5.

399 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p116.

400 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p117.

401 "Great Land Sale", *South Australian*, 4 September 1849, p2.

402 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* p120.

403 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p120.

404 "Local Intelligence", *Adelaide Observer*, 1 September 1849, p2.

405 "OBITUARY." *Burra Record,* 17 March 1909, p3.

406 Pikusa, Stefan. Heritage SA Research Packet 10203.

407 CT 2075/21.

408 Flightpath submission for the 2003 Edmund Wright Heritage Awards.

409 SA Lands Titles Office Community Title Plan C25716.

410 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

411 CT 2739/60.

412 CT 2739/62.

413 LT A/124.

414 "Hampton" onsite heritage signage.

415 Aeuckens, Annely, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

416 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* p121.

417 Aeuckens, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

418 Aeuckens, 1875 Ratepayers Petition. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

419 Aeuckens, 1875 Ratepayers Petition. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

420 "Hampton" onsite heritage signage.

421 "Hampton" onsite heritage signage.

422 Payton, John Philip, "The Cornish in South Australia: Their Influence and Experience from Immigration to Assimilation., A thesis presented for the Degree of Doctor of Philosophy", University of Adelaide, 1978., p436.

423    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p296.

424    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p292.

425    "A Trip to Kooringa", *Adelaide Observer*, 28 December 1850, p4.

426    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p 307.

427    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p293.

428    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p293.

429    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p304.

430    Arnold D. Hunt The Bible Christians in South Australia. Journal of the Historical Society of S.A. No.10 1982 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p303.

431    "Primitive Methodism", *The Advertiser*, 23 February 1900, p6.

432    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p303.

433    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p296.

434    Primitive Methodist Magazine p.438 London 1850 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p.303.

435    Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011. Note – The date of construction is identified as 1847. Other sources report the date as 1850.

436    Burra Heritage Plaque.

437    "Reminiscences of Burra in the Fifties", *Burra Record*, 16 May 1934, p1.

438    "A Pioneer Preacher", *The Register*, 22 June 1904, p6.

439    "Death of Rev. J.G. Wright", *The Advertiser*, 22 June 1904, p6.

440    Primitive Methodist Magazine p.184 London 1855 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p293.

441    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p303.

442    *Burra Record*, 9 May 1856. Heritage SA Research Packet 10011.

443    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p.305.

444    "Kooringa", *Adelaide Observer*, 30 August 1856, p8.

445    *Register* 29.8.1856 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p.305.

446    Burra Heritage Plaque, and "A Pioneer Preacher", *The Register*, 22 June 1904, p6.

447    Burra Record, 2 August 1858, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011.

448    *Burra Record*, March 1880, p2.

449    "Advertising", *Burra Record*, 18 June 1880, p2.

450    *Burra Record* 6 November 1883, p2.

451    "KOORINGA" *Yorke's Peninsula Advertiser*, 25 January 1884, p3.

452    "Methodist Union", *Kapunda Herald*, 12 January 1900, p3.

453    Burra Heritage Plaque.

454    Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011.

455    "Burra", *Kapunda Herald*, 1 July 1904, p6.

456    Burra Heritage Plaque.

457    "Masonic", *Burra Record*, 8 October 1935, p4.

458    Burra Heritage Plaque.

459    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

460    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p302.

461    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p302.

462    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p302.

463    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p302.

464    "Paxton Square, Burra S.A." Burra History Group pamphlet (compiled by Eric Fuss and Meredith Satchell), 2019.

465    "Domestic News", *Adelaide Times*, 24 August 1853, p2.

466    "Bible Christian Missionary Society", *South Australian Register*, 21 March 1853, p3.

467    "Memo", *South Australian Register*, 2 June 1855, p3.

468    Burra Heritage Plaque.

469    Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10013.

470    "The Old Bible Christian Church: Demolishing the Building", *Burra Record*, 13 January 1909, p3.

471    "Kooringa", *Adelaide Observer*, 19 November 1859, p1.

472    "Kooringa", *South Australian Weekly Chronicle*, 7 July 1860, p7.

473    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp301-302.

474    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p306.

475    "The Old Bible Christian Church: Demolishing the Building", *Burra Record*, 13 January 1909, p3.

476    "The Old Bible Christian Church: Demolishing the Building", *Burra Record*, 13 January 1909, p3.

477    *Burra Record* 13.1.1909; 10.09.1930 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p306.

478    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p291.

479    In c.1849, 400 people attended each of the three daily services at the Wesleyan Chapel. Refer Alvey, Harry, Burra, Its Mines and Methodism, p7. Refer to: Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10013.

480    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p291.

481    "The Census of South Australia for 1855", *Empire*, 3 September 1855, p2.

482    "88th Anniversary of the Burra-Redruth Methodist Church", *Burra Record*, 30 May 1939, p3.

483    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p304.

484    "Burra Methodism", *Australian Christian Commonwealth*, 4 April 1930, p3.

485    *Australian Christian Commonwealth* p.13 27.6.1902 cited in Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p304.

486    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p306.

487    "Building Improvements", *The South Australian Advertiser*, 31 January 1874, p5.

488    "Religious and Philanthropic", *South Australian Register*, 10 October 1874, p6.

489    "Burra Wesleyan Church", *South Australian Register*, 9 December 1879, p5.

490    "A New Sunday School", *Chronicle*, 19 April 1924, p13.

491    Heritage SA, Redruth Methodist Church – Conservation Management Strategy, May 2013

492    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp297,300.

493    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp297, 300.

494    Devenport, John, *St Mary's Church, Burra: the first 150 years*, (Burra: The Anglican Parish of SA, 1997).

495    "St Mary's Church, Burra", *South Australian Chronicle and Weekly Mail*, 12 July 1879, p 2.

496    Devenport, *St Mary's Church, Burra: the first 150 years*.

497    Devenport, *St Mary's Church, Burra: the first 150 years*, p69.

498    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p300.

499    Devenport, St Mary's Church, Burra: the first 150 years.

500    "The Late Captain Killicoat", *The Express and Telegraph*, 23 January 1886, p3.

501    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p187.

502    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p187.

503    "St Mary's Sunday-School", *Burra Record*, 19 July 1893, p.3 & "Sparks", *Burra Record*, 27 September 1893 p.3.

504    *Burra Record*, 19 February 1884, p2.

505    *Burra Record*, 22 February 1884, p2.

506    "Advertising", *Burra Record*, 9 January 1885, p2.

507    *Burra Record*, 13 February 1885, p2.

508    "Opening of new barracks in Kooringa Wednesday April 15", *Burra Record*, 10 April 1885, p2.

509    "The Government Manifesto", *Burra Record*, 17 April 1885, p2.

510    "The Government Manifesto", *Burra Record*, 17 April 1885, p2.

511    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p117.

512    "Opening of the Burra Burra Miners' and Mechanics Institute", *South Australian Register*, 2 September 1857, p3.

513    "Opening of the Burra Burra Miners' and Mechanics Institute", *South Australian Register*, 2 September 1857, p3.

514    "Opening of the Burra Burra Miners' and Mechanics Institute", *South Australian Register*, 2 September 1857, p3.

515    "Laying Foundation Stones of Mechanics' Institute, Burra", *South Australian Chronicle and Weekly Mail,* 19 December 1874, p12.

516    The Burra History Group Inc, 2007, "The Burra Institute & Town Hall".

517    Iris Iwanicki, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10403.

518    Iris Iwanicki, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10403.

519    "Reopening of the Burra Institute", *South Australian Register*, 20 October 1875, p6.

520    Regional Council of Goyder, "Former Burra Institute", on site heritage signage.

521    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

522    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* p306.

523    BurraSA, https://www.burrasa.info/pages/bridges.html, accessed 23 July 2020.

524    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

525    BurraSA, https://www.burrasa.info/pages/bridges.html, accessed 23 July 2020.

526    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

527    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

528    McDougall & Vines, "Burra Cemetery Conservation Management Plan".

529    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

530    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

531    McDougall & Vines, "Burra Cemetery Conservation Management Plan".

532    Based on McDougall & Vines, "Burra Cemetery Conservation Management Plan".

533    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p252.

534    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p252.

535    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

536    "Tenders", *Adelaide Observer*, 10 October 1846, p6.

537    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p253.

538    "Visit to the Burra Burra", *South Australian Register*, 9 June 1847, p2.

539    "Colonial Secretary's Office, Adelaide, Dec.14.1847", *South Australian Register*, 18 December 1847, p4.

540    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p259.

541    "Gaol at Redruth", *South Australian Register*, 3 October 1851, p4.

542    State Records of SA (SRSA) GRG54/210 (Unit 1). Register of prisoners and charge books - Redruth Gaol, from 1861

543    "Burra, January 16", *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7.

544    "Tenders Accepted", *Adelaide Observer*, 30 November 1878, p7.

545    "Public Works", *South Australian Register*, 17 November 1853, p3 & "Local Intelligence", *Adelaide Times*, 16 August 1856, p3.

546    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

547    "Legislative Council", *Adelaide Times*, 17 November 1855, p2.

548    "Advertising", *Adelaide Observer*, 15 December 1855, p1.

549    "Local Intelligence", *Adelaide Times*, 16 August 1856, p3. "Miscellaneous", *The South Australian Advertiser*, 25 September 1860, p4.

550    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p260.

551  SRSA GRG54/210 (Unit 1) Register of prisoners and charge books - Redruth Gaol, from 1861.

552  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p91.

553  "Redruth", *The South Australian Advertiser*, 1 July 1864, p3.

554  "The Redruth Gaol", *The Express and Telegraph*, 1 March 1894, p2.

555  "The Redruth Gaol", *The Port Augusta Dispatch, Newcastle and Flinders Chronicle*, 22 October 1897, p2.

556  "Girls' Reformatory, Redruth", *Burra Record*, 19 July 1922, p3.

557  "Redruth Reformatory Abolished", *The Advertiser*, 15 September 1922, p13.

558  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p253.

559  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p256.

560  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p258.

561  "Advertising", *Adelaide Times*, 18 November 1856, p3.

562  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p260.

563  "Advertising", *Adelaide Times*, 16 October 1857, p3.

564  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p260.

565  "Redruth", *The South Australian Advertiser*, 1 July 1864, p3.

566  SRSA GRG54/210 (Unit 1) Register of prisoners and charge books - Redruth Gaol, from 1861.

567  "Local Court - Redruth", *The South Australian Advertiser*, 15 February 1861, p3.

568  "Redruth", *The South Australian Advertiser*, 4 December 1860, p3.

569  "Inquest", *The South Australian Advertiser*, 11 February 1859, p3. "Kooringa and Redruth", *The South Australian Advertiser*, 25 January 1867, p3.

570  "Redruth", *The South Australian Advertiser*, 30 June 1859, p3. "Kooringa", *South Australian Register*, 29 March 1861, p3. "Kooringa and Redruth", *The South Australian Advertiser*, 16 March 1867, p3. "Kooringa", *South Australian Register*, 28 May 1867, p2. "Railway Extension to the Burra", *The South Australian Advertiser*, 15 June 1867, p3.

571  "Burra, January 16", *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7.

572  "Tenders Accepted", *Adelaide Observer*, 30 November 1878, p7.

573  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp89-90.

574  Davies, Mel, "Financing the Burra Burra Mines, South Australia: Liquidity Problems and Resolution", (The University of Western Australia), p10.

575  "Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

576  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p90.

577  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p129.

578  Blainey, Geoffrey, *Gold and Paper 1858-1982: A History of The National Bank of Australia Ltd*, pp 27-28.

579  "Kooringa", *South Australian Weekly Chronicle*, 7 May 1859, p7.

580  "Classified Advertising" *The South Australian Advertiser*, 16 July 1861, p1.

581  Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

582  "KOORINGA." *South Australian Register*, 15 March 1862, p3.

583  "KOORINGA." *South Australian Register*, 15 March 1862, p3.

584  Burra SA Website, http://www.burrasa.info/pages/nab1.html, accessed 24 August 2020.

585  ANU Australian Cornish Mining Heritage Site, July 2014, p18.

586  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p252.

587  "The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

588  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p253.

589  "Early Recollections of the Burra Burra Mine", *Kapunda Herald*, 2 November 1906, p5.

590  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p148.

591  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p306.

592  "Reminiscences of Burra in the fifties of last century", *Burra Record*, 11 April 1934, p3.

593  Burra Heritage Plaque.

594  "Licences", *South Australian Register*, 18 March 1848, p3.

595  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p60.

596  Burra Heritage Plaque.

597  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p347.

598  "Reminiscences of Burra in the Fifties", *Burra Record*, 18 April 1934, p1.

599  Burra SA website, http://www.burrasa.info/pages/kooringaward.html, accessed 13 August 2020.

600  "Burra, January 16", *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7.

601  "Provincial Telegrams", *Evening Journal*, 24 December 1878, p4.

602  "A Merry Christmas and a Happy New Year", *Burra Record*, 27 December 1878, p2.

603  Burra Heritage Plaque.

604  'Topics' *Burra Record*, 25 April 1879, p2.

605  "Burra, December 18", *South Australian Register*, 23 December 1879, p2.

606  Burra Heritage Plaque.

607  Burra Heritage Plaque.

608  "Burra's Hotels", Burra History Group, 2008.

609  ANU Australian Cornish Mining Heritage Site, July 2014, p17.

610  "New General Publicans' Licences, *Adelaide Observer*, 15 September 1849, p4.

611  "Local Intelligence", *Adelaide Times*, 15 October 1849, p3.

612  Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10419.

613  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp418-419.

614  "Advertising", *Adelaide Observer*, 12 February 1859, p8.

615  "Burra's Hotels", Burra History Group, 2008.

616  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p 331.

617  "Burra's Hotels", Burra History Group, 2008.

618  "Burra, January 16", *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7.

619 Pearson M and Marshall D. "Study of condition and integrity of historic heritage places". Report prepared for the Australian Government Department of Sustainability, Environment, Water, Population and Communities on behalf of the State of the Environment 2011 Committee. Canberra: DSEWPaC, 2011

620 "NEW TOWN NAMES APPROVED" *Chronicle*, 1 August 1940: p 13.

621 Drew, G.J., "Australia's first mining era", *MESA Journal* 7, 2011, pp 42-46.

622 "The South Australian." *South Australian*, 24 December 1847: p 3.

623 Goyder's Line is a line that runs roughly east–west across South Australia demarks those areas north of the line usually too low to support cropping, with the land being only suitable for grazing.

624 Bannear, David "The Burra Smelting Works, a survey of its history and archaeology/ for the District Council of Burra Burra". District Council of Burra Burra, 1990.

625 Drew, G.J. *Discovering historic Burra, South Australia*. (Burra Tourist Association. 1991).

626 "Meetings: South Australian Mining Association", *The Register*, 16 June 1914, p4. This newspaper report stated that SAMA has wound up the company and held its last general meeting on Monday 15 June 1914. It recorded that the Association "which has been in existence for 70 years, was wound up at an extraordinary meeting … the mine had been sold and the property was now all realized. A resolution was adopted to the effect that the company be wound up voluntarily".

627 Burra History Group, "Miners' Dugouts Burra", p5.

628 UNESCO World Heritage List, https://whc.unesco.org/en/list/1215/, accessed 7 October 2020.

629 Australian Heritage Database, https://www.environment.gov.au/heritage/publications/australian-heritage-database, accessed 7 October 2020.

630 Heritage SA, Moonta State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Moonta_Mines accessed 1 October 2018

631 Australian Heritage Database, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=106096 accessed 3 July 2019.

632 Australian Heritage Database, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=106096 accessed 3 July 2019.

633 Australian Heritage Database, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=106096 accessed 3 July 2019.

634 Castlemaine Diggings National Heritage Park, National Heritage List, https://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword_PD%3D0%3Bkeyword_SS%3D0%3Bkeyword_PH%3D0;place_id=105683 accessed 3 July 2019.

635 Castlemaine Diggings National Heritage Park, National Heritage List, https://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword_PD%3D0%3Bkeyword_SS%3D0%3Bkeyword_PH%3D0;place_id=105683 accessed 3 July 2019.

636 Castlemaine Diggings National Heritage Park, National Heritage List, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=105683 accessed 3 July 2019.

637 Castlemaine Diggings National Heritage Park, National Heritage List, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=105683 accessed 3 July 2019.

638 Castlemaine Diggings National Heritage Park, National Heritage List, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=105683 accessed 3 July 2019.

639 South Australian Heritage Register, https://www.environment.sa.gov.au/topics/heritage/sa-heritage-register, accessed 7 October 2020.

640 Drew, Greg, "Notes on the Kanmantoo-Strathalbyn Mining District", 2014, http://www.samininghistory.com/wp-content/uploads/2014/11/drew-2014-kan-strath-district.pdf accessed 3 July 2019.

641 Based on https://heritageblinmanmine.com.au/ accessed 3 July 2019, and information regarding Buddle Pits provided by Greg Drew pers comm.

642 Based on "North Rhine Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp 119-121.

643 Based on "Wallaroo Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp128-143.

644 Based on "Bremer Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp114-118.

645 URPS, "Kapunda Historic Mine Site Conservation Management Plan", September 2008, p22.

646    This list is based on the Kapunda CMP. URPS, "Kapunda Historic Mine Site Conservation Management Plan", September 2008, pp20-21.

647    Heritage SA, Moonta State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Moonta_Mines accessed 1 October 2018.

648    Australian Heritage Database, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=list_code%3DNHL%3Blegal_status%3D65%3Bkeyword%3DCornish%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=106096 accessed 3 July 2019.

649    SA Heritage Places Database Search, http://maps.sa.gov.au/heritagesearch/HeritageItem.aspx?p_heritageno=13509 accessed 3 July 2019.

650    Based on "Moonta Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp144-163.

651    SA Heritage Places Database Search, http://maps.sa.gov.au/heritagesearch/HeritageItem.aspx?p_heritageno=27679 accessed 3 July 2019.

652    SA Heritage Places Database Search, http://maps.sa.gov.au/heritagesearch/HeritageItem.aspx?p_heritageno=27679 accessed 3 July 2019.

653    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p111.

654    Based on "Worthing Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp110-113.

655    SA Heritage Places Database Search, http://maps.sa.gov.au/heritagesearch/HeritageSearchLocation.aspx, accessed 7 October 2020.

656    Based on "Bremer Mine". Refer to: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, pp114-118.

657    New South Wales Heritage Register, https://www.heritage.nsw.gov.au/search-for-heritage/search-for-nsw-heritage/, accessed 7 October 2020.

658    Cadia Valley Heritage, Newcrest Mining, http://www.cadiavalleyheritage.com.au/historical-map/east-cadia-mine/ accessed 3 July 2019.

659    Australian Heritage Database, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;search=place_name%3Dmine%3Bstate%3DNSW%3Bkeyword_PD%3Don%3Bkeyword_SS%3Don%3Bkeyword_PH%3Don%3Blatitude_1dir%3DS%3Blongitude_1dir%3DE%3Blongitude_2dir%3DE%3Blatitude_2dir%3DS%3Bin_region%3Dpart;place_id=868 accessed 3 July 2019.

660    Victorian Heritage Register, https://heritagecouncil.vic.gov.au/heritage-protection/register/, accessed 7 October 2020.

661    Victorian Heritage Database, https://vhd.heritagecouncil.vic.gov.au/places/5061 accessed 3 July 2019.

662    Victorian Heritage Database, https://vhd.heritagecouncil.vic.gov.au/places/68520 accessed 3 July 2019.

663    Victorian Heritage Database, https://vhd.heritagecouncil.vic.gov.au/places/11618 accessed 3 July 2019.

664    Queensland Heritage Register, https://apps.des.qld.gov.au/heritage-register/, accessed 7 October 2020.

665    Queensland Heritage Register, https://apps.des.qld.gov.au/heritage-register/detail/?id=600429# accessed 3 July 2019.

666    Queensland Heritage Register, https://apps.des.qld.gov.au/heritage-register/detail/?id=645605 accessed 3 July 2019.

667    Western Australian Heritage Register, https://www.dplh.wa.gov.au/about-inherit, accessed 7 October 2020.

668    Western Australian Heritage Register, http://inherit.stateheritage.wa.gov.au/Admin/api/file/35988aad-3c6a-cf40-bddd-cd5b87843a7a accessed 3 July 2019.

669    Western Australian Heritage Register, http://inherit.stateheritage.wa.gov.au/Admin/api/file/05562373-a7fe-479e-eaee-78774d33934d accessed 3 July 2019.

670    Western Australian Heritage Register, http://inherit.stateheritage.wa.gov.au/Admin/api/file/35988aad-3c6a-cf40-bddd-cd5b87843a7a accessed 3 July 2019.

671    Western Australian Heritage Register, http://inherit.stateheritage.wa.gov.au/Public/Inventory/Details/c1e2a67e-237c-4ac9-bbe6-8a844f608262 accessed 3 July 2019.

672    Australian Capital Territory Heritage Register, https://www.environment.act.gov.au/heritage/heritage_register, accessed 7 October 2020.

673    Northern Territory Heritage Register, https://nt.gov.au/property/land/heritage-listings/heritage-register-search-for-places-or-objects, accessed 7 October 2020.

674    Tasmanian Heritage Register, https://heritage.tas.gov.au/heritage-listed-places/search-the-register, accessed 7 October 2020.

675    Cornish Mining World Heritage Site website, https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/the-spread-of-cornish-mining-around-the-globe/the-spread-to-other-world-regions/ accessed 1 October 2018.

676    Cornish Mining World Heritage Site website, https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/the-spread-of-cornish-mining-around-the-globe/cornish-mining-in-mexico/ accessed 1 October 2018.

677    Department of the Environment, Water, Heritage and the Arts, "Working Together: Managing National Heritage Places", "Applying the Principles", 2008, https://www.environment.gov.au/resource/working-together-managing-national-heritage-places accessed 6 February 2020.

678    Inclusion of two places in the National Heritage List – Australian Cornish Mining Sites: Burra and Moonta, https://www.legislation.gov.au/Details/C2017G00516 accessed online 3 February 2020.

679    Inclusion of two places in the National Heritage List – Australian Cornish Mining Sites: Burra and Moonta, https://www.legislation.gov.au/Details/C2017G00516 accessed online 3 February 2020.

680    Australian Heritage Database, https://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106096 accessed online 3 February 2020.

681    Protected Matters Search tool, http://www.environment.gov.au/epbc/protected-matters-search-tool accessed online 4 February 2020.

682    Correspondence from Aboriginal Affairs and Reconciliation to Swanbury Penglase dated 14 February 2019.

683    Historical Consultants Pty Ltd and Hames Sharley Australia, "Survey of the Heritage of Eight Lower North Towns: Angaston; Auburn; Burra; Clare; Kapunda; Port Wakefield; Saddleworth; Tanuda", 1990.

684 "Development Plan Goyder Council Consolidated – 24 November 2016", https://www.goyder.sa.gov.au/__data/assets/pdf_file/0022/264208/Goyder_Council_Development_Plan.pdf, accessed online 18 August 2020.

685 SA Heritage Places Database Search Website, http://maps.sa.gov.au/heritagesearch/HeritageSearchByID.aspx, accessed 17 August 2020.

686 "Building Improvements", Burra Record, 30 May 1879, p2 & "Bank of Australasia", South Australian Weekly Chronicle, 18 February 1860, p1.

687 "Redruth Methodist, Burra – CMS (Conservation Management Strategy) Report May 2013", p2.

688 Significant Impact Guidelines 1.1 Matters of National Environmental Significance

# Appendix A - Statement of Significance

**Commonwealth of Australia**

Published by the Commonwealth of Australia

# Gazette

**GOVERNMENT NOTICES**

*Environment Protection and Biodiversity Conservation Act 1999*

INCLUSION OF TWO PLACES IN THE NATIONAL HERITAGE LIST

**AUSTRALIAN CORNISH MINING SITES: BURRA AND MOONTA**

I, Josh Frydenberg, Minister for the Environment and Energy, having considered in relation to the two places and the National Heritage values described in the Schedule of this instrument:

(a)     the Australian Heritage Council's assessment whether the places meet any of the National Heritage criteria; and

(b)     the comments given to the Council under sections 324JG and 324JH of the *Environment Protection and Biodiversity Conservation Act 1999*; and

being satisfied that the two places described in the Schedule have the National Heritage values specified in the Schedule, pursuant to section 324JJ of the *Environment Protection and Biodiversity Conservation Act 1999*, include the places and the specified National Heritage values in the National Heritage List.

Dated  4/5/2017

*[signed]*
Josh Frydenberg
Minister for the Environment and Energy

Government Notices Gazette C2017G00516  09/05/2017

## SCHEDULE

SOUTH AUSTRALIA
Copper Coast District

**NAME:  Australian Cornish Mining Sites: Burra**

**BOUNDARY**:
Approximately 640ha at Burra comprising the Burra State Heritage Area (Heritage Number 27549 and State Heritage ID 16183) designated as a state heritage area in 1993

| | *Criterion* | Values |
|---|---|---|
| (a) | the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history. | The 'Burra' copper mine operated profitably for thirty two years from 1845 to 1877. This mine was one of the early and first copper mines in Australia, established following finds of copper in South Australia. The copper mines at Burra and Kapunda (a much smaller mine) mark the beginning of Australia's base metal mining industry. |

This new form of deep, hard rock mining required new skills and technology not then present in Australia. Mining for copper required the skills of miners who knew how to establish mines and systematically mine them in a way which created the best return for the effort and cost required to access the ore body.

Cornish technology, embodied in the steam engines, work practices and ore processing methods applied in the early copper mines of South Australia, was critical to the establishment and ongoing economic viability of these mines. The application of steam power in particular was essential. Without steam power copper mining was impossible. Over the course of the nineteenth century Australia began to move from a pre-industrial agrarian based society and economy to one which was rapidly industrialising. At Burra, Cornish miners established a system of mining on a 'greenfield' site, transplanting from one of the world's most advanced centres of machine innovation (Cornwall) an emergent form of industry which was being shaped by a new revolutionary machine, the steam engine.

South Australia's colonial relationship with Britain enabled access to Britain's steam engine technology which at the time was protected to prevent transfer to competitor nations. Steam power was not just an 'improving' technology - it was revolutionary. The power of one boiler for example replaced the power of one thousand men.

Burra is of outstanding importance because Burra remains, with Moonta, one of only two areas in Australia where Cornish mining technology, skills and culture is demonstrated to a high degree. Burra represents the Cornish mining system's successful transplantation in Australia.

Features which express these values include an outstanding collection of nineteenth century civic, residential, church and Cornish mining built structures, all located within the former villages (Kooringa, New Aberdeen, Aberdeen, Llwchwr, Hampton) and mine at Burra.

In relation to the demonstration of Cornish mining technology, skills and practice the following items in or near to the Burra Mine Area are significant including but not limited to the former Winding House, the former Ore Sorting Floor, the former Crusher Chimney (Cornish), the former Morphett's

| Criterion | Values |
|---|---|
| (a)<br>Burra<br>cont. | Pump House, the former Engine/Crusher House, the former Mine Manager's Dwelling and Office, the former Graves Pump House, the former Haulage Engine Chimney (Welsh), the former Powder Magazine, Peacock's Chimney (Cornish), the former SA Mining Association Store Room, Yard and Walls (Market Street) and the former SA Mining Association Storeman's Dwelling (Market Street). |

The Burra Mines Historic Site as a whole is also significant as a place which on the surface and underground demonstrates the layout of surface and underground mining operations. The remnant underground shafts including but not limited to Morphetts shaft, Hector shaft and Waterhouse Shaft with their connecting horizontal levels are significant for their ability to demonstrate underground mining practice in association with the arrangement of surface mining structures.

In relation to the demonstration of smelting technology used to improve the economic viability of the mine, the following items in the Smelter area to the east of the Burra Mine Area are significant including but not limited to the Former Burra Smeltsyard and Storehouse, the former Burra Smelts Historic Site (including Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office) and the former Smelts Superintendent's Dwelling and Wall.

In relation to the demonstration of the Cornish miner's living conditions and ways of life which enabled them to mine, the following items are significant including but not limited to the former Miner's Dugouts (tributary of Burra Creek), the former Dugout Sites (Burra Creek), the small, attached dwellings on Truro Street in Redruth (street numbers 8, 9, 10, 11, 12, 13, 14, 16 and 18), the stone cottages and dwellings on Upper Thames Street in old Kooringa (street numbers 2, 4, 6, 8, 10, 12, 16), the former Burra Primitive Church (9 Upper Thames Street), the Paxton Square cottages (33), the former Burra Bible Christian Chapel (Kingston Street), the former Smelter's Home Hotel (SAHR 10419 ' Market Street), the Burra Hotel (SAHR 10404 ' Market Street), the former Burra Salvation Army Citadel (11 Kingston Street) and a 1840s timber dwelling (39 Commercial Street ' SAHR 10434) and Burra Town Hall (original Miners' and Mechanics' Institute). While the Cornish miners were mostly Methodist in faith the following early Anglican Churches are significant for their representative demonstration of the importance of religion in these miner communities including St Mary's Anglican Church and St Mary's Anglican Church Hall.

In relation to the demonstration of the speculative nature of mining operations, the former Bon Accord Mine Buildings (SAHR10023) are significant including but not limited to the 1859 mine offices, blacksmith's forge, carpenter's shop and a manager's residence. The following additional features also reflect the Cornish influence within the town of Burra including but not limited to the stone wall located on the east side of Commercial Street and Ware Street, Burra (SAHR 10435) and the stone wall located on the west side of Commercial Street (SAHR 10436) in Burra.

Burra is distinctive in its development from a group of smaller townships including Kooringa (Company town), Redruth (Government surveyed town), Aberdeen (Scottish speculators), New Aberdeen (Scottish association), Llwwchwr (Welsh Smelter workers) and Hampton (new mining settlement named after the assayer at the smelting works). The names of these townships reflect the mining history of Burra and the haphazard nature of its

| Criterion | Values |
|---|---|

(a)
Burra
cont.

development as a mining settlement. The Hampton Township Precinct (SAHR 10359) represents the impact of the decline of the mine and the consequent loss of population when the Burra Mine closed in 1877. The features of significance include but are not limited to Jacka House, the remnant street and allotment layout, fences, walls and remnant stone domestic buildings and introduced trees such as almond, pine, olive and pepper trees and the remains of the quarries that provided stone for the dwellings.

Burra Cemetery (SAHR 10432 Spring Street, Burra) is also significant as a place which, through the headstones within the cemetery, chronicles the lives and misfortunes of the mining community up to 1877. These stories are valued as an important complementary record of the life of Cornish miners in Burra.

(f) the place has outstanding heritage value to the nation because of the place's importance in demonstrating a high degree of creative or technical achievement at a particular period.

At Burra, Cornish miners established a system of mining on a 'greenfield' site, transplanting from Cornwall - one of the world's most advanced centres of machine innovation - an emergent form of industry which was being shaped by a new revolutionary machine, the steam engine. Welsh smelting technology was also successfully established at the mine soon after its establishment.

This achievement created a 'prototype' system which could then be repeated and applied in other later significant mining ventures such as Broken Hill in NSW, Bendigo in Victoria, Kalgoorlie in WA and Charters Towers in Queensland. Cornish mining traditions continued to be used and improved as Cornish miners moved from one mine to another across the country. This achievement also demonstrates the important role technology played in the evolution of Australia's industrialised modern economy.

Features which express these values include the remnant mining structures within the Burra Mines Historic Site (SAHR 10970) and all of the significant features listed under criterion (a).

**NAME: Australian Cornish Mining Sites: Moonta**

**BOUNDARY:**

Approximately 320ha at Moonta comprising the Moonta Mines State Heritage Area (Heritage Number 27551 and State Heritage ID 13975) designated as a state heritage area in 1984.

| | *Criterion* | **Values** |
|---|---|---|
| (a) | the place has outstanding heritage value to the nation because of the place's importance in the course, or pattern, of Australia's natural or cultural history. | The Moonta copper mine in South Australia operated for sixty one years from c1862 to 1923. In the late nineteenth century it was one of the world's largest producers and exporters of copper; evidence of Australia's emerging international position in an increasingly industrialised global economy. This achievement was made possible by the successful transfer of Cornish mining technology and skills from Cornwall to Australia. |

The copper mine at Moonta demonstrates the resilience of the Cornish mining system in Australia following its earlier transfer in other smaller mines in South Australia. At Moonta the Cornish mining system was able to be repeated and applied at a larger scale. Improvements to the system were also progressed in the areas of labour organisation, labour relations (advocacy for a minimum wage through the 'down' times) and in a number of improvements made to mining and ore processing technology. The Hancock Jig is noted in particular.

A generation of Cornish miners, engineers and tradespeople worked in the copper mines of South Australia, including at Moonta. The cumulative impact of their contribution to Australia's wealth production, nation building and development of Australia's mining industry was substantial. The Cornish way of mining started in South Australia and dispersed to many of Australia's other key mining regions like Broken Hill, Bendigo, Kalgoorlie and Charters Towers. While Cornish miners were the main work force Welsh smelter technology and skills are also noted for their contribution to the mining system's profitability and success.

The Moonta copper mine is of outstanding importance because the remnant mining structures and their layout on the surface and underground can demonstrate to a very high degree the Cornish mining system.

The Cornish way of working developed over generations in the mines of Cornwall. The mining system generally includes the knowledge applied to identify the ore body in the first instance. Then the labour force was organised in a specific way to develop a system of vertical shafts and horizontal levels organised in the efficient exploitation of the ore body. Teams of underground miners were organised into tut-work or tribute teams. Young boys were employed on the surface to sort the ore prior to further processing. The mine's Captain (superintendent) acted to manage the mine for the mine's owners. This was a critical and powerful position. Mine owners kept the Captain accountable for the profitability of the mine. The Cornish practice of applying levies to miner wages for the support of families and miners in times of illness or death is also noted as an early form of worker's insurance.

Mining for copper required the development of deep hard rock mining techniques. In the process of extracting the ore large underground rooms or stopes were created. The use of explosives formed part of the underground mining process. Various technologies were then applied to process the ore once hauled to the surface. Critically Cornish steam engines were used in

(a)

| *Criterion* | **Values** |
|---|---|
| Moonta cont. | various roles but mainly in the work to keep the mines free of water. In Australia, until the 1890s all work underground at the Moonta mine was done by manual labour. To get from one level to another miners climbed up and down step ladders (a double decker man skip was introduced after 1880). Some shafts went as deep as 750m. The ore was hauled to the surface by horse whims and the engine houses were built to pump water from the mine. An estimated 80 miles of shaft and levels were constructed in the mining area.

The mine Captain, Henry Richard Hancock, made numerous improvements. An enthusiast for machinery he introduced a steam-engine to replace hand worked pumps, winches and ore crushers; by 1865 tramways had reduced barrow work and by 1866 a railway replaced wagon teams for carrying ore to the smelters at Wallaroo. The mine's engineering shops were the largest in the southern hemisphere. These workshops enabled Hancock to experiment in replacing the slow and arduous labour of drilling holes by sledge hammer in the hard Moonta rock. He designed and patented a percussion drill driven by compressed air and capable of boring forty feet of shot holes in an eight hour shift. For separating sulphides from the ores he made and patented a jigger which was also used later at Broken Hill. He also introduced wire rope and skips in place of chain and kibbles. Hancock, a devout Wesleyan, also worked to establish minimum wages for miners, established a brass band, library and reading room and compulsory night school for boys from the mine's sorting tables. He also encouraged cricket, football, chess and glee clubs and many mutual improvement societies (Australian Dictionary of Biography ' Hancock, H. R.). This 'tinkering' with machines and the introduction of benevolent activity is reflective of a 'Cornish' approach.

Religion played a strong part in holding the mining community together through the hardships of work, illness and difficult living conditions. In Moonta fresh water was scarce and epidemics of typhoid, cholera and diphtheria were decimating. At one time there were 6,000 people living on the Moonta mining leases surrounded by the industrial workings of the mine; a mining settlement pattern typical of the nineteenth century. In the leased mining areas at Moonta the Moonta Mines Methodist Church (1865) was the focus of the settlement.

Features which express these values include the physical evidence of nineteenth and early twentieth century Cornish mining in the area known as the Moonta Mine. The remnant surface and underground mining structures are significant where they demonstrate Cornish mining practice and technology. Specific features of significance include but are not limited to the following features and items.

The layout of the mine on the surface demonstrates the way the ore body was mined. The shafts, engine houses, processing areas, supporting functions and administrative facilities are all located in a pattern which is oriented to the underground lines of lode (Fergussons Lode, Greens Lode, Beddomes Lode, Trevers Lode, Elders Lode). This arrangement and pattern of mining infrastructure also demonstrates the focus of mining operations on efficiency and function. As a demonstration feature therefore the remnant arrangement and pattern of surface mining infrastructure is significant.

In more detail the features which demonstrate Moonta's mining significance include but are not limited to the Hughes enginehouse and stack, the Hughes engine pool, the ruins of Elders enginehouse, Richmans enginehouse and |

| Criterion | Values |
|---|---|
| (a) Moonta cont. | nearby tailings dumps, Hancocks tailings dump (including the tailings and the form and shape of the heap, nearby former mining shafts, remnant ore floors and the foundations of Hancocks enginehouse and crusher house), Ryans tailings heap, Ryans shaft, Taylors shaft, Treuers shaft, ruins of precipitation works, site of the mine workshops, site of mine offices, site of General Manager's residence, site of the assayers residence, the ruins of the powder magazine, the remnant water reservoir (Ryan Road), site and remnant structures of the Hamley mine, the remnant route of the Hamley tramline and the Moonta Railway Station (including disused railway line within the Moonta Mines State Heritage Area).

Churches are also important because they demonstrate the importance of religion in these mining communities and the Cornish influence more generally. Items of significance include but are not limited to the site of the Bible Christian church, site of the Primitive Methodist church, the Moonta Mines Methodist Church (1865) and the Moonta Mines Model Sunday School.

The historic miner's cottage and garden (Verco Street) is significant as a place which demonstrates the way miners and their families lived on the mining lease. |

# Appendix B - Community Engagement

**Attendees at Community Information Evening**

| Name | Email |
| --- | --- |
| Meredith Satchell | burrahistory@bigpond.com |
| Eric Fuss | ericfuss1@bigpond.com |
| Vivienne Wilson | Jivewilson4b@gmail.com |
| Richard Ghion | |
| Helen Carmody | Helencarmody8@bigpond.com |
| Patrick Jones | pkandpj1@bigpond.com |
| Anne and Wayne Tomsen | burracaravanpark@bigpond.com |
| Graeme Bradley | |
| Roslyn and John Holbrook | yachties@bigpond.com |
| Deborah Morgan | turners.burra@bigpond.com |
| Jenny Loftes | studiojproduction@hotmail.com |
| Geraldine Smedley | Rastus39@westnet.com.au |
| Trevor Lawrence | tlawrence1958@yahoo.com.au |
| John Brak | John_and_nerida@hotmail.com |
| William Gebhardt | crgebhardt@goyder.sa.gov.au |
| Robert Heath | robmarg@adam.com.au |
| Darren Peacock | dpeacock@nationaltrustsa.org |
| John Neal | uncleroy@rbe.net.au |
| Jane Kellock | Kelvale1@bigpond.com |
| Peter Schiller | crschiller@goyder.sa.gov.au |
| Jill and Robert Perry | bjperry@internode.on.net |
| Hannah Dale | Hannah.lavendar.dale@gmail.com |
| David Stevenson | dstevenson@goyder.sa.gov.au |
| Barbara Button | bbutton @goyder.sa.gov.au |
| Glen Roberts | groberts @goyder.sa.gov.au |
| Fiona Barr | fbarr@goyder.sa.gov.au |

**Places highlighted through the Community Engagement Process for further research**

- The Railway Station
- Deadman's Bridge
- The Mine Bridge
- Former Kooringa Post & Telegraph Office and Post Master's Residence
- Former Burra Institute
- Former Primitive Methodist Church and Masonic Lodge
- 16 and 16a Smelts Road
- The Former Tiver's Railway Store
- Former Miners' Arms Hotel
- 3 Morehead Street
- Former Butterworth's Mill (39 Cooper Street)
- Unicorn Brewery site
- 2 Truro Street
- First Cemetery site

# Appendix D - National Environmental Significance (NES) and Protected Species Listing for Flora and Fauna

# EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

## LGA THE REGIONAL COUNCIL OF GOYDER, SA

Report created: 04/08/20 12:29:21

Summary
Details
    Matters of NES
    Other Matters Protected by the EPBC Act
    Extra Information
Caveat
Acknowledgements
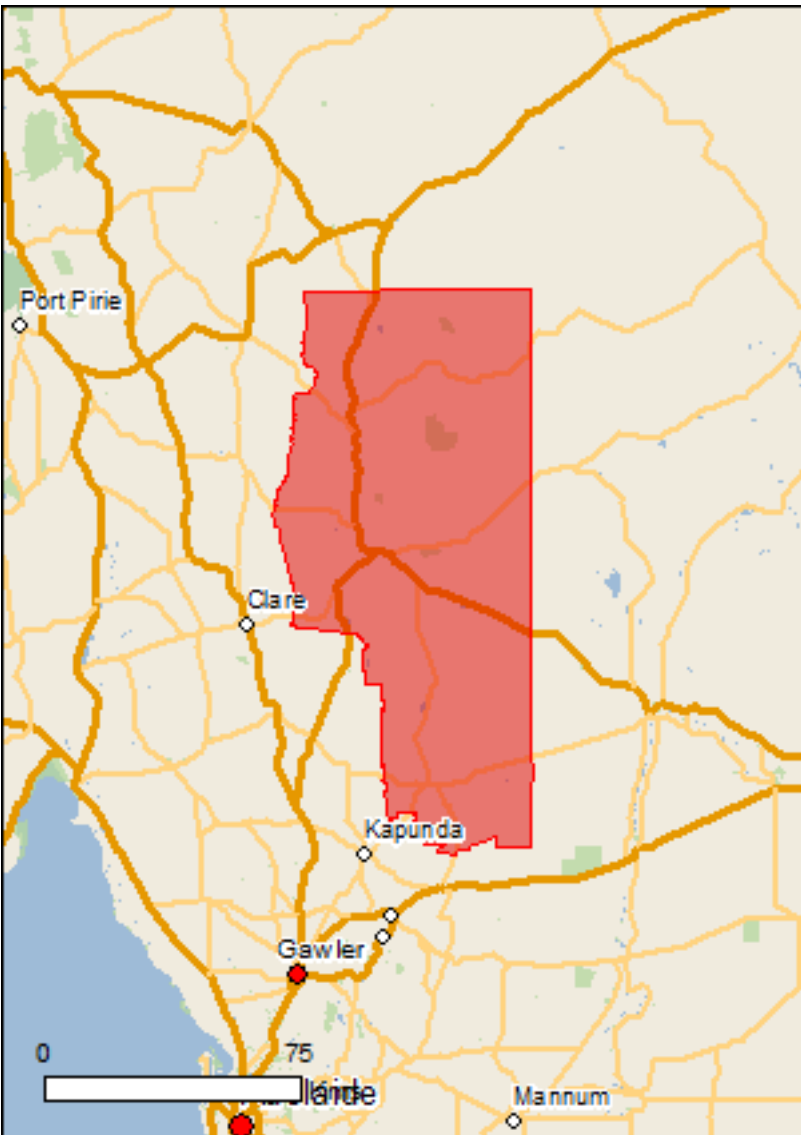
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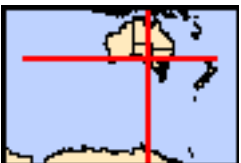
# Summary

## Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance - see http://environment.gov.au/protection/environment-assessments

| | |
|---|---|
| World Heritage Properties: | None |
| National Heritage Places: | 1 |
| Wetlands of International Significance: | 1 |
| Great Barrier Reef Marine Park: | None |
| Commonwealth Marine Area: | None |
| Threatened Ecological Communities: | 3 |
| Threatened Species: | 32 |
| Migratory Species: | 12 |

## Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species. Information on EPBC Act permit requirements and application forms can be found at http://www.environment.gov.au/epbc/permits-and-application-forms

| | |
|---|---|
| Commonwealth Lands: | 1 |
| Commonwealth Heritage Places: | None |
| Listed Marine Species: | 18 |
| Whales and Other Cetaceans: | None |
| Critical Habitats: | None |
| Commonwealth Reserves Terrestrial: | None |
| Australian Marine Parks: | None |

## Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

| | |
|---|---|
| State and Territory Reserves: | 32 |
| Regional Forest Agreements: | None |
| Invasive Species: | 38 |
| Nationally Important Wetlands: | None |

# Details

## Matters of National Environmental Significance

| National Heritage Properties | | [ Resource Information ] |
|---|---|---|
| Name | State | Status |
| **Historic** | | |
| [Australian Cornish Mining Sites: Burra](#) | SA | Listed place |

| Wetlands of International Importance (Ramsar) | [ Resource Information ] |
|---|---|
| Name | Proximity |
| [The coorong, and lakes alexandrina and albert wetland](#) | 100 - 150km upstream |

| Threatened Ecological Communities | | [ Resource Information ] |
|---|---|---|

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

| Name | Status | Type of Presence |
|---|---|---|
| [Buloke Woodlands of the Riverina and Murray-Darling Depression Bioregions](#) | Endangered | Community may occur within area |
| [Iron-grass Natural Temperate Grassland of South Australia](#) | Critically Endangered | Community likely to occur within area |
| [Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia](#) | Critically Endangered | Community likely to occur within area |

| Threatened Species | | [ Resource Information ] |
|---|---|---|
| Name | Status | Type of Presence |
| **BIRDS** | | |
| [Botaurus poiciloptilus](#)<br>Australasian Bittern [1001] | Endangered | Species or species habitat may occur within area |
| [Calidris ferruginea](#)<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| [Falco hypoleucos](#)<br>Grey Falcon [929] | Vulnerable | Species or species habitat likely to occur within area |
| [Grantiella picta](#)<br>Painted Honeyeater [470] | Vulnerable | Species or species habitat may occur within area |
| [Leipoa ocellata](#)<br>Malleefowl [934] | Vulnerable | Species or species habitat likely to occur within area |
| [Manorina melanotis](#)<br>Black-eared Miner [449] | Endangered | Species or species habitat may occur within area |
| [Numenius madagascariensis](#)<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area |
| [Pedionomus torquatus](#)<br>Plains-wanderer [906] | Critically Endangered | Species or species habitat known to occur within area |
| [Pezoporus occidentalis](#)<br>Night Parrot [59350] | Endangered | Extinct within area |
| [Rostratula australis](#)<br>Australian Painted Snipe [77037] | Endangered | Species or species |

| Name | Status | Type of Presence |
|------|--------|------------------|
| | | habitat may occur within area |
| **FISH** | | |
| [Craterocephalus fluviatilis](#)<br>Murray Hardyhead [56791] | Endangered | Species or species habitat may occur within area |
| [Galaxias rostratus](#)<br>Flathead Galaxias, Beaked Minnow, Flat-headed Galaxias, Flat-headed Jollytail, Flat-headed Minnow [84745] | Critically Endangered | Species or species habitat may occur within area |
| [Maccullochella peelii](#)<br>Murray Cod [66633] | Vulnerable | Species or species habitat may occur within area |
| **FROGS** | | |
| [Litoria raniformis](#)<br>Growling Grass Frog, Southern Bell Frog,  Green and Golden Frog, Warty Swamp Frog, Golden Bell Frog [1828] | Vulnerable | Species or species habitat known to occur within area |
| **MAMMALS** | | |
| [Nyctophilus corbeni](#)<br>Corben's Long-eared Bat, South-eastern Long-eared Bat [83395] | Vulnerable | Species or species habitat may occur within area |
| **PLANTS** | | |
| [Acacia carneorum](#)<br>Needle Wattle, Dead Finish, Purple-wood Wattle [66685] | Vulnerable | Species or species habitat may occur within area |
| [Acacia glandulicarpa](#)<br>Hairy-pod Wattle [8838] | Vulnerable | Species or species habitat known to occur within area |
| [Acacia menzelii](#)<br>Menzel's Wattle [9218] | Vulnerable | Species or species habitat known to occur within area |
| [Acacia spilleriana](#)<br>Spiller's Wattle [34123] | Endangered | Species or species habitat known to occur within area |
| [Caladenia tensa](#)<br>Greencomb Spider-orchid, Rigid Spider-orchid [24390] | Endangered | Species or species habitat known to occur within area |
| [Caladenia xantholeuca](#)<br>White Rabbits, Flinders Ranges White Caladenia [55025] | Endangered | Species or species habitat may occur within area |
| [Codonocarpus pyramidalis](#)<br>Slender Bell-fruit, Camel Poison [19507] | Vulnerable | Species or species habitat known to occur within area |
| [Dodonaea procumbens](#)<br>Trailing Hop-bush [12149] | Vulnerable | Species or species habitat known to occur within area |
| [Dodonaea subglandulifera](#)<br>Peep Hill Hop-bush [11956] | Endangered | Species or species habitat known to occur within area |
| [Lachnagrostis limitanea](#)<br>Spalding Blown Grass, Spalding Blowngrass [78119] | Endangered | Species or species habitat known to occur within area |
| [Olearia pannosa subsp. pannosa](#)<br>Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush [12348] | Vulnerable | Species or species habitat known to occur within area |
| [Prasophyllum pallidum](#)<br>Pale Leek-orchid [20351] | Vulnerable | Species or species habitat may occur within area |

| Name | Status | Type of Presence |
|------|--------|------------------|
| [Pterostylis despectans](#)<br>Lowly Greenhood [6272] | Endangered | Species or species habitat likely to occur within area |
| [Senecio megaglossus](#)<br>Superb Groundsel [13374] | Vulnerable | Species or species habitat likely to occur within area |
| [Swainsona pyrophila](#)<br>Yellow Swainson-pea [56344] | Vulnerable | Species or species habitat likely to occur within area |
| **REPTILES** | | |
| [Aprasia pseudopulchella](#)<br>Flinders Ranges Worm-lizard [1666] | Vulnerable | Species or species habitat likely to occur within area |
| [Tiliqua adelaidensis](#)<br>Pygmy Blue-tongue Lizard, Adelaide Blue-tongue Lizard [1270] | Endangered | Species or species habitat known to occur within area |

## Migratory Species [ Resource Information ]

\* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

| Name | Threatened | Type of Presence |
|------|------------|------------------|
| **Migratory Marine Birds** | | |
| [Apus pacificus](#)<br>Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
| **Migratory Terrestrial Species** | | |
| [Motacilla cinerea](#)<br>Grey Wagtail [642] | | Species or species habitat may occur within area |
| [Motacilla flava](#)<br>Yellow Wagtail [644] | | Species or species habitat may occur within area |
| [Myiagra cyanoleuca](#)<br>Satin Flycatcher [612] | | Species or species habitat known to occur within area |
| **Migratory Wetlands Species** | | |
| [Actitis hypoleucos](#)<br>Common Sandpiper [59309] | | Species or species habitat may occur within area |
| [Calidris acuminata](#)<br>Sharp-tailed Sandpiper [874] | | Species or species habitat known to occur within area |
| [Calidris ferruginea](#)<br>Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| [Calidris melanotos](#)<br>Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
| [Gallinago hardwickii](#)<br>Latham's Snipe, Japanese Snipe [863] | | Species or species habitat may occur within area |
| [Numenius madagascariensis](#)<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area |
| [Pandion haliaetus](#)<br>Osprey [952] | | Species or species habitat may occur within area |
| [Tringa nebularia](#)<br>Common Greenshank, Greenshank [832] | | Species or species |

| Name | Threatened | Type of Presence |
|---|---|---|
| | | habitat may occur within area |

# Other Matters Protected by the EPBC Act

| Commonwealth Lands | [ Resource Information ] |
|---|---|

The Commonwealth area listed below may indicate the presence of Commonwealth land in this vicinity. Due to the unreliability of the data source, all proposals should be checked as to whether it impacts on a Commonwealth area, before making a definitive decision. Contact the State or Territory government land department for further information.

| Name |
|---|
| Commonwealth Land - Australian National Railways Commission |

| Listed Marine Species | | [ Resource Information ] |
|---|---|---|

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

| Name | Threatened | Type of Presence |
|---|---|---|
| **Birds** | | |
| Actitis hypoleucos Common Sandpiper [59309] | | Species or species habitat may occur within area |
| Apus pacificus Fork-tailed Swift [678] | | Species or species habitat likely to occur within area |
| Ardea alba Great Egret, White Egret [59541] | | Species or species habitat known to occur within area |
| Ardea ibis Cattle Egret [59542] | | Species or species habitat may occur within area |
| Calidris acuminata Sharp-tailed Sandpiper [874] | | Species or species habitat known to occur within area |
| Calidris ferruginea Curlew Sandpiper [856] | Critically Endangered | Species or species habitat likely to occur within area |
| Calidris melanotos Pectoral Sandpiper [858] | | Species or species habitat may occur within area |
| Chrysococcyx osculans Black-eared Cuckoo [705] | | Species or species habitat known to occur within area |
| Gallinago hardwickii Latham's Snipe, Japanese Snipe [863] | | Species or species habitat may occur within area |
| Haliaeetus leucogaster White-bellied Sea-Eagle [943] | | Species or species |

| Name | Threatened | Type of Presence |
|------|-----------|------------------|
| | | habitat likely to occur within area |
| [Merops ornatus](#)<br>Rainbow Bee-eater [670] | | Species or species habitat may occur within area |
| [Motacilla cinerea](#)<br>Grey Wagtail [642] | | Species or species habitat may occur within area |
| [Motacilla flava](#)<br>Yellow Wagtail [644] | | Species or species habitat may occur within area |
| [Myiagra cyanoleuca](#)<br>Satin Flycatcher [612] | | Species or species habitat known to occur within area |
| [Numenius madagascariensis](#)<br>Eastern Curlew, Far Eastern Curlew [847] | Critically Endangered | Species or species habitat may occur within area |
| [Pandion haliaetus](#)<br>Osprey [952] | | Species or species habitat may occur within area |
| [Rostratula benghalensis (sensu lato)](#)<br>Painted Snipe [889] | Endangered* | Species or species habitat may occur within area |
| [Tringa nebularia](#)<br>Common Greenshank, Greenshank [832] | | Species or species habitat may occur within area |

## Extra Information

| State and Territory Reserves | [ Resource Information ] |
|------------------------------|--------------------------|
| Name | State |
| Caroona Creek | SA |
| Hopkins Creek | SA |
| Mimbara | SA |
| Mokota | SA |
| Pandappa | SA |
| Red Banks | SA |
| Tiliqua Nature Reserve | SA |
| Unnamed (No.HA1057) | SA |
| Unnamed (No.HA1082) | SA |
| Unnamed (No.HA1093) | SA |
| Unnamed (No.HA1221) | SA |
| Unnamed (No.HA1225) | SA |
| Unnamed (No.HA1264) | SA |
| Unnamed (No.HA1294) | SA |
| Unnamed (No.HA1443) | SA |
| Unnamed (No.HA1448) | SA |
| Unnamed (No.HA1489) | SA |
| Unnamed (No.HA1511) | SA |
| Unnamed (No.HA1520) | SA |
| Unnamed (No.HA1551) | SA |
| Unnamed (No.HA1562) | SA |
| Unnamed (No.HA277) | SA |
| Unnamed (No.HA321) | SA |
| Unnamed (No.HA655) | SA |
| Unnamed (No.HA656) | SA |
| Unnamed (No.HA669) | SA |
| Unnamed (No.HA677) | SA |
| Unnamed (No.HA707) | SA |
| Unnamed (No.HA727) | SA |
| Unnamed (No.HA886) | SA |
| Unnamed (No.HA927) | SA |
| Unnamed (No.HA958) | SA |

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit,

| Name | Status | Type of Presence |
|------|--------|------------------|
| **Birds** | | |
| Alauda arvensis<br>Skylark [656] | | Species or species habitat likely to occur within area |
| Anas platyrhynchos<br>Mallard [974] | | Species or species habitat likely to occur within area |
| Carduelis carduelis<br>European Goldfinch [403] | | Species or species habitat likely to occur within area |
| Columba livia<br>Rock Pigeon, Rock Dove, Domestic Pigeon [803] | | Species or species habitat likely to occur within area |
| Passer domesticus<br>House Sparrow [405] | | Species or species habitat likely to occur within area |
| Streptopelia chinensis<br>Spotted Turtle-Dove  [780] | | Species or species habitat likely to occur within area |
| Sturnus vulgaris<br>Common Starling [389] | | Species or species habitat likely to occur within area |
| Turdus merula<br>Common Blackbird, Eurasian Blackbird [596] | | Species or species habitat likely to occur within area |
| **Mammals** | | |
| Bos taurus<br>Domestic Cattle [16] | | Species or species habitat likely to occur within area |
| Canis lupus  familiaris<br>Domestic Dog [82654] | | Species or species habitat likely to occur within area |
| Capra hircus<br>Goat [2] | | Species or species habitat likely to occur within area |
| Felis catus<br>Cat, House Cat, Domestic Cat [19] | | Species or species habitat likely to occur within area |
| Lepus capensis<br>Brown Hare [127] | | Species or species habitat likely to occur within area |
| Mus musculus<br>House Mouse [120] | | Species or species habitat likely to occur within area |
| Oryctolagus cuniculus<br>Rabbit, European Rabbit [128] | | Species or species habitat likely to occur within area |
| Rattus rattus<br>Black Rat, Ship Rat [84] | | Species or species habitat likely to occur within area |
| Vulpes vulpes<br>Red Fox, Fox [18] | | Species or species |

| Name | Status | Type of Presence |
|------|--------|------------------|
| | | habitat likely to occur within area |

| Name | Status | Type of Presence |
|------|--------|------------------|
| Asparagus asparagoides<br>Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus [22473] | | Species or species habitat likely to occur within area |
| Austrocylindropuntia spp.<br>Prickly Pears [85132] | | Species or species habitat likely to occur within area |
| Carrichtera annua<br>Ward's Weed [9511] | | Species or species habitat likely to occur within area |
| Cenchrus ciliaris<br>Buffel-grass, Black Buffel-grass [20213] | | Species or species habitat may occur within area |
| Chrysanthemoides monilifera<br>Bitou Bush, Boneseed [18983] | | Species or species habitat may occur within area |
| Chrysanthemoides monilifera subsp. monilifera<br>Boneseed [16905] | | Species or species habitat likely to occur within area |
| Cylindropuntia spp.<br>Prickly Pears [85131] | | Species or species habitat likely to occur within area |
| Cytisus scoparius<br>Broom, English Broom, Scotch Broom, Common Broom, Scottish Broom, Spanish Broom [5934] | | Species or species habitat likely to occur within area |
| Genista linifolia<br>Flax-leaved Broom, Mediterranean Broom, Flax Broom [2800] | | Species or species habitat likely to occur within area |
| Genista monspessulana<br>Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126] | | Species or species habitat likely to occur within area |
| Genista sp. X Genista monspessulana<br>Broom [67538] | | Species or species habitat likely to occur within area |
| Lycium ferocissimum<br>African Boxthorn, Boxthorn [19235] | | Species or species habitat likely to occur within area |
| Nassella neesiana<br>Chilean Needle grass [67699] | | Species or species habitat may occur within area |
| Olea europaea<br>Olive, Common Olive [9160] | | Species or species habitat likely to occur within area |
| Opuntia spp.<br>Prickly Pears [82753] | | Species or species habitat likely to occur within area |
| Pinus radiata<br>Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780] | | Species or species habitat may occur within area |
| Rubus fruticosus aggregate<br>Blackberry, European Blackberry [68406] | | Species or species habitat likely to occur within area |
| Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii<br>Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497] | | Species or species habitat likely to occur |

| Name | Status | Type of Presence |
|------|--------|------------------|
| | | within area |
| Solanum elaeagnifolium |  |  |
| Silver Nightshade, Silver-leaved Nightshade, White Horse Nettle, Silver-leaf Nightshade, Tomato Weed, White Nightshade, Bull-nettle, Prairie-berry, Satansbos, Silver-leaf Bitter-apple, Silverleaf-nettle, Trompillo [12323] |  | Species or species habitat likely to occur within area |
| Tamarix aphylla |  |  |
| Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018] |  | Species or species habitat likely to occur within area |
| Ulex europaeus |  |  |
| Gorse, Furze [7693] |  | Species or species habitat likely to occur within area |

# Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining oigations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods.  Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc).  In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and

- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants

- some species and ecological communities that have only recently been listed

- some terrestrial species that overfly the Commonwealth marine area

- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites

- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

# Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

- [Office of Environment and Heritage, New South Wales](#)
- [Department of Environment and Primary Industries, Victoria](#)
- [Department of Primary Industries, Parks, Water and Environment, Tasmania](#)
- [Department of Environment, Water and Natural Resources, South Australia](#)
- [Department of Land and Resource Management, Northern Territory](#)
- [Department of Environment and Heritage Protection, Queensland](#)
- [Department of Parks and Wildlife, Western Australia](#)
- [Environment and Planning Directorate, ACT](#)
- [Birdlife Australia](#)
- [Australian Bird and Bat Banding Scheme](#)
- [Australian National Wildlife Collection](#)
- Natural history museums of Australia
- [Museum Victoria](#)
- [Australian Museum](#)
- [South Australian Museum](#)
- [Queensland Museum](#)
- [Online Zoological Collections of Australian Museums](#)
- [Queensland Herbarium](#)
- [National Herbarium of NSW](#)
- [Royal Botanic Gardens and National Herbarium of Victoria](#)
- [Tasmanian Herbarium](#)
- [State Herbarium of South Australia](#)
- [Northern Territory Herbarium](#)
- [Western Australian Herbarium](#)
- [Australian National Herbarium, Canberra](#)
- [University of New England](#)
- [Ocean Biogeographic Information System](#)
- [Australian Government, Department of Defence](#)
- [Forestry Corporation, NSW](#)
- [Australian Tropical Herbarium, Cairns](#)
- [eBird Australia](#)
- [Australian Government – Australian Antarctic Data Centre](#)
- [Museum and Art Gallery of the Northern Territory](#)
- [Australian Government National Environmental Science Program](#)
- [Australian Institute of Marine Science](#)
- [Reef Life Survey Australia](#)
- [American Museum of Natural History](#)
- [Queen Victoria Museum and Art Gallery, Inveresk, Tasmania](#)
- [Tasmanian Museum and Art Gallery, Hobart, Tasmania](#)
- Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

[Please feel free to provide feedback via the Contact Us page.](#)

| NSXCODE | FAMILY NAME | SPECIES | COMMON NAME | NATIVE | NATIONAL RATING | STATE RATING | NUMBER OF RECORDS | DATE OF LAST RECORD |
|---|---|---|---|---|---|---|---|---|
| K01297 | AMARANTHACEAE | Ptilotus erubescens | Hairy-tails | Y | | R | 6 | 07-Nov-1999 |
| Q01192 | CHENOPODIACEAE | Maireana excavata | Bottle Fissure-plant | Y | | V | 10 | 25-May-2000 |
| U01206 | CHENOPODIACEAE | Maireana rohrlachii | Rohrlach's Bluebush | Y | | R | 5 | 12-Jun-2000 |
| M05698 | COMPOSITAE | Leptorhynchos orientalis | Eastern Annual Buttons | Y | | R | 1 | 01-Jan-1895 |
| Z32639 | COMPOSITAE | Podolepis decipiens | | Y | | R* | 1 | 21-Oct-1981 |
| M32638 | COMPOSITAE | Podolepis jaceoides | Showy Copper-wire Daisy | Y | | R | 1 | 19-Oct-1981 |
| M03314 | COMPOSITAE | Senecio megaglossus | Large-flower Groundsel | Y | VU | E | 1 | 01-Jun-1993 |
| M01490 | CRASSULACEAE | Crassula peduncularis | Purple Crassula | Y | | R | 1 | 01-Nov-1999 |
| Y02184 | ELATINACEAE | Elatine gratioloides | Waterwort | Y | | R | 1 | 01-Nov-2005 |
| E00142 | GRAMINEAE | Austrostipa gibbosa | Swollen Spear-grass | Y | | R | 2 | 01-Nov-1999 |
| G00443 | GRAMINEAE | Bothriochloa macra | Red-leg Grass | Y | | R | 1 | 04-Apr-2000 |
| E00178 | GRAMINEAE | Rytidosperma tenuius | Short-awn Wallaby-grass | Y | | R | 5 | 27-Oct-1995 |
| Y00620 | JUNCACEAE | Juncus australis | Austral Rush | Y | | R | 1 | 01-Jan-2004 |
| A00636 | JUNCACEAE | Juncus radula | Hoary Rush | Y | | V | 1 | 10-Dec-1988 |
| W02607 | LABIATAE | Mentha satureioides | Native Pennyroyal | Y | | R | 1 | 10-Dec-1988 |
| C01569 | LEGUMINOSAE | Acacia glandulicarpa | Hairy-pod Wattle | Y | VU | E | 1 | 01-Sep-1966 |
| W01575 | LEGUMINOSAE | Acacia iteaphylla | Flinders Ranges Wattle | Y | | R | 1 | 11-Jan-2004 |
| Z03915 | LEGUMINOSAE | Acacia spilleriana | Spiller's Wattle | Y | EN | E | 1 | 12-Jun-2000 |
| A01744 | LEGUMINOSAE | Cullen parvum | Small Scurf-pea | Y | | V | 3 | 01-Jan-2005 |
| Q05320 | LEGUMINOSAE | Swainsona behriana | Behr's Swainson-pea | Y | | V | 14 | 15-Nov-2005 |
| W04751 | LILIACEAE | Dianella longifolia var. grandis | Pale Flax-lily | Y | | R | 2 | 07-Nov-1999 |
| A00708 | LILIACEAE | Thysanotus tenellus | Grassy Fringe-lily | Y | | R | 1 | 22-Oct-1892 |
| A00432 | LOGANIACEAE | Logania saxatilis | Rock Logania | Y | | R | 3 | 10-Oct-2008 |
| A05384 | ORCHIDACEAE | Caladenia tensa | Inland Green-comb Spider-orchid | Y | EN | | 1 | 08-Oct-1891 |
| G04391 | ORCHIDACEAE | Diuris behrii | Behr's Cowslip Orchid | Y | | V | 5 | 21-Sep-2013 |
| Q05840 | POLYGONACEAE | Rumex dumosus | Wiry Dock | Y | | R | 11 | 13-Nov-1996 |
| E04006 | RHAMNACEAE | Cryptandra campanulata | Long-flower Cryptandra | Y | | R | 7 | 25-May-2000 |
| M02362 | UMBELLIFERAE | Eryngium ovinum | Blue Devil | Y | | V | 3 | 26-Oct-1995 |
| A00176 | AVES | Ardeotis australis | Australian Bustard | Y | | V | 1 | 25-May-2000 |
| S00693 | AVES | Corcorax melanorhamphos | White-winged Chough | Y | | R | 1 | 26-Aug-2003 |
| C00001 | AVES | Dromaius novaehollandiae | Emu | Y | ssp | ssp | 5 | 20-Jun-2018 |
| S02145 | REPTILIA | Aprasia pseudopulchella | Flinders Worm-lizard | Y | VU | | 4 | 01-Oct-2016 |
| Y02572 | REPTILIA | Tiliqua adelaidensis | Pygmy Bluetongue | Y | EN | E | 854 | 29-Mar-2007 |

**Lists of Protected Species of Flora and Fauna.**

**Produced by the Government of South Australia, Department for Environment and Water**

# Appendix E - Project Brief

# Regional Council of Goyder



Request for Tender

Conservation Management Plan

For

Australian Cornish Mining Sites

Tender Number 07.2018.11

Open Request for Tenders

Closing Date 3:00pm on 17th August 2018

# Table of Contents

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## 1. Structure of this RFT

This RFT is comprised of six sections, being:

1.1     Section A - Background and General Information to Tenderers

1.2     Section B - Conditions of Tendering

1.3     Section C - Tender Evaluation Process

1.4     Section D - Specifications

1.5     Section E - Tender Response Schedules

1.6     Section F - Contract for Services

## 2. Section A – Background & General Information

2.1     Regional Council of Goyder requires the services of a consultant to develop a new Conservation Management Plan of a target place being the National Heritage List Australian Cornish Mining Sites: Burra.

2.2     Regional Council of Goyder (the Council) invites tenders from Tenderers for the provision of Conservation Management Plan for Australian Cornish Mining Sites, Burra (the Services). The Council will enter into a Contract for Services with the successful Tenderer.

2.3     Payment will be made after;

2.3.1     the finished project is assessed against the criteria shown in this RFT, and the presentation of an invoice that reflects costs shown in the Quote response schedules,

## 3.    Section B – Conditions of Tendering

3.1    Definitions

Terminology

3.1.1    In this RFT, the following terms shall, unless inconsistent with the context, have the meanings indicated:

3.1.1.1    **A reference to a clause** is a reference to a clause of this RFT.

3.1.1.2    **Closing Date** means the time and date specified in clause 2.5.3.1, or such later time and date as may be notified in writing to Tenderers by the Council.

3.1.1.3    **Conditions of Tendering** means these Conditions of Tendering as attached to Section B of this RFT.

3.1.1.4    **Conforming Tender** means a Tender described in clause 2.8.1.

3.1.1.5    **Contract for Services** means the contract for the provision of the Services as attached to Section F of this RFT, as may be subsequently amended by agreement between the Council and the successful Tenderer pursuant to clause 2.12.

3.1.1.6    **Nominated Contact Person** means the person named in clause 2.6.1

3.1.1.7    **Non-Conforming Tender** means a Tender does not meet the requirements set out in this RFT and/or the Tender Documents.

3.1.1.8    **Preferred Tenderer** means the Tenderer referred to in clause 4.9.

3.1.1.9    **RFT** means this Request for Tender.

3.1.1.10    **Services** means the services sought to be purchased by the Council pursuant to this RFT.

3.1.1.11    **Specifications** means the specifications specified in Section D of this RFT.

3.1.1.12    **Tender means** a tender submitted by a Tenderer pursuant to this RFT.

3.1.1.13    **Tender Documents** means the documents specified in clause 2.5.1.

3.1.1.14    **Tender Process** means the process for calling, receiving, evaluating and awarding of Tender(s) as proposed in clauses 2.5.7 and 2.5.8 of these Conditions of Tendering.

3.1.1.15    **Tender Response Schedules** are the forms attached to Section F of this RFT.

3.1.1.16    **Tenderer** has the meaning given to it in clause 2.5.2.

3.1.1.17    **Tenderer's Representative** means the person nominated by a Tenderer under clause 2.6.2.

3.2    Request for Tenders

The Council seeks Tenders from Tenderers for the provision of the Services, which are further described in the Tender Documents.

3.2.1    Tender Documents

The Tender Documents are comprised of:

3.2.1.1    These Conditions of Tendering;

3.2.1.2    The Contract for Services;

3.2.1.3    The Specifications; and

3.2.1.4    The Tender Response Schedules.

3.2.2    Obtaining a Copy of this RFT

3.2.2.1    This RFT is open to any organisation or person who registers SA Tenders On-line and thereby downloads a copy of the Tender Documents (each such party is a **Tenderer**). Parties obtaining the Tender Documents (the download) will be required to register their name and contact details at the time of issue of the documents or available to download from the Regional Council of Goyder website, www.goyder.sa.gov.au

3.2.3    Lodgement of Tenders

3.2.3.1    Tenders must be delivered to the Tender Box at the Council prior to 3:00pm **17ᵗʰ August 2018**. (The **Closing Date**).

3.2.3.2    Applications must be enclosed in an envelope and marked "CONFIDENTIAL" and be addressed as follows:

**Tender Box**
**Tender For Conservation Management Plan For**
**Australian Cornish Mining Sites**
**Regional Council of Goyder**
**1 Market Square**
**Burra   SA   5417**

3.2.3.3    Closing Date: 3:00pm on **17ᵗʰ August 2018**

3.2.3.4    Email submissions of Tenders will not be accepted.

3.2.3.5    Facsimile transmissions of Tenders will not be accepted.

3.2.3.6    Tenderers are required to lodge one original Tender, (including all supporting documentation).

3.2.4    Late Tenders

3.2.4.1    Tenders received after the Closing Date **WILL NOT** be considered or accepted.

3.2.5    Extension of Time for the Submission of Tenders

3.2.5.1    The Council may, in its absolute discretion, no less than two business days before the Closing Date, extend the Closing Date by notice in writing to the Tenderers.

3.2.5.2    A Tenderer may request the Council to extend the Closing Date for the submission of a Tender by written application to the Nominated Contact Person.

(a)    Any such requests must be received by the Nominated Contact Person at least five business days prior to the Closing Date, and must provide sufficient reasons to support the request.

(b)    It is entirely at the Council's discretion as to whether an extension is granted.

3.2.6    Tender Validity Period

3.2.6.1    All Tenders will remain open for acceptance by the Council for a period of not less than three months after the Closing Date.

3.2.6.2    Once submitted, a Tenderer cannot withdraw its Tender without the prior written consent of the Council, unless the Tender is withdrawn in writing before the Closing Date.

3.2.7    Proposed Tender Process

3.2.7.1    Council will conduct a site meeting to brief all potential tenders on the scope of the operation and answer queries that tenderers may have.

3.2.7.2    Council will evaluate all tenders on merit of their tender response and tendered price.

3.2.7.3    The preferred tenderer will be offered the opportunity to meet all of the criteria as shown in the Specification.

3.2.7.4   The agreement between parties will be reached and site handed over to the selected tenderer.

3.2.8   Proposed Timing of Tender Process

The proposed timing for the Tender Process is as follows:

| Request for Tenders | 1st August,  2018 |
|---|---|
| Pre Tender Site Inspection | N/A |
| Closing Date | 3:00pm on 17th  August 2018 |
| Notification to successful Tenderer | 23rd August, 2018 *(indicative)* |
| Execution of Contract for Services | 23rd August 2018 *(indicative)* |
| Completion of Provision of Services / possession of site | N/A |

3.2.9   Copying Tenders

3.2.9.1   Tenderers must not use this RFT or the RFT Documents (including any attached technical and other written information supplied by the Council) for any purpose other than to prepare a Tender.

3.2.9.2   This includes not copying this RFT or the RFT Documents (including any attached technical and other written information supplied by the Council) and providing a copy to any third party not involved in the preparation of a Tender.

3.3   Communication between the Parties

3.3.1   Enquiries or Requests for Information or Clarification

3.3.1.1   Any enquiries or requests for information or clarification regarding this RFT or the Tender Documents must be made in writing and addressed to the Nominated Contact Person.

3.3.1.2   The Nominated Contact Person is:

**Emily Moore**
**1 Market Square**
**Burra  SA  5417**
**Ph:  08 8892 0100**

3.3.1.3   The Nominated Contact Person may (but is not obligated to) respond to a Tenderer's enquiries or requests for information or clarification.

3.3.1.4   If the Council provides any information to a Tenderer by way of clarification, then the Council reserves the right to provide that information to other Tenderers.

3.3.1.5   No statement made by the Nominated Contact Person, or any other representative of the Council should be construed as modifying this RFT or any of the Tender Documents, unless confirmed in writing by the Nominated Contact Person.

3.3.2    Tenderer's Contact Person

3.3.2.1    Tenderers are required to nominate a person to be the authorised contact person and supply an address for the service of any notices for the purpose of this RFT (**Tenderer's Representative**).

3.3.2.2    Each Tenderer must notify the Council of its Tenderer's Representative within 10 business days of obtaining the Tender Documents.

3.3.2.3    All communication with the Tenderer will be via the Tenderer's Representative.

3.3.3    Site/Industry Briefing

3.3.3.1    The Council may conduct a site/industry briefing.

3.3.3.2    The briefing (if conducted) is intended to provide Tenderers with background information, and Tenderers are not to treat any statements made at the briefing as variations to this RFT.

3.3.3.3    The Council reserves the right to require all Tenderers to attend the site/industry briefing.

3.3.3.4    Details of the briefing will be provided to Tenderers at least seven business days prior to the briefing.

3.3.3.5    Tenderers may be notified of the site/industry briefing by email, and Council may post the details of the briefing on the internet.

3.3.3.6    Each attending Tenderer must advise the Nominated Contact Person of the details of that Tenderer's attendees (including name and position) at least two business days before the briefing.

3.3.4    Tenderer not to solicit the Council and its employees

3.3.4.1    The Tenderer and its representatives must not interfere or attempt to interview or to discuss its Tender with Councillors or employees of the Council, other than the Nominated Contact Person.

3.3.4.2    The Council reserves the right to reject any Tender submitted by a Tenderer which contravenes this clause.

3.4    Tender Preparation

3.4.1    Tenderers to be informed

3.4.1.1    Each Tenderer must, prior to submitting its Tender, become acquainted with the nature and extent of the Services to be undertaken, and make all necessary examinations, investigations, inspections and deductions.

3.4.2    Evidence of Registration or Licensing

3.4.2.1    Each Tenderer must (if applicable) be licensed or registered to perform the Services.

3.4.3    Conflict of Interest

3.4.3.1    Tenderers must inform Council of any circumstances or relationships which will constitute a conflict or potential conflict of interest if the Tenderer is successful.

3.4.3.2    If any conflict or potential conflict exists, the Tenderer must advise how it proposes to address this.

3.4.4    Use of Sub-contractors

3.4.4.1    Where a Tenderer proposes to use resources from organisations other than the Tenderer itself, substantial information relating to the contractual arrangements for such resources must be detailed in the Tender, together with information on the relevant experience of such other organisation.

### 3.4.5 Staff Conditions

3.4.5.1 The Tenderer will ensure that all staff involved with the supply of the tendered item will be paid the at the relevant award wage and receive all appropriate employment conditions.

### 3.4.6 Ombudsman *Act*

3.4.6.1 Tenderers should be aware that the *Ombudsman Act 1972* (SA) has been amended so that the definition of "administrative act" under that Act includes an act done in the performance of functions under a contract for services with a Council.

3.4.6.2 That Act also includes powers enabling the Ombudsman to investigate matters in the public interest.

3.4.6.3 The Tenderer must ensure compliance with all obligations arising under that Act and any other applicable legislation.

### 3.4.7 Freedom of Information

3.4.7.1 Tenderers should be aware that the *Freedom of Information Act 1991* (SA) (**FOI Act**) gives members of the public rights to access documents of the Council.

3.4.7.2 The FOI Act promotes openness in governance and accountability of government agencies and confers the public with a legally enforceable right to be given access to documents, including contracts entered into by the Council, except for those contracts or provisions which should be kept confidential for public interest purposes, the preservation of personal privacy or are commercial in confidence.

### 3.4.8 Collusion

3.4.8.1 The Tenderer must not collude with any other Tenderers or potential Tenderers.

### 3.4.9 Tenderer's confidential information

3.4.9.1 Subject to clauses 2.7.9.2 and 3, the Council will treat as confidential all Tenders submitted by Tenderers in connection with this RFT.

3.4.9.2 The Council will not be taken to have breached any obligation to keep information provided by Tenderers confidential to the extent that the information:

(a) Is disclosed by the Council to its advisers, officers, employees or subcontractors solely in order to conduct the RFT process or to prepare and manage any resultant agreement;

(b) Is disclosed to the Council's internal management personnel, solely to enable effective management or auditing of the RFT process;

(c) Is disclosed by the Council to the responsible Minister;

(d) Is authorised or required by law to be disclosed; or

(e) Is in the public domain otherwise than due to a breach of the relevant obligations of confidentiality.

## 3.5 Tender Documents

### 3.5.1 Conforming Tenders

3.5.1.1 A Conforming Tender is a Tender which meets all of the requirements set out in this RFT and the Tender Documents.

### 3.5.2 Non-Conforming Tenders

3.5.2.1 The Council is not required to, but may at its sole discretion; consider an incomplete, informal or a Non-Conforming Tender.

3.5.2.2    Failure to respond to or meet any of the requirements set out in this RFT and the Tender Documents will result in the Tender being deemed a Non-Conforming Tender.

3.5.3    Content of Tenders

3.5.3.1    Tenderers are required to complete the Tender Response Schedules and submit them to the Council.

3.5.3.2    Tenderers can also supply any other additional information or documents. The Council may have reference to such additional information or documents in evaluating the Tenders.

3.5.3.3    All prices quoted by Tenderers in their Tender are:

     (a)    to be in Australian dollars;

     (b)    to be exclusive GST; and

     (c)    (if subject to rise and fall) to provide full details of how the rise and fall applies and the method of determining the price.

3.5.3.4    If a Tenderer proposes to provide the Services on a basis different to that envisaged by the Tender Documents (whether for reasons of innovation, efficiency or otherwise) that proposal should be fully documented and justified with the Tender.

3.5.3.5    The Council does not warrant that any discussion with the Council's Nominated Contact Person prior to the Closing Date in relation to such a proposal will be taken into account in evaluating the Tenders.

3.6    Acknowledgement by Tenderers

3.6.1    Tenderers acknowledge that the Council:

3.6.1.1    makes no representations and offers no undertakings in issuing this RFT or the Tender Documents;

3.6.1.2    is not bound to accept the lowest Tender or required to accept any Tender;

3.6.1.3    may accept all or part of any Tender;

3.6.1.4    may require one or more Tenderers (but is not obliged to require all) to supply further information and/or attend a conference or interview;

3.6.1.5    may require one or more Tenderers (but is not obliged to require all) to make presentation(s);

3.6.1.6    may undertake "due diligence" checks on any Tenderer, including verifying references and/or referees, and undertaking company searches and credit checks;

3.6.1.7    will not be responsible for any costs or expenses incurred by the Tenderer arising in any way from the preparation and submission of its Tender;

3.6.1.8    accepts no responsibility for a Tenderer misunderstanding or failing to respond correctly to this RFT;

3.6.1.9    will not be liable for or pay any expenses or losses incurred by any party whether in the preparation of a Tender or prior to the signing of any Contract for Services or otherwise; and

3.6.1.10    will not be bound by any verbal advice given or information furnished by any member, officer or agent of the Council in respect of the Tender Documents or this RFT, but will only be bound only by written advice provided by the Nominated Contact Person.

3.7   Council's Rights

3.7.1   The Council reserves the right to:

3.7.1.1   amend, vary, supplement or terminate this RFT at any time;

3.7.1.2   accept or reject any Tender, including the lowest price tender;

3.7.1.3   negotiate with any service provider on all or any part of the Services to be supplied pursuant to this RFT;

3.7.1.4   vary the timing and process referred to in clauses 2.5.7 and 2.5.8;

3.7.1.5   postpone or abandon this RFT;

3.7.1.6   add or remove any Tenderer;

3.7.1.7   accept or reject any Tenders whether or not they are Conforming Tenders;

3.7.1.8   accept all or part of any Tender;

3.7.1.9   negotiate or not negotiate with one or more Tenderers; and/or

3.7.1.10   discontinue negotiations with any Tenderer.

3.8   Tender Evaluation

3.8.1   In assessing Tenders, the Council will have regard to, but not necessarily be limited to, the following criteria (not listed in any order of priority):

3.8.1.1   insurance;

3.8.1.2   compliance with work health and safety requirements;

3.8.1.3   customer service experience and capacity;

3.8.1.4   the tendered prices, including the proposed pricing structure;

3.8.1.5   the level of risk associated with negotiation of an acceptable Contract for Services;

3.8.1.6   environmental management systems (if applicable);

3.8.1.7   degree of compliance with the requirements set out in this RFT and the  Tender Documents; and

3.8.1.8   such other matters that Council considers relevant, including:

(a)   details of current and previous relevant experience in the provision of the Services;

(b)   the provision of any aspect of the Services by sub-contractors (if applicable);

(c)   financial resources;

(d)   staff resources; and

(e)   current and future contracts/workload.

3.8.2   Use of Tender Documents

3.8.2.1   The Council may use, retain and copy any information contained in the Tenders for the evaluation of Tenders and for the finalisation of the provisions of the Contract for Services.

3.8.3   Debriefing of Tenderers

3.8.3.1   If requested, Tenderers may be debriefed against the Council's evaluation criteria. Tenderers will not be provided with information concerning other Tenderers, apart from publicly available information. No comparison with other Tenders will be made.

3.9 Acceptance of Tender

3.9.1 Councils rights

3.9.1.1 The Council reserves the right to negotiate different terms and conditions for the Contract for Services with any one or more Tenderers (each referred to as a Preferred Tenderer).

3.9.2 Negotiations

3.9.2.1 The Council and the Preferred Tenderer may (if required) enter into negotiations for the award and execution of a Contract for Services.

3.9.3 Councils right to negotiate with any other parties

3.9.3.1 If, despite their best endeavours and acting in good faith, the Council and the Preferred Tenderer are unable to negotiate and agree on the terms of the Contract for Services, the Council reserves the right to negotiate with any other parties, including other Tenderers, for the provision of the Services.

3.9.4 Notification of tenderer.

3.9.4.1 The successful Tenderer will be notified in writing by the Council of the Council's acceptance of its Tender.

3.9.4.2 The successful Tenderer must not make any oral or written public statements in relation to the awarding of a Contract for Services until written notice is received by the Tenderer.

3.9.5 Creates an obligation

3.9.5.1 The notification of the acceptance of Tender by the Council creates an obligation on the Council and the successful Tenderer to enter into the Contract for Services (subject to any variations agreed pursuant to this clause 0).

3.9.6 The successful Tenderer acknowledges

3.9.6.1 The successful Tenderer acknowledges and agrees that all intellectual property created by the successful Tenderer arising out of the provision of the Services belongs to the Council, and the successful Tenderer will do all reasonable things necessary to assist the Council in the protection and transfer of ownership of the intellectual property resulting from the provision of the Services.

3.10 Unsuccessful Tenders

3.10.1 Unsuccessful Tenderers must,

3.10.1.1 if required by the Council, return the Tender Documents to the Council, once they have been advised that their Tender is unsuccessful.

3.11 No Legal Requirement

3.11.1 No obligation to purchase

3.11.1.1 The issue of this RFT or any response to it does not commit, obligate or otherwise create a legal obligation on the Council to purchase the Services from the Tenderers.

## 4. Section C – Governing Law

4.1 **This RFT is governed by the law in South Australia.**

4.2 **The parties irrevocably submit to the exclusive jurisdiction of the courts in South Australia.**

## 5. Section D – Tender Evaluation Process

# REGIONAL COUNCIL OF GOYDER



# EVALUATION PANEL GUIDE

| Title of Tender / Expression of Interest: | Tender for Conservation Management Plan For Australian Cornish Mining Sites |
|---|---|

| RFT/EOI Number: | 07.2018.11 |
|---|---|

**Note:** Please read and understand carefully the given scoring criteria for RFT, on the basis of which supplier will be selected.

5.1   Introduction

   5.1.1   Document purpose

      5.1.1.1   The purpose of this document is to assist the Evaluation Panel (the "Panel") to assess the tenders/submissions.

      5.1.1.2   The objectives of this Evaluation Panel Guide are to:

         (a)   Ensure that the assessment of the tenders/submissions is undertaken fairly according to a pre-determined weighting schedule;

         (b)   Ensure adherence to probity procedures and relevant policies; and

         (c)   Ensure that the requirements specified in the Tender/Expression of Interest document are evaluated in a way that can be measured and documented.

5.2   Evaluation Panel

   5.2.1   The purpose of the Panel is to:

      5.2.1.1   Assess each tender/submission in accordance with the process and methodology contained in this document;

      5.2.1.2   Undertake any communication with tenderers/respondents that may be necessary to clarify tenders/submissions; and

      5.2.1.3   Document the Panel member's decision in an evaluation report which may be submitted to Regional Council of Goyder.

5.3   Reporting

   5.3.1   Written report.

      5.3.1.1   The Panel may present a written report for consideration at the completion of the scoring process.

5.4   Scoring System

   5.4.1   Each panel member.

      5.4.1.1   Each Panel member will individually assess each submission on a 0-100% score basis of the indicated maximum score shown for each criteria, as shown in the table below.

      5.4.1.2   Part scoring for shown criteria are acceptable.

| CRITERION | | |
|---|---|---|
| Did the submission meet the overall RFT? | (Score | /10) |
| Did the submission provide adequate detailed work necessary to cover:<br>(i) Historical matters?<br>(ii) Physical investigations?<br>(iii) Analysis of Documentary and Physical Evidence?<br>(iv) Conservation Policy?<br>(v) Heritage matters? | (Score | /50) |
| Is there consideration given to new thinking about heritage in the submission? | (Score | /15) |
| How well does the submission detail the costs and timeframe of the project? | (Score | /15) |
| How well does the submission detail the policy development and future management aspects? | (Score | /10) |
| How well does the submission proponent meet the necessity for appropriate experience and skills in preparation of a plan? | (Score | /10) |

| Percentage of Indicated Score | Description |
|---|---|
| 0 | **Inadequate or non-appropriate offer**, many deficiencies, does not meet criterion between 0 and 2 |
| 10% | |
| 20% | **Marginal offer**, some deficiencies, partly meets criterion, between 2 and 4 |
| 30% | |
| 40% | **Fair offer**, few deficiencies, almost meets criterion, between 4 and 6 |
| 50% | |
| 60% | **Good offer**, no deficiencies, meets criterion, between 6 and 8 |
| 70% | |
| 80% | **Very good offer**, exceeds criterion, between 8 and 10 |
| 90% | |
| 100% | **Outstanding offer**, greatly exceeds criterion. |

5.4.2   Determining score

    5.4.2.1   There is not a set formula for determining scores.

    5.4.2.2   All scores should be made by comparing the responses of each tenderer/respondent.

5.4.3   Panel to consider.

    5.4.3.1   In determining the score that will be given to each tenderer/respondent, Panel members should consider:

        (a)   Does the response answer each element of the criterion?

        (b)   Are any examples provided to substantiate the claims made in the response?

        (c)   Are the examples relevant to the requirements of the tender/expression of interest?

5.5   The score sheet

5.5.1   Panel member responsibility

    5.5.1.1   The Score Sheet is to be completed by each Evaluation Panel Member to evaluate all tenders/submissions received.

    5.5.1.2   The score sheet is divided into 3 sections:

        (a)   Compliance criteria,

        (b)   Quantitative criteria, and

        (c)   Qualitative criteria.

5.6     Procedural Fairness and Evaluation Panels

5.6.1   Introduction

5.6.1.1   Councils engaged in purchasing goods and services from the private sector must ensure that their tender evaluation process meets the appropriate standards of probity.

5.6.1.2   Tender/Expression of Interest selection/evaluation panels (Panels) are part of these processes and it is therefore important that Panel members are aware of the principles underlying probity – these principles are referred to as procedural fairness.

5.6.2   What is procedural fairness?

5.6.2.1   Procedural fairness can be defined as the duty to act fairly to all potential and actual respondents and the duty to adopt fair procedures that are appropriate and adapted to the circumstances of a particular case.

5.6.3   Why should panel members be concerned with procedural fairness?

5.6.3.1   There are two main reasons why Panel members should be concerned:

(a)   Tenderers are entitled to a fair process, and

(b)   Failing to follow a fair process could lead to the tender/submission being subject to challenge, with a re-tender being required – this would be costly in terms of time and resources.

5.6.4   What are the requirements of procedural fairness?

5.6.4.1   In order to ensure the tender/expression of interest selection process is fair and objective, the following principles of procedural fairness must be adhered to:

(a)   Knowledge

(b)   Before commencing the tender/expression of interest selection process, Panel members must have an understanding of the contents of each tender/submission, the selection criteria against which tenders/submissions will be rated, and the process by which each tender/submission will be rated.

(c)   Relevant Considerations

(d)   Panel members must consider all relevant considerations related to each tender/submission.

(e)   This would include the tenderer's/respondent's responses to the selection criteria, and all other information tenderers/respondents were required to supply.

(f)   If information is considered irrelevant, the reason must be stated in the selection report.

5.6.5   Irrelevant Considerations

5.6.5.1   The tender/expression of interest selection process must not be based on irrelevant considerations, that is, anything outside the selection criteria or information requested in the tender/expression of interest.

5.6.5.2   The tender/submission selection must use the information requested and adhere to the selection criteria.

5.6.6   Bias

5.6.6.1   The tender/expression of interest selection process must be free of bias, and any perception of bias.

5.6.6.2   Any connections between a Panel member and a tenderer/respondent must be disclosed to the Panel chairperson.

5.6.6.3 Panel members should not accept gifts, and should limit contact with tenderers/respondents during the tender/expression of interest selection process.

5.6.6.4 Any possible issue of bias should be discussed with the Panel chairperson as soon as it arises.

5.6.7 Evidence

5.6.7.1 Tender/expression of interest ratings and selections must be made on the basis of the material presented and included in the tenders/submissions rather than rumour.

5.6.7.2 If any adverse allegations are made against a tenderer/respondent affecting the way in which the tender/expression of interest is assessed, these allegations must be communicated to the tenderer/respondent.

5.6.7.3 The tenderer/respondent must also be given a reasonable opportunity to respond to these allegations.

5.6.8 Confidentiality

5.6.8.1 The contents of each tender/expression of interest should not be disclosed to any outside party.

5.6.8.2 Each tender/submission should be viewed as commercially confidential information.

5.6.9 Commenting During the Tender Selection Process

5.6.9.1 One Panel member, usually the Panel chairperson, should be nominated as the only person permitted to comment to outside parties about the tender/expression of interest selection process and outcome.

5.6.9.2 Panel members should not discuss any element of the selection process with work colleagues or any other party.

5.6.10 Recording of tender/expression of interest scores.

5.6.10.1 Panel members must fully record their tender/submission evaluation against the selection criteria.

5.6.11 Conclusion

5.6.11.1 Procedural fairness.

(a) By observing and implementing the rules of procedural fairness, Panel members will ensure that tender/expression of interest selections are 'visible', defensible and auditable.

(b) Following these guidelines not only ensures that the tender/expression of interest selection process is fair, but also helps to ensure that the best tenderer/respondent is chosen.

(c) These guidelines also aid in maintaining a high level of transparency of process.

SPECIFICATION


FOR


Conservation Management Plan
For
Australian Cornish Mining Sites


August 2018


REGIONAL COUNCIL OF GOYDER

6.    **Section E – Specifications for the Services**

▪   Target place

Australian Cornish Mining Sites: Burra

▪   **Project scope and description, including key eligible activities**

The RFQ is to develop a new Conservation Management Plan of a target place being the National Heritage List Australian Cornish Mining Sites: Burra. The Plan is to be developed in accordance with The Burra Charter, (The Australia ICOMOS Charter for Places of Cultural Significance) 2013, and the Australian Government guidelines for Managing National Heritage places.

It will follow A Guide to The Preparation of Conservation Plans for Places of European Cultural Significance by Dr James Semple Kerr and Ask First: a guide to respecting Indigenous heritage places and values. The plan will meet all the requirements of the EPBC Act.

The scope of the RFQ is completion of a Conservation Management Plan as the tool to be implemented by council and other managers to conserve and protect the National and State Heritage values of the Australian Cornish Mining Site: Burra.

The plan will be a written document identifying the heritage values of the sites and the conservation policies and plans that can be followed.

▪   Project outcomes

The project outcome will be identification, protection, conservation, presentation and transmitting to all generations, of the National Heritage values of the Australian Cornish Mining

Sites: Burra. This National Heritage area at Burra is a place of cultural significance which will be managed to enrich people's lives and provide a deep and inspirational sense of connection to community and landscape, to the past and to living experiences.

Burra has been recognised as being a nationally significant heritage area as it is only one of two areas in Australia that reflect the successful transplantation of Cornish mining systems to Australia, and the development of mining settlements, that are an important expression of Australian identity and experience.

As a place of cultural significance, the outcome will reflect the diversity of our communities, telling us about whom we are and the past that has formed us and the Australian landscape.

Once developed, the Conservation Management Plan will become part of the day- to-day management and decision-making processes of council, state government agencies and others.

The Objectives of this project are to:

☐   review, identify and analyse the heritage values of the target place and its components
☐   develop conservation policies and guidelines for inclusion in the Regional Council of Goyder Development Plan
☐   make practical recommendations for its ongoing conservation, management and promotion of an historic township
☐   contribute to the community's sense of identity – its past, present and future
☐   provide the basis for ongoing cultural resource management

- National Heritage List Place ID: 106304

http://www.environment.gov.au/heritage/places/national/australian-cornish-mining-sites
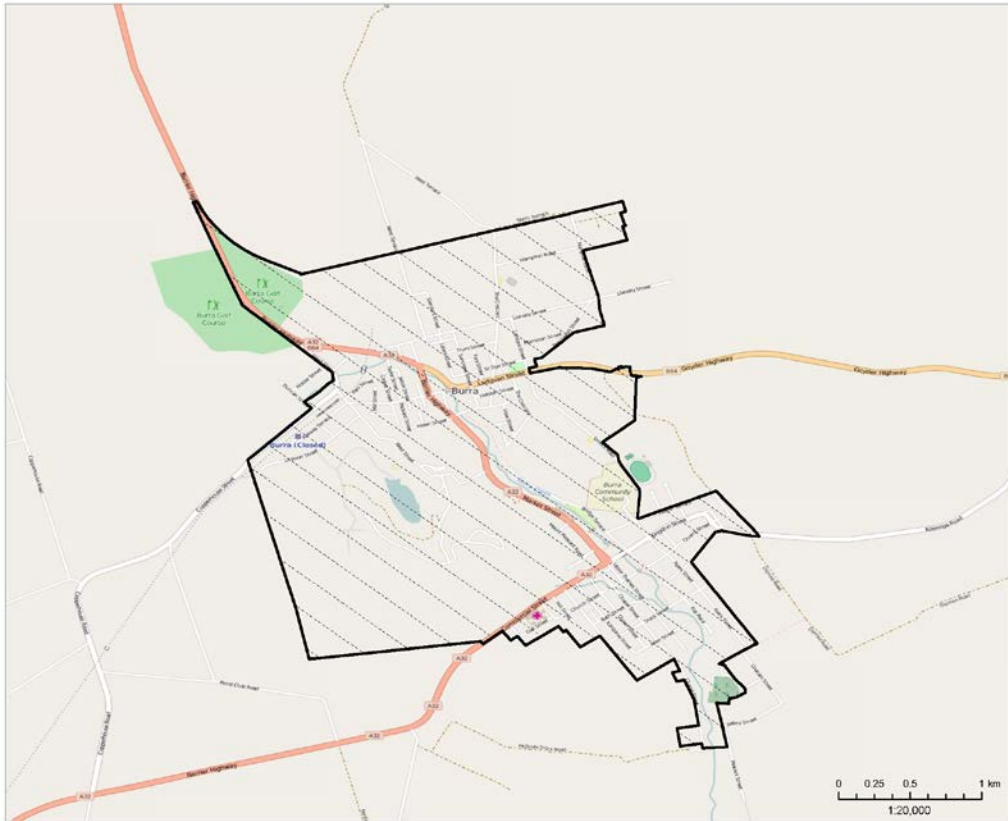


- **The work**

The preparation of the Conservation Management Plan will involve the following:

## 1.   Historical Outline

The consultant team will:
- ☐ focus on the physical history of the area
- ☐ identify historical themes that reinforce the settlement patterns and growth of the area
- ☐ compile historical maps, photographs and plans, illustrating the settlement patterns and growth of the area at regular intervals
- ☐ add, as necessary, to existing information for the identified sites, places or landscapes of particular historical and/or aesthetic interest

## 2. Physical Investigations

The consultant team will:
- ☐ undertake fieldwork identifying elements of built and natural environment which provide evidence of historical themes, settlement patterns, events etc. previously identified. The survey will address both the private and public domain
- ☐ identify important vistas, views and cultural landscapes
- ☐ expand as necessary, to the existing inventory of the buildings, gardens (if relevant) and structures to include:
  - ☐ Name (if relevant)
  - ☐ Address
  - ☐ Brief description

☐ Photograph
☐ Physical condition
☐ Modifications/integrity
☐ Contributory value (potential heritage place, contributory, neutral, intrusive)
☐ Historical information (if available)
☐ Brief Conservation Policy
☐ Brief Statement of Desired Future Character
☐ Identify all buildings and structures on a map indicating level of contribution

### 3. Analysis of Documentary Evidence

The consultant team will:
☐ examine the historical outline and revise in light of evidence gathered through the fieldwork
☐ undertake any comparative research, if required
☐ prepare a brief summary of issues arising from the documentary and physical evidence in relation to heritage value

### 4. Conservation Policy
The consultant team will:
☐ prepare general Conservation Policies for the built and natural environment, relating to both the private and public domain
☐ prepare specific Conservation Policies in the form of Objectives and Principles of Development Control for the area. These will be drafted in accordance with the format and terminology used in Development Plans. The policies will include, but not be limited to:
☐ Form of Development
☐ Setbacks
☐ Appearance of Land and Buildings
☐ Alterations and Additions
☐ Environment
☐ Open space, landscaping and gardens
☐ Demolition
☐ Infill Development
☐ Land Division
☐ Streetscape and Street Furniture
☐ Public Buildings
☐ Signs, Advertisements and Hoardings
☐ Utilities Infrastructure
☐ The consultant will also prepare Conservation Guidelines which address all of the above issues. The Conservation Guidelines will provide practical advice to both the Regional Council of Goyder and property owners within the project brief and be illustrated with line drawings, as appropriate. The Guidelines will apply equally to the private and public domain in providing a management framework for decision making and development applications.

### 5. Consultation
The consultants will:
☐ Liaise with Heritage South Australia at the start and Progress report stages
☐ Liaise, as necessary with various government agencies, including Council, Transport SA, Planning SA, PIRSA (Primary Industries & Resources SA)
☐ Relevant community organisations
☐ Present report to Regional Council of Goyder

### 6. Consultants
The consultants should have demonstrated heritage assessment experience and/or expertise in the following areas:
(i)    Historical research

(ii)   Architectural assessment
(iii)  Planning
(iv)  Landscape assessment (ie. Landscape Architect/Geographer)

▪  **Land owners and community**

With the diversity of land owners, including Council, State Government and private landowners, Article 6.3 will be applied with plan development including consideration of other factors affecting the future of a place such as the owner's needs, resources, external constraints and its physical condition. In developing the plan as an effective policy, different ways to retain cultural significance and address other factors will be explored.  This will include planning approaches which identify a use or combination of uses or constraints on uses that retain the cultural significance of the place.  We will be providing for the participation of people for whom the place has significant associations and meanings, or who have social, spiritual or other cultural responsibilities for the place.

▪  **Traditional owners**

As a place of cultural significance, the plan will reflect the diversity of our communities, telling us about wo we are and the past that has formed us and the Australian landscape.

The Australian Heritage Cornish Sites: Burra is listed for the values relating to the Cornish mining activities and settlement. However, taking into consideration that the traditional owners of the area around Burra are the Ngadjuri people, the Ask First guidelines will be used to consult with the traditional owners to have input from them during the preparation of the Conservation Management plan.

▪  **EPBC Act**

The Australian Government Department of the Environment and Energy guidelines for Managing National Heritage places, clearly state that a management plan should be prepared that sets out how the heritage values of the site will be protected or conserved. These guidelines identify that these management plans need to be consistent with the National Heritage management principles; and that where National Heritage place is in a state or territory, the Australian Government must endeavour to ensure that a management plan is prepared and implemented with the relevant state or territory government.

The Conservation Management Plan to be prepared will be developed in accordance with the Australian Government Department of the Environment and Energy National Heritage management principles. The preparation of the Conservation Management Plan will also support the operation of the Australian Government Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act), Under the EPBC Act, approval is required from the Australian Government Minister for the Environment before any action takes place that could have significant impact on the national heritage values of a listed place.

▪  **Project milestones**

**Milestone 1**
Heritage Consultant engaged to prepare Conservation Management Plan
End date 1st September, 2018

**Milestone 2**
Research, gathering and analysis of evidence
End date 1st February, 2019

**Milestone 3**
Completion of the Australian Cornish Mining Sites: Burra Conservation Management Plan, including ` consultation and strategies implementation
End date 1st June, 2019

▪  **Project manager**

The Project will be managed by David Stevenson, Chief Executive Officer, Regional Council of Goyder

N.B. – all tenderers should be aware that blank returns will be considered as a Non-Conforming Tender Response.

It is the best interest of all tenderers to make an entry in all available cells.

Refer to 0- SCORE SHEET for examples of what the Evaluation Panel will score against.

To help with this process Council have included a Tenderers Self-help Check Sheet.

This check sheet is for tenderers reference only.

## TENDERERS SELF HELP CHECKLIST

| Schedule description | | Sign off to check that you have completed this form. |
|---|---|---|
| Schedule 1 | Tender Form - Formal Offer | |
| Schedule 2 | Tenderer's Details | |
| Schedule 3 | Insurance | |
| Schedule 4 | Conflict of Interest | |
| Schedule 5 | Referees | |
| Schedule 6 | Statement of Conformity | |
| Schedule 7 | Organisation Structure, Facilities and Resources | |
| Schedule 8 | Experience | |
| Schedule 9 | Value added Services | |
| Schedule 10 | Response Times | |
| Schedule 11 | Pricing | |

W:\GDS-SYNERGY\07 Financial Management\81 Tender\02 Major Successful Tenders\73 RFT - Conservation Managment Plan for Australian Cornish Mining Sites, Burra - 07.2018.11

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## 7. Schedule 1     Tender Form – Formal Offer

I/We                                        (**Tenderer**) on
having read, understood and fully informed myself/ourselves/itself of the contents, requirements and obligations
of the Request for Tender, do hereby tender to provide and complete the Services described in the
Specifications in accordance with the Contract for the amounts set out in the Tender Return Schedules attached.

The Tenderer:

1.     is subject to the terms and conditions set out in the Conditions of Tendering;

2.     irrevocably offers to perform the Services on the terms of the Contract and the Specifications which form
       part of the Tender Documents subject only to the variations set out in Schedule ;

3.     confirms that this Tender has been prepared without any consultation, communication, agreement or
       other arrangement with any competitor regarding:

       3.1     **prices or methods, factors or formulae used to calculate prices;**

       3.2     **the intention or decision to submit a Tender, or the terms of the Tender;**

       3.3     **the submission of a Non-Conforming Tender; and**

       3.4     **the quality, quantity, specifications or particulars of the Services; and**

4.     holds this offer open and capable of acceptance by the Council for a period of 90 days from the closing
       date.

The undersigned undertakes that if selected as the successful Tenderer, I/we/it will execute and be bound by the Contract in accordance with the Conditions of Tendering.

**If the Tenderer is a company**, it must execute this Tender as follows:

---

**Executed** by [Insert Company name] ……………………………………………………………………. pursuant to section 127 of the *Corporations Act 2001*

-----------------------------------------------------
Signature of Director

-----------------------------------------------------
Name of Director (print)

-----------------------------------------------------
Signature of Director/Company Secretary
(*Please delete as applicable*)

-----------------------------------------------------
Name of Director/Company Secretary (print)

**OR**

-----------------------------------------------------
Signature of Sole Director and Sole Company Secretary

-----------------------------------------------------
Name of Sole Director and Sole Company Secretary (print)

**OR**
**Signed** for [Insert name of Representative] …………………………………………………………….. by an authorised representative in the presence of:

-----------------------------------------------------
Signature of witness

-----------------------------------------------------
Name of witness (print)

-----------------------------------------------------
Signature of authorised representative

-----------------------------------------------------
Name of authorised representative (print)

-----------------------------------------------------
Position of authorised representative (print)

---

**If the Tenderer is an individual**, the document must be executed as follows:

| Signed by [insert name] ………………………………………………………….. in the presence of: | |
|---|---|
| ------------------------------------------------------------<br>Signature of witness | ------------------------------------------------------------<br>Tenderer |
| ------------------------------------------------------------<br>Name of witness (print) | |

**If the Tenderer is a partnership**, the Tender must be executed as follows:

Partner 1:

| Signed sealed and delivered by [insert name] ……………………………………… in the presence of: | |
|---|---|
| ------------------------------------------------------------<br>Signature of witness | ------------------------------------------------------------<br>Signature of partner |
| ------------------------------------------------------------<br>Name of witness (print) | |
| ------------------------------------------------------------<br>Address of witness (print) | |

Partner 2:

| Signed sealed and delivered by [insert name] ……………………………………… in the presence of: | |
|---|---|
| ------------------------------------------------------------<br>Signature of witness | ------------------------------------------------------------<br>Signature of partner |
| ------------------------------------------------------------<br>Name of witness (print) | |
| ------------------------------------------------------------<br>Address of witness (print) | |

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8. **Schedule 2** **Tenderer's Details**

| 1. | **Name of Tenderer**<br><br>State in full the name(s) of the person(s) or the registered name(s) of the company(s) and trading names.<br><br>ABN number | |
|----|----|----|
| 2. | **Contact person**<br><br>Nominate a contact person for this tender to deal with any questions or queries that may arise. | |
| 3. | **Registered address** | |
| 4. | **Postal address** | |
| 5. | **Telephone** | |
| 6. | **Fax** | |
| 7. | **Email** | |
| 8. | **Tender conditions**<br><br>Tenderer to sign that it has read and understood this RFT and the Conditions of Tender. | |
| 9. | **Amendments to Tender Documents**<br><br>Tenderer to indicate the amendments it requests. | |

## 9. Schedule 3 Insurance

Provide details of insurance currently held by you and any proposed subcontractor that would be extended to provide cover for work under the Contract.

| Insurance type | Policy no | Extent of cover | | Expiry date | Name of insurer |
|---|---|---|---|---|---|
| | | Per incident $A | In aggregate $A | dd/mm/yyyy | |
| Public and products liability | | | | | |
| Professional indemnity (if applicable) | | | | | |
| Property and facilities | | | | | |
| Vehicles plant & equipment | | | | | |
| Workers compensation | | | | | |
| Other | | | | | |

## 10.   Schedule 4      Conflict of Interest

Does the Tenderer have any conflict of interest?

Yes                                  No

☐                                    ☐

If Yes, Provide details of any interest, relationship or clients which may or do give rise to a conflict of interest and the issue about which that conflict or potential conflict does or may arise.

## 11.  Schedule 5     Referees

Details of at least three references for similar work and information on the approximate date when work was completed and the approximate value of work undertaken.

Reuse this page if more than three references are provided.

**Client Name:**

Address:


Contact Name:

Telephone:

Date of Work:

Value of Work:


**Client Name:**

Address:


Contact Name:

Telephone:

Date of Work:

Value of Work:


**Client Name:**

Address:


Contact Name:

Telephone:

Date of Work:

Value of Work:

## 12.  Schedule 6      Statement of Conformity

Does the Tenderer Conform?

Yes                                        NO

☐                                          ☐

If No, than the Tenderer must list below all areas of non-conformity, partial conformity or alternative offer and the reasons therefore.

The Tender must be read to disregard and render void any area of the Tender which is non-conforming, partially conforming or an alternative offer except to the extent detailed in this Schedule.

If any non-compliance is determined to be unacceptable, the Tender may not be further considered.

NC = Non-conforming

PC = Partial conforming

AO = Alternate offer

| Area of non-conformity and reason | NC/PC/AO |
|---|---|
|  |  |
|  |  |
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13.     **Schedule 7         Organisation Structure, Facilities and Resources**

1.      **Organisation structure**

Provide details of the staff and the organisation structure proposed to be used for performance of the Services.  Details must include but not be limited to:

- Company structure to be used to support the Services including size and location of office, organisation structure

- Number of staff proposed to be used and their qualifications and experience

- Details of the award, enterprise agreement, and/or local area workplace agreement, under which staff will be employed, and rates of pay, conditions, or allowances

2.      **Employees** (Provide details)

3.      **Other details** (eg specific plant & equipment, vehicles)

4.      **Facilities**   (Provide details)

5.    Proposed subcontractors

Provide details in the Table below the proposed major sub-contractors or other representatives to be employed or engaged by the Tenderer.   The Tenderer must define the scope and extent of Services to be provided by sub-contractors.

| Subcontractor's name and address | Services to be provided | Item(s) |
|---|---|---|
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

6.    Contingency arrangements

Provide details of contingency arrangements should any facilities or sites required to facilitate the Contract become unavailable in the short and long term.

## 14. Schedule 8 Experience

### 1. Past performance

For how many years has the Tenderer engaged in the type of work required by the Contract?

Has the Tenderer had an appointment terminated on a project in the last five years? If yes please provide brief details.

Has the Tenderer terminated a project in the last five years? If yes please provide brief details.

Has the Tenderer refused to continue providing services under a contract in the last five years unless the terms or payments were changed from those which were originally agreed? If yes please provide brief details.

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## 2.      Current contracts

Provide details of current contracts in a local government environment including the range of services provided and the numbers and types of properties serviced.

## 3.      Other commitments

Provide details of other work commitments expected to continue during this Contract.

## 15. Schedule 9 Value Added Services

Does the Tenderer offer any Value added services

Yes                                     NO
☐                                       ☐

If yes, provide details of any other benefits you can offer to improve the level of service or value of your Tender. (Attach additional pages as required)

## 16. Schedule 10 Completion Time

Provide project timeline.

17.    Schedule 11   Pricing Schedule

Prices must be listed exclusive of GST unless shown otherwise

| CONSERVATION MANAGEMENT PLAN<br><br>FOR<br><br>AUSTRALIAN CORNISH MINING SITES<br><br>AUGUST 2018 | |
| --- | --- |
| TOTAL OF TENDERED COST   (exc gst) | $ |
| GOODS & SERVICES TAX   (gst) | $ |
| TOTAL CONTRACT SUM   (including gst) | $ |

Tenderer name:_____signature:_____

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## 18. Section G – Contract for Services

# REGIONAL COUNCIL OF GOYDER



## LOCAL GOVERNMENT
## WORKS
## CONTRACT

## GENERAL CONDITIONS OF CONTRACT

## GENERAL CONDITIONS OF CONTRACT

### 19.    Interpretation

19.1   In the Contract, except where the context otherwise requires:

19.1.1   "Contract" means:

19.1.1.1   the agreement between the Principal and the Contractor and includes the tender documents, these conditions of Contract, the specification, the Contracting Work Health & Safety Policy and any other items in the Contract schedule.

19.1.2   "Contract sum" means:

19.1.2.1   where the Principal accepted a lump sum, the lump sum; or

19.1.2.2   where the Principal accepted a schedule of rates, the sum determined by calculating the product of the rates and quantities listed in either the bill of quantities or the schedule of rates.

19.1.2.3   where the Principal accepts a lump sum and a schedule of rates then the "contract sum" is the aggregate of the sums calculated above (but does not include any deductions or additions which may be required to be made under the contract).

19.1.3   "Practical Completion" means:

19.1.3.1   the point when the works are complete except for minor omissions and defects, however, rectification of any minor omissions or defects must not prejudice the use of the works or prevent it from being reasonably used for its intended purpose and as further explained in Clause 20.6

19.1.3.2   The Superintendent must determine that the Contractor has reasonable grounds for not rectifying any minor omissions or defects immediately;

(a)   all tests which are required by the contract have been carried out and passed; and

(b)   all information and documents which are essential for the use, operation and maintenance of the works have been supplied.

19.1.4   "Principal" means:

19.1.4.1   the City, Town or District Council or other Authority constituted under the Local Government Act 1934 as amended and nominated in the Contract for whom the works are to be provided.

19.1.5   "Site" means:

19.1.5.1   the land and other places on under in or through which the works are to be executed and any other lands or place provided by the Principal for the purposes of the Contract.

19.1.6   "Specification" means

19.1.6.1   any technical specification, schedules, plans or drawings forming part of the Contract. Such specification shall be read with these General Conditions as an integral part of the Contract, but in the event of any inconsistency between the specification and these General Conditions the former shall (unless the Contract otherwise provides) prevail.

19.1.7   "Superintendent" means

19.1.7.1   any officer or person authorised by the Principal and notified to the Contractor as an authorised officer for the purpose of the Contract.

19.1.8   "Works" means

19.1.8.1   all work necessary for the completion of the Contract including any variations ordered or agreed by the Superintendent.

19.1.9   Words in the singular shall include the plural and words in the plural shall include the singular according to the requirements of the context, words importing the masculine gender shall include

the feminine or neuter gender and vice versa and words importing persons shall include partnerships and companies and vice versa.

19.1.10 The clause headings and sub-clause headings in the General Conditions of Contract shall not form part of the General Conditions of Contract and shall not be used in the interpretation of the Contract.

## 20. Status of Contractor

### 20.1 The Contractor

20.1.1 The Contractor, in performing the work under this Contract, is not for any purpose a partner, joint-venturer, servant, agent or employee of the Principal.

20.1.2 However, the services provided under this contract may be an administrative act pursuant to the Ombudsman Act 1972, and in particular amendments to that Act by the Ombudsman (Honesty and Accountability in Government) Amendment Act 2002 and be subject to investigation in the public interest by the office of the Ombudsman.

20.1.3 The Contractor must ensure compliance with all obligations arising under that or any other Act.

## 21. General Obligations

### 21.1 Contractors Responsibility

21.1.1 The Contractor shall perform and complete the works and shall (subject to any condition elsewhere provided in the Contract) provide all supervision, labour, materials, plant, transport and temporary works which may be necessary.

21.1.2 The Contractor must pay all employees a minimum of the award wage relevant to the classification of employment.

### 21.2 Specifications and Standards

21.2.1 All works rendered shall comply with specified standards and conform to the specification provided for in the Contract. Unless otherwise specified in the Contract, any materials to be incorporated in the works shall be new.

21.2.2 Where no standards are specified in the Contract, the works shall comply with the appropriate and current standards of the Standards Association of Australia or applicable Code of Practice.

21.2.3 If no standards or code of practice are applicable, the works shall be of the highest standard and carried out promptly with all due skill, care and diligence.

### 21.3 Site Responsibilities

21.3.1 The Contractor is responsible for the care of the works from the date of the commencement of the works or the date of possession of the site (whichever is the earlier) until close of business on the date of practical completion.

21.3.2 Without limiting the generality of the above, the Contractor will be responsible for:

21.3.3 the care, storage and protection of unfixed items;

21.3.4 items provided to the Contractor by the Principal; and

21.3.5 items brought onto the site by any sub-contractors.

21.3.6 The Contractors shall provide, erect and maintain all barricades, guards, fencing, signs, lighting, temporary roadways and footpaths, necessary for the protection of the works, other property and for the safety and convenience of the public in accordance with accepted Standards or Codes of Practice and shall remove them when no longer required.

21.3.7   The Contractor shall keep the site clean and tidy and regularly remove rubbish and surplus material.  On completion of the works, the Contractor shall clear away and remove from the site all construction and surplus materials, rubbish and temporary works.

21.4   Urgent Protection

21.4.1   If urgent action is necessary to protect property, members of the public or any of the Works under the Contract and the Contractor fails to take the necessary action then the Principal may take such action as it sees fit.

21.4.2   Where such action should have been taken at the Contractor's expense then any costs incurred by the Principal will be a debt due to the Principal by the Contractor.

## 22.   Starting and Completing

22.1   Possession of Site

22.1.1   The Principal shall on or before the expiration of the time stated in the Annexure give to the Contractor possession and control of the Site or sufficient of the Site to enable the Contractor to commence work and thereafter in accordance with the requirements of the Contract.

22.2   Starting the works

22.2.1   The Contractor shall commence work under the Contract within the time stated in the Annexure and shall, unless otherwise specified, give at least two working days' notice to the Superintendent prior to the commencement of work.

22.2.2   Notwithstanding the provisions of Clauses 20.1 and 20.2, the Principal may refuse to give the Contractor possession of the Site or any part of the Site if the Contractor is in breach of Clauses 24.4 and 26

22.3  Completion of the Works

22.3.1   The Contractor shall complete the Works to the satisfaction of the Superintendent within the time stated in the Annexure or within such extended time as agreed to in writing by the Superintendent.

22.3.2   The completion date may be extended by the Principal for any of the following reasons but will not be limited by the following:

22.3.2.1   a variation to the Works ordered by the Superintendent;

22.3.2.2   extra work ordered by the Superintendent;

22.3.2.3   change to the Works programme ordered by the Superintendent;

22.3.2.4   encountering an obstruction or condition not known at the time of tendering;

22.3.2.5   delay in receipt by the Contractor of necessary instructions, drawing or other information;

22.3.2.6   delay in receipt by the Contractor of materials to be provided by the Principal under the Contract;

22.3.2.7   exceptional adverse weather;

22.3.2.8   other special circumstances of any kind whatsoever outside the control of the Contractor.

22.4  Programme of the Works

22.4.1   The Contractor shall proceed with the Works with due expedition and without delay.

22.4.2   The Contractor shall within 14 days after the starting date, if so requested by the Superintendent, provide a programme of the Contractors activities.

22.4.3   The Contractor shall proceed in accordance with the programme, or any mutually agreed modification in writing, which the Contractor may require or which the Superintendent may request.

22.5  Suspension of the Works

22.5.1    The Superintendent may suspend the whole or any part of the Works if the Superintendent considers it necessary:

    22.5.1.1    as the result of an act or omission of the Principal, the Superintendent or an employee, consultant or agent of the Principal;

    22.5.1.2    as the result of an act or omission of the Contractor, a sub-contractor or an employee or agent of either;

    22.5.1.3    for the protection or safety of any person or property.

22.5.2    If the Contractor requires a suspension to the whole or part of the Works, the prior written approval of the Superintendent must be obtained and any such approval agreed by the Superintendent may have conditions of approval imposed.

22.5.3    Where a suspension of the Works is caused by the Contractor, sub-contractor or their employees or agents the Contractor will bear all costs incurred.

22.5.4    Where the suspension of the Works is due to an act or omission of the Principal, Superintendent, or an employee, agent or consultant of the Principal, any variation in the costs will be determined in accordance with clause 21.2

22.6 Practical Completion

22.6.1    Practical Completion of the whole of the Works shall occur when the Works reach a state when, notwithstanding any defects or outstanding items therein, they are taken or are fit to be taken into use or possession by the Principal.

22.6.2    Practical Completion of part of the Works may occur if provided for elsewhere in this Contract but only if it is fit for such part to be taken into use or possession independently of the remainder.

22.6.3    Upon Practical Completion of the Works or part of the Works to the satisfaction of the Superintendent, a certificate of Practical Completion as provided in the Annexure shall be issued by the Superintendent.

22.7 Quality Assurance

22.7.1    Where it is a requirement of the Contract, the Contractor will:

    22.7.1.1    plan, establish and maintain a quality system which conforms to the requirements specified;

    22.7.1.2    provide the Superintendent with access to the quality system of the Contractor and each of the sub-contractors to enable monitoring and quality auditing.

22.8 Examination and Testing of Materials

22.8.1    The Superintendent may at any time, and from time to time, direct that any materials or work to be used in or forming part of the Works be examined and tested.

22.8.2    The Superintendent may at any time and from time to time before the issue of the Final Certificate pursuant to sub-clause 20.11 direct the Contractor to open up or pull down for examination or testing any part of the Works.

22.8.3    If the part of the Works referred to above has been covered up or put out of view in contravention of a direction given by the Superintendent is found not to be in accordance with the Contract, then the whole of the cost of opening up, pulling down, reconstruction and making good shall be paid by the Contractor.

22.8.4    If the part of the Works is found to be in accordance with the Contract, the whole cost of opening up, pulling down, reconstruction and making good shall be paid by the Principal.

22.8.5    If under a test any part of the works fails to fulfil the requirements of the Contract, tests on the remedial work of that part and tests on all other parts of the Works affected by the remedial work shall be repeated in accordance with the requirements of the Contact.

22.8.6    The cost of such repeat tests shall be paid by the Contractor.

22.9 Defects Liability

22.9.1 Period of Defects Liability

22.9.1.1 From the date of Practical Completion of the Works, the Contractor shall maintain the Works for the defects liability period stated in the Annexure and shall make good, at the Contractor's own expense, any omission or defect in the work or materials and all loss or damage to the Works occasioned by such omission or defect.

22.10 Principal May Correct

22.10.1 If any such defects are not corrected within a reasonable time by the Contractor, the Principal may, after giving 14 days written notice to the Contractor, employ others to correct the same and the cost thereof shall be payable by the Contractor to the Principal.

22.11 Issue of Final Certificate

22.11.1 At the end of the defects liability period and when the Works and any remedial work have been finally and satisfactorily executed and the Contractor has fulfilled all his other obligations under the Contract, the Superintendent shall issue to the Contractor a Final Certificate as provided in the Annexure.

## 23. Variations and Extra Works

23.1 Variations and Extra Works Ordered

23.1.1 The Superintendent may order the Contractor to do all or any one of the following things:

23.1.1.1 increase, decrease or omit any part of the Works;

23.1.1.2 change the character or quality of any material or work;

23.1.1.3 change the levels, lines, positions or dimension of any part of the Works;

23.1.1.4 execute additional work;

23.1.2 No variation shall be made to the Works by the Contractor except as directed by the Superintendent or approved in writing by the Superintendent.

23.1.3 Each agreed variation shall be valued before the work to which the variation relates is commenced. The value of the variation shall be taken into account in determining the final Contract sum.

23.2 Valuation of Variations

23.2.1 A variation shall be valued in accordance with the rates or prices in the Contract and in so far as the Superintendent determines that those rates are applicable to the variation.

23.2.2 Where the Superintendent determines that the rates or prices in the Contract do not apply to a variation, the rate or price payable for the variation shall be determined by an agreement between the Contractor and the Superintendent, but if the Contractor and the Superintendent fail to agree on the rate or price, the matter shall be determined by an arbiter in accordance with Clause 25

23.2.3 Notwithstanding the existence of a dispute, the Contractor shall continue to fulfil all obligations under the Contract.

## 24. Performance and Payment

24.1 Value of the Contract

24.1.1 The value of the Works shall be the Contract sum adjusted by any additions or deductions made as provided for in the Contract.

24.1.2 Progress Payment

24.1.2.1 Unless otherwise provided and subject to these conditions, claims for payment shall be made at calendar monthly intervals.

24.1.2.2 The Contractor shall be entitled to such payment within twenty eight (28) days of receipt from the Contractor of a claim for work completed to the satisfaction of the Superintendent, except for such sum as may be retained pursuant to Clause 22.3

24.2 Retention Monies

24.2.1 The Principal may deduct from moneys otherwise due to the Contractor amounts up to the percentage limit, if any, stated in the Annexure for retention moneys.

24.2.2 Upon issue of the Certificate of Practical Completion in respect of the works, the retention monies held by the Principal shall be reduced by the amount stated in the Annexure.

24.3 Final Payment

24.3.1 Within fourteen (14) days after the Final Certificate has been issued, the Principal shall pay to the Contractor all amounts then payable including any retention monies held by the Principal.

24.3.2 Payment will be made after –

24.3.2.1 the finished project is assessed against the criteria shown in this RFT, and the presentation of an invoice that reflects costs shown in the tender response schedules.

24.3.2.2 Council has received copies of the Work Zone Traffic Management Plans.

24.3.2.3 Council has received all Safe Work Method Statements developed for the project.

# 25. Assignment and Sub-Contracting

25.1 Assignment and Sub-Contracting

25.1.1 The Contractor shall not assign nor sub-contract the Works or any part thereof without the approval of the Superintendent in writing. Such approval shall not be unreasonably withheld.

25.2 Request to Sub-Contract

25.2.1 The Contractor shall provide to the Superintendent in writing a request for approval to sub-contract, particulars of the work to be sub-contracted and the name and the address of the proposed Sub-Contractor.

25.3 Approval to Sub-Contract

25.3.1 Approval may be conditional on the sub-contract including:

25.3.1.1 provision that the Sub-Contractor shall not assign or sub-contract without the consent in writing of the Contractor.

25.3.1.2 provisions which may be reasonably necessary to enable the Contractor to fulfil the Contractor's obligations to the Principal.

25.3.1.3 Approval to sub-contract shall not relieve the Contractor from any liability or obligation under the Contract. Except where the Contract otherwise provides, the Contractor shall be liable to the Principal for the acts and omissions of Sub-Contractors and servants and agents of Sub-Contractors as if they were acts or omissions of the Contractor.

# 26. Statutory Obligations

26.1 General

26.1.1 The Contractor must comply with and give all notices required by any Act of Parliament, ordinances, regulations or by-laws relating to the Works.

26.2     Staff Direction

26.2.1     The Contractor will be responsible for the direction and control of their own staff.

26.2.2     Where the Contractor is required to utilised Council staff and equipment for monitoring road surface conditions on site, direction of Council Employees will be given by Contractors Supervisor via the Council Supervisor(s) only.

26.2.3     Work performed by the Contractors will be executed in a manner to comply with the safe systems of work within their own organisation and formulated by that particular organisation.

26.3     Variances

26.3.1     If, in the opinion of the Contractor, the provisions of any document forming part of the Contract are at variance with anything covered by this clause 9, then the Contractor shall give written notice to the Principal specifying the departure from any such provisions which he considers necessary to comply with the legislation, notices, ordinances, by laws and the like.

26.4     Work Health & Safety

26.4.1     Without limiting in any way the generality of the foregoing, the Contractor must comply with the provisions of the Work Health & Safety Act2012 (SA) and all associated regulations (as amended from time to time) and will ensure that its own contractors and employees will comply with the Act and all regulations, improvement notices, prohibition notices and codes of practice issued thereunder and having application to this contract.

26.4.2     The Contractor acknowledges that the Principal has duties imposed upon it by the Work Health & Safety Act2012 (SA); Division 2 – Primary Duty of Care and as such the Principal has the right:

26.4.2.1     to ensure that the Contractor complies with the Act;

26.4.2.2     to inspect safety measures and documentation; and

26.4.2.3     to interrupt or suspend the Works if safety standards are violated.

26.4.3     The Principal will supply Council staff working on the work site with a copy of the Safe Work Procedure as developed by the Council for tasks that can be foreseen to be performed

26.4.4     The Principal will conduct at least one Work Site & Signage Audit during the construction of this project.

26.4.4.1     Failure to comply with the Work Site & Signage Audit will necessitate additional audits.

26.4.5     Upon completion of the project and before payments are authorised the Principal will require a copy of the completed Safe Work Method Statements and Work Zone Traffic Management Plans for Council records.

26.4.6     The Principal must provide its WHS Contractor Management Policy and may provide other Work Health & Safety documents to the Contractor and the Contractor must acknowledge that it has been provided with and has read and understands such policies and documents of the Principal.  The Contractor also undertakes to ensure that such policies and documents (as amended from time to time) will be brought to the attention of the Contractor's employees or any sub-contractors.

26.4.7     The Contractor also undertakes to ensure that such policies and documents (as amended from time to time) will be brought to the attention of the Contractor's employees or any sub-contractors.

26.4.8     The Contractor agrees to immediately notify the Principal of any incident or accident occurring on or in relation to the site or arising from the undertaking of the contract including those involving the public.

26.5    Return to Work

26.5.1    The Contractor must ensure that it is registered as an employer under the Return to Work Act 2015 ("the Act") and that it must pay all monthly levies due thereunder in respect of its employees engaged in and about the works.

26.5.2    The Contractor must produce to the Superintendent on the execution of this Agreement a current certificate of registration as an employer under the Act.

26.5.3    The Contractor must ensure that all Sub-Contractors engaged by it have current certificates of registration as employers under the Act and must produce the same to the Superintendent upon request in writing by the Superintendent.

26.5.4    The Contractor must indemnify the Superintendent in respect of any action, claim, demand, suit or proceedings made by any employee brought in connection with the Act.

26.5.5    Insurance effected by the Contractor pursuant to this clause is limited only by the amount stated in any statute and is in all other respects unlimited.

## 27.    Indemnities and Insurances

27.1    Indemnity

27.1.1    The Contractor agrees to indemnify and to keep indemnified the Principal, its employees, servants and agents and each of them from and against all actions, costs, claims, charges and expenses whatsoever which may be brought or made or claimed against them or any of them arising out of any negligent act or omission of the Contractor or its employees, servants and agents in relation to the granting of this Contract.

27.1.2    Notwithstanding the above, the Contractor shall not be rendered liable for personal injury to or the death of any person or loss of or damage to any property resulting from any breach by the Principal of any provision of this Contract or any negligent act or omission of the Principal or its employees, servants and agents.

27.2    Employee Indemnity

27.2.1    The Contractor shall indemnify and keep indemnified the Principal against liability for all loss or damage resulting from personal injury to or the death of the Contractor or any Sub-Contractor or any employee or agent of the Contractor or of any Sub-Contractor (other than such injury or death resulting from any breach by the Principal of any of the provisions of the Contract or any negligent act or omission of the Principal, the Superintendent, or the employees, professional consultants or agents of the Principal) occurring during the currency of the Contract and arising out of or in connection with the execution of the works under the Contract or the performance of the Contract and against all claims, demands, actions, suits or proceedings, costs and expenses whatsoever in respect thereof or in relation thereto, whether at Common Law or under any applicable statute.

27.3    Public Liability Insurance

27.3.1    The Contractor shall take out and keep current a Public Liability Policy of insurance in the name of the Contractor which covers the Principal, the Contractor, the Superintendent and all sub-Contractors employed from time to time in relation to the works under the Contract to cover their liabilities to third parties including any liability under Clause 10.1.  The policy shall be for an amount not less than the sum stated in the Annexure.

27.3.2    The Contractor shall not commence the works until confirmation of the Public Liability Policy of insurance is given to the Principal.

27.4    Contract Works Insurance

27.4.1    The Contractor shall, whenever required to do so, take out Contracts works insurance for an amount not less than the amount stated in the Annexure.  The policy shall be maintained for the currency of the Contract.

27.5    Contractor Fails to Insure

27.5.1    If on demand, the Contractor fails to produce evidence of compliance with clauses 10.3 and 10.4, the Superintendent, on behalf of the Principal, may effect such insurance and recover the costs thereof from money otherwise payable by the Principal to the Contractor.

27.6    Notices of Claim

27.6.1    The Contractor shall give immediate notice in writing to the Principal following any occurrence which may result in a claim against any of the insurances required in clauses 25.3 and 25.4 above.

# 28.    Settlement of Disputes

28.1    Disputes and Procedures

28.1.1    All disputes or differences between the Principal, or the Superintendent on behalf of the Principal, and the Contractor arising out of the Contract or concerning the performance or non-performance by either party of its obligations under the Contract whether raised during the execution of the Works or after the completion of the Works shall be referred to an arbitrator who shall be either:

28.1.1.1    mutually agreed upon by the parties in writing; or

28.1.1.2    in the absence of that agreement, one of at least three persons, none of whom shall be an employee of the Principal or the Contractor or have had any association with the work under the Contract, whose names are submitted in writing by the Principal for selection by the Contractor; or

28.1.1.3    in the absence of that selection, by an arbitrator nominated by the State Chapter of the Institute of Arbiters Australia and appointed in accordance with the provisions of the laws of South Australia.

28.2    Arbitration

28.2.1    The party requesting arbitration shall give notice in writing to the other party within twenty-eight days of the dispute or difference arising and shall be responsible for the initial costs associated with arbitration.

# 29.    Default or Bankruptcy of Contractor

29.1    General

29.1.1    If the Contractor fails to commence the Works within the time stated in the Annexure or fails to carry on the Works at a reasonable rate or commits any breach of the Contract or intimates that the Contractor is unable or unwilling to complete the Works or becomes insolvent or bankrupt, or being a company has a receiver appointed to it or goes into liquidation, the Principal may suspend payment under the Contract and may call upon the Contractor, by notice in writing specifying the default, to show cause within fourteen days, why the powers hereinafter contained should not be exercised.  Such notice shall not be unreasonably given.

29.2    Determination of the Contract

29.2.1    If the Contractor fails within the fourteen day period to show cause to the satisfaction of the Principal, then the Principal without prejudice to any other rights and remedies that it may possess may, by notice in writing to the Contractor, determine the Contract.

29.3    Principal May Complete Works

29.3.1    In the event of determination all monies that would otherwise be payable or refundable to the Contractor may be used by the Principal for the purpose of completing the Works.

29.3.2 If the Principal takes work out of the hands of the Contractor under Clause 27.2, the Principal shall complete that work and the Principal may without payment of compensation take possession of such of the plant, equipment, material and other things on or in the vicinity of the Site as are owned by the Contractor and are reasonably required by the Principal to facilitate completion of the work.

29.3.3 If the Principal takes possession of the plant, equipment, material or other things, the Principal shall maintain them and on completion of the work, the Principal shall return to the Contractor such plant, equipment, material or other things taken under this clause which are surplus.

## 30. Default of Principal

30.1 General

30.1.1 Without prejudice to any of the rights and remedies which the Contractor may possess if the Principal fails to make any payment due under the provisions of Clause 21 or if the Principal or his servants or agents seriously interfere with or obstruct the carrying out of the Works, then the Contractor may give written notice to the Principal specifying the default and calling on the Principal to show cause, within fourteen days, why the powers hereinafter contained should not be exercised. Such notice shall not be unreasonably given.

30.2 Contractor May Take Action

30.2.1 If the Principal fails, within the fourteen day period, to show cause to the reasonable satisfaction of the Contractor then the Contractor may by notice in writing to the Principal:

30.2.1.1 suspend the execution of the Works, or

30.2.1.2 determine the Contract.

30.2.2 Such notice shall not be unreasonably given.

## 31. Notices

31.1 Serving Notices

31.1.1 Any notice to be given to the Contractor under the terms of the Contract may be served by sending by post, leaving the notice at the address given in the tender or by facsimile. When posted in a pre-paid letter, such notice shall be deemed to have been duly received at the time at which the notice would have reached that address in the ordinary course of post.

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## 32. Annexure to the General Conditions of Contract

For the purpose of this Contract, the following items, in conjunction with the Conditions of Tendering, the General Conditions of Contract, any Special Conditions of Contract, the Specifications and the Contracting Work Health & Safety Policy are to apply:

| | | |
|---|---|---|
| 1. | The Contract shall be governed by and construed with reference to the laws for the time being in force in the state of: | South Australia |
| 2. | All payments made under the Contract shall be made at: | Completion of work and successful review by The Superintendent. (Clause 24.3.2) |
| 3. | The Contract shall be: (Schedule of rates/lump sum) | Lump Sum |
| 4. | The Principal is: (Name of Principal) | Regional Council of Goyder |
| 5. | The address of the Principal is: | 1 Market Square Burra  SA  5417 |
| 6. | The Superintendent is: (Name of person nominated) | Emily Moore |
| 7. | The address of the Superintendent is: | 1 Market Square. Burra   SA   5417 |
| 8. | The amount of Public Liability Insurance shall be not less than (Clause 25.3): | $20,000,000 |
| 9. | The amount of Contract Works Insurance shall not be less than (Clause 25.4): | $20,000,000 |
| 10. | The time for giving possession of the site is (Clause 20) | By agreement with the Principal and with seasonal considerations |
| 11. | Work to commence within (Clause 20.2): | By agreement with the Principal and with seasonal considerations |
| 12. | Work to be completed within (Clause 20.3): | Nil |
| 13. | The Defects Liability Period for the works shall be (Clause 20.9): | Twelve months from the date of when the site is handed back to Council after the completion of work. |
| 14. | Retention monies are required in the amount of (Clause 22.2): | 0% |
| 15. | The percentage by which the retention monies shall be reduced upon practical completion is (Clause 22.2): | 100% |
| 16. | Tender enquiries to be referred to: | Emily Moore 1 Market Square Burra  SA  5417 (08) 8892 0100 |
| 17. | Tenders Close: | 3:00pm on 17th August 2018 |
| 18. | Tenders to be submitted to: | Tender Box 1 Market Square Burra   SA   5417 Before 3:00pm on 17th August 2018 |
| 19. | The following Clauses have been deleted from the General Conditions of Contract: | Nil |
| 20. | The following Clauses have been amended and differ from the clauses in the General Conditions of Contract: | Nil |

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# Appendix F - Bibliography

## Archival Sources

<u>Museums Victoria</u>
MM 3105.

<u>South Australian Heritage</u>
Heritage SA research packets 10011R, 10013R, 10018R, 10019R, 10020R, 10021R, 10022R, 10023R, 10024R, 10028R, 10029R, 10030R, 10031R, 10032R, 10033R, 10034R, 10036R, 10037R, 10038R, 10039R, 10040R, 10041R, 10045R, 10046R, 10047R, 10049R, 10052R, 10053R, 10054R, 10055R(1), 10055R(2), 10056R, 10159R, 10160R, 10203R, 10359R, 10403R, 10404R, 10419R, 10432R, 10434R, 10435R, 10436R, 10445R, 10446R, 10447R, 10970R, 10989R, 11187R.

Aeuckens, Annely, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

Aeuckens, 1875 Ratepayers Petition. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.

Alvey, Harry, "Burra, Its Mines and Methodism". Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10013

Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10403.

Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10419.

Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10989.

Royal South Australian Almanack for 1848. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10023.

<u>State Library of SA (SLSA)</u>
*Photographs*
B 6820, B 69728/1, B 69728/2, B 4147, B 4149, B 27694, B 8631, B 27709, B 18896, B 8628, B 27707, B 8630, B 23609
PRG 733/507
SRG 94/10/18/105

*Maps*
C178
C178/2 Burra Burra Mine plan
C40
C41
BRG 42/119/75
BRG 42/119/80

*Paintings*
PRG 631/2/1400

<u>State Library of Victoria (SLV)</u>
*Photographs*
H25811, H25812

<u>State Records of SA (SRSA)</u>
State Records of SA (SRSA) GRG54/210 (Unit 1)

Register of prisoners and charge books - Redruth Gaol, from 1861

<u>UniSA, Louis Laybourne Smith School of Architecture, Architecture Museum (LLSAM)</u>
Book No. 1431

McDougall & Vines, "Conservation Plan for Burra Cemeteries", (1991).

Bierbaum reports on Redruth Police Station, Gaol, Courthouse.

## Conservation Plans and Reports
ANU, "Australian Cornish Mining Heritage Site: Burra State Heritage Area, South Australia, National Heritage Research Report (DRAFT 2.0) Dated: July 2014, Appendix A".

Auhl, Ian, "Burra Conservation Plan: Historic Buildings and Areas Survey", (Burra: The Burra Conservation Study Steering Committee, 1978).

Austral Archaeology Pty Ltd, "Burra Creek Dwellers Dugout Conservation Study", (Burra: The Regional Council of Goyder & The Burra Branch of the National Trust of Australia (SA), 1999).

Austral Archaeology Pty Ltd, "Line of Lode, Broken Hill Conservation Management Plan", (Broken Hill: Line of Lode Association Incorporated 2001).

Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (Burra: District Council of Burra Burra, 1990).

Birt, Peter "Whitewash and Red Clay: The archaeology of the Burra Creek Miners' Dugouts: an interim report for Heritage South Australia, the National Trust of SA, the Regional Council of Goyder and the Mid-North Regional Development Board", (Adelaide: Birt, 2001-2002).

"Cornwall and West Devon Mining Landscape World Heritage Site Management Plan 2013-2018", (Cornish Mining World Heritage, November 2012).

EBS Ecology, "Burra Creek Revegetation Action Plan", (Adelaide: EBS Ecology 2013).

Habitable Places & Phillips and Pilkington Architects, "Burra Mines Storeroom Yard and Wall Conservation Plan", February 1996.

Heritage SA, Redruth Methodist Church – Conservation Management Strategy, May 2013.

Kerr, James S., "Fremantle Prison", (Fremantle: Department of Contract & Management Services for the Fremantle Prison Trust Advisory Committee, 1998).

Langmead, Donald, *George Strickland Kingston: Pioneer and Architect*, (PhD Thesis, Flinders University of South Australia, May 1983).

Lester Firth & Murton Pty Ltd, "Burra Conservation Plan", (Adelaide: Dept of Housing, Urban and Regional Affairs, 1978).

Payton, John Philip, "The Cornish in South Australia: Their Influence and Experience from Immigration to Assimilation., A thesis presented for the Degree of Doctor of Philosophy", University of Adelaide, 1978.

Regional Council of Goyder, "Goyder Master Plan 2018-2033", (Burra, Regional Council of Goyder 2018).

South Australian Department of Environment and Planning, "Heritage of the Lower North", (Adelaide: SA Dept of Environment and Planning, 1983).

URPS, "Kapunda Historic Mine Site Conservation Management Plan", (Light Regional Council, September 2008).

**Pamphlets**
"Burra's Hotels", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2008.

"Miner's dugouts", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2007.

"Paxton Square", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2007.

"Redruth Gaol", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2007.

"The Burra Institute & Town Hall", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2002.

"The churches of Burra", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2008.

"The early townships of Burra", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2007.

"The Telegraph Office", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2009.

"The Thames Street Cottage", Burra History Group pamphlet (Compiled by Julian Ratcliffe), 2007.

**Newspapers and Periodicals**
"88th Anniversary of the Burra-Redruth Methodist Church", *Burra Record*, 30 May 1939, p3.

"A Merry Christmas and a Happy New Year", *Burra Record*, 27 December 1878, p2.

"A New Sunday School", *Chronicle*, 19 April 1924, p13.

"A Pioneer Preacher", *The Register*, 22 June 1904, p6.

"A Trip to Kooringa", *Adelaide Observer*, 28 December 1850, p4.

"Advertising", *South Australian Register*, 14 September 1854, p1.

"A Visit to the Northern Mines of South Australia", *South Australian Register*, 28 November 1846, p4.

"Advertising", *Adelaide Observer*, 15 December 1855, p1.

"Advertising", *Adelaide Times*, 18 November 1856, p3.

"Advertising", *Adelaide Times,* 16 October 1857, p3.

"Advertising", *Adelaide Observer*, 12 February 1859, p8.

"Advertising", *Burra Record*, 18 June 1880, p2.

"Advertising", *Burra Record*, 9 January 1885, p2.

"Bank of Australasia", *South Australian Weekly Chronicle*, 18 February 1860, p1.

"Bible Christian Missionary Society", *South Australian Register*, 21 March 1853, p3.

"Building Improvements", *The South Australian Advertiser*, 31 January 1874, p5.

"Burra", *Kapunda Herald*, 1 July 1904, p6.

"BURRA BURRA MINES." *Burra Record*, 31 July 1907, p2.

"Burra, December 18", *South Australian Register*, 23 December 1879, p2.

"Burra, January 16", *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7.

"Burra Methodism", *Australian Christian Commonwealth*, 4 April 1930, p3.

*Burra Record,* March 1880, p2.

*Burra Record,* 6 November 1883, p2.

*Burra Record*, 19 February 1884, p2.

*Burra Record*, 22 February 1884, p2.

*Burra Record*, 13 February 1885, p2.

*Burra Record*, 27 September 1893 p.3

"Burra Wesleyan Church", *South Australian Register*, 9 December 1879, p5.

"Classified Advertising", *The South Australian Advertiser*, 16 July 1861, p1.

"Colonial Secretary's Office, Adelaide, Dec.14.1847", *South Australian Register*, 18 December 1847, p4.

"CONCERNING PEOPLE", *The Register*, 23 June 1913, p6.

"Death of Rev. J.G. Wright", *The Advertiser*, 22 June 1904, p6.

"Dinner to Mr. M.H. Furniss, at Kooringa", *The Express and Telegraph*, 28 August 1874, p2.

"Domestic News", *Adelaide Times*, 24 August 1853, p2.

"Early Recollections of the Burra Burra Mine", *Kapunda Herald*, 2 November 1906, p5.

"Friday 3rd November", *South Australian Gazette and Mining Journal*, 4 November 1848, p4.

"Gaol at Redruth", *South Australian Register*, 3 October 1851, p4.

"GENERAL TRADE LIST." *The Shipping Gazette and Sydney General Trade List*, 15 June 1857, p145.

"Girls' Reformatory, Redruth", *Burra Record*, 19 July 1922, p3.

"Great Land Sale", *South Australian*, 4 September 1849, p2.

"Kadina", *The Wallaroo Times & Mining Journal*, 23 June 1866, p5.

"Kooringa", *Adelaide Observer*, 30 August 1856, p8.

"Kooringa", *South Australian Weekly Chronicle*, 7 May 1859, p7.

"Kooringa", *Adelaide Observer*, 19 November 1859, p1.

"Kooringa", *South Australian Weekly Chronicle*, 7 July 1860, p7.

"Kooringa", *The South Australian Advertiser*, 8 January 1861, p3.

"Kooringa", *South Australian Register,* 15 March 1862, p3.

"KOORINGA" *Yorke's Peninsula Advertiser*, 25 January 1884, p3.

"Kooringa and Redruth", *The South Australian Advertiser*, 3 February 1866, p3.

"Laying Foundation Stones of Mechanics' Institute, Burra", *South Australian Chronicle and Weekly Mail*, 19 December 1874, p12.

"Legislative Council", *Adelaide Times*, 17 November 1855, p2.

"Licences", *South Australian Register*, 18 March 1848, p3.

"Local Intelligence", *Adelaide Observer,* 16 December 1848, p3.

"Local Intelligence", *Adelaide Observer*, 1 September 1849, p2.

"Local Intelligence", *Adelaide Times*, 15 October 1849, p3.

"Local Intelligence", *Adelaide Times*, 16 August 1856, p3.

"Local News", *South Australian Gazette and Mining Journal*, 29 January 1852, p3.

"Masonic", *Burra Record*, 8 October 1935, p4.

"Memo", *South Australian Register*, 2 June 1855, p3.

"Methodist Union", *Kapunda Herald*, 12 January 1900, p3.

"MINES AND METALS." *Adelaide Observer*, 11 December 1847, p4.

"New General Publicans' Licences, *Adelaide Observer*, 15 September 1849, p4.

"No. XXII, Kooringa", *Adelaide Observer*, 12 July 1851, p6.

"Obituary- James Tiver", *Burra Record*, 17 March 1909, p3.

"Old Identities", *Burra Record*, 21 February 1917, p2.

"Opening of the Burra Burra Miners' and Mechanics Institute", *South Australian Register*, 2 September 1857, p3.

"Opening of new barracks in Kooringa Wednesday April 15", *Burra Record*, 10 April 1885, p2.

"Patent Copper Company", *South Australian Register,* 12 July 1851, p4.

"Primitive Homes", *News*, 17 June 1928, p8.

"Primitive Methodism", *The Advertiser*, 23 February 1900, p6.

"Provincial Telegrams", *Evening Journal*, 24 December 1878, p4.

"REDRUTH:" *South Australian Weekly Chronicle*, 29 August 1863, p2.

"Redruth", *The South Australian Advertiser*, 1 July 1864, p3.

"Redruth Reformatory Abolished", *The Advertiser*, 15 September 1922, p13.

"Religious and Philanthropic", *South Australian Register*, 10 October 1874, p6.

"Reminiscences of Burra in the Fifties", *Burra Record*, 18 April 1934, p1.

"Reminiscences of Burra in the Fifties", *Burra Record*, 16 May 1934, p1.

"Reminiscences of Burra in the fifties of last century", *Burra Record*, 11 April 1934, p3.

"Reopening of the Burra Institute", *South Australian Register,* 20 October 1875, p6.

"Saturday, 15 June", *South Australian Gazette and Mining Journal*, 20 June 1850, p4.

"Sketches of the present state of South Australia", *South Australian Register*, 8 July 1851, p3.

*South Australian Register*, 29 August 1849, p4.

"Sparks", *Burra Record*, 27 September 1893 p.3.

"St Mary's Church, Burra", *South Australian Chronicle and Weekly Mail*, 12 July 1879, p 2.

"St Mary's Sunday-School" *Burra Record*, 19 July 1893, p.3

"Tenders", *Adelaide Observer*, 10 October 1846, p6.

"Tenders Accepted", *Adelaide Observer*, 30 November 1878, p7.

"Tenders Accepted", *Adelaide Observer*, 30 November 1878, p7.

"THE BON ACCORD MINING COMPANY." *Adelaide Times*, 10 June 1857, p3.

"The Burra Burra Mine", *The Perth Gazette and Independent Journal of Politics and News*, 26 September 1851, p3.

"The Burra Burra Mines", *South Australian Register*, 21 March 1855, p2.

"The Burra Burra Mines and Smelting Works", *South Australian Register*, 21 March 1855, p2.

"The Burra Hospital", *South Australian Register*, 24 May 1878, p6.

"The Census of South Australia for 1855", *Empire*, 3 September 1855, p2.

"The Government Manifesto", *Burra Record*, 17 April 1885, p2.

"The Late Captain Killicoat", *The Express and Telegraph*, 23 January 1886, p3.

"The Late Mr M.H. Furniss", *Adelaide Observer*, 29 June 1895, p30.

"The Northern Mines and Country", *South Australian*, 17 December 1847, p3.

"The Old Bible Christian Church: Demolishing the Building", *Burra Record*, 13 January 1909, p3.

"The Redruth Gaol", *The Express and Telegraph*, 1 March 1894, p2.

"The Redruth Gaol", The Port Augusta Dispatch, *Newcastle and Flinders Chronicle*, 22 October 1897, p2.

"THE REVENUE AND EXPENDITURE." *South Australian Register*, 5 February 1869, p2.

"Topics", *Burra Record*, 25 April 1879, p2.

"Visit to the Burra Burra", *South Australian Register*, 9 June 1847, p2.

"Waterspout at Kooringa", *Adelaide Times*, 17 May 1851 p3.

**On-site Heritage Signage**

"Hampton" onsite heritage signage.

Mines and Energy Burra Mine Museum, "Dressing Tower", on site heritage signage.

Mines and Energy Burra Mine Museum, "Graves Enginehouse", on site heritage signage.

Mines and Energy, National Trust, "Miners Dugouts", on site heritage signage.

Mines and Energy Burra Mine Museum, "Morphetts Enginehouse", on site heritage signage.

Mines and Energy Burra Mine Museum, "Morphetts Windinghouse", on site heritage signage.

Mines and Energy Burra Mine Museum, "Ore Dressing Tower c.1875", on site heritage signage.

Mines and Energy South Australia, District Council of Burra Burra, "The Smelting Houses", on site heritage signage.

Paxton square, on site heritage signage.

Regional Council of Goyder, "The Burra Jinker 1851", on site heritage signage.

The Burra History Group, 10 Thames Street, on site heritage signage.

**Journal Articles**

Bell, Peter, "Continuity in Australian Timber Domestic Building: An Early Cottage at Burra", *Australian Journal of Historical Archaeology*, 1990.

Bell, P. and McCarthy, J. "The Evolution of Early Copper Smelting Technology in Australia", *Journal of Australian Mining History*, Vol. 8, September 2010.

Carter, J. and Cross, R., "Success and Failure: Earliest Attempts at the Commercial Smelting of the 'Monster Mine's' Copper Ore in the Province of South Australia", *Journal of the Historical Society of South Australia*, Issue 25, 1997.

Davies, Mel, "Financing the Burra Burra Mines, South Australia: Liquidity Problems and Resolution", *Journal of Australasian Mining History*, Volume 8, September 2010.

Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *South Australian Engineering Heritage Conference: Transactions Proceedings*, 2014.

Keith Johns, R., "The Cornish at Burra, South Australia", *Journal of Australasian Mining History*, Volume 4, September 2006.

Payton, Philip, "1848 and all that", *Journal of the Historical Society of South Australia*, No. 42, 2014.

Waterton, Emma, Staiff, Russell, Bushell, Robyn & Burns, Emily, (2019) "Monster mines, dugouts, and abandoned villages: a composite narrative of Burra's heritage", *Journal of Heritage Tourism*, 14:2, 85-100.

## Books

Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986).

Auhl, Ian, and Finch, Perry, *Burra in Colour*, (Adelaide: Rigby Limited, 1973).

Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, (Adelaide: Rigby Limited, 1969).

Austin, J.B., *The Mines of South Australia including also an account of the Smelting Works in that Colony*, (Cambridge: Cambridge University Press, 1863).

Birt, Peter, and Copley, Vincent, "Coming back to country: a conversation at Firewood Creek", in Smith, Claire; Wobst, H. Martin (eds.). *Indigenous Archaeologies: Decolonising Theory and Practice.* (Routledge, 2004).

Blainey, Geoffrey, *Gold and Paper 1858-1982: A History of The National Bank of Australia Ltd*, (Melbourne: Georgian House, 1986).

Devenport, John, *St Mary's Church, Burra: the first 150 years*, (Burra: The Anglican Parish of SA, 1997).

Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012).

Heritage Office of New South Wales and the Department of Urban Affairs and Planning, *Heritage Curtilages*, (Sydney: The Department of Urban Affairs and Planning, c.1996).

Heyman, Shirley, *Men of the Wheal: life on the Burra 1848-54*, (1973).

Kerr, James S., *The Conservation Plan: a guide to the preparation of conservation plans for places of European cultural significance* (Sydney: National Trust of Australia (NSW), 1990).

Langmead, Donald, *Accidental Architect: the life and times of George Strickland Kingston*, (Sydney: Crossing Press, 1994).

Matthews, Kevin, *St Joseph's Burra: 1874 -1974*, (Burra: Matthews, 1974).

Ngadjuri Walpa Juri Lands and Heritage Association, *Ngadjuri: Aboriginal People of the Mid North Region of South Australia*, (Adelaide: SASOSE Council Inc., 2005).

Pike, Douglas, *Paradise of dissent: South Australia 1829-1857*, (London: Longmans, Green and Co., 1957).

Pryor, Oswald, *Australia's Little Cornwall*, (Moonta, Vic.: National Trust, Moonta Branch, 1989).

Scott, J.S. *The Penguin Dictionary of Building*, (London: Penguin, 1999).

Walker, Meredith, *Protecting the social value of public places* (Canberra: Australian Council of National Trusts, 1998).

Walker, Meredith and Marquis-Kyle, Peter, *The Illustrated Burra Charter: good practice for heritage places*, (Burwood: Australian ICOMOS, 2004).

## Online references

Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

Australian Government, National Heritage Places website, http://www.environment.gov.au/heritage/places/national/australian-cornish-mining-sites, accessed 1 October 2018.

Australian Heritage Commission, *Australian Historic Themes Framework,* available online. http://155.187.2.69/heritage/ahc/publications/commission/books/pubs/australian-historic-themes-framework.pdf accessed 8 May 2019.

Australian Heritage Council, "Guidelines for the assessment of Places for the National Heritage List", 2009, available online https://www.environment.gov.au/system/files/resources/8b50f335-42e8-4599-b5e0-ac643f75475f/files/nhl-guidelines.pdf accessed 8 May 2019.

Burra SA website, http://www.burrasa.info/pages/burra1874.html accessed 18 October 2018

Britannica website, https://www.britannica.com/biography/James-Watt, accessed 1 October 2018.

Cooper, Barry, "Geologists and the Burra Copper Boom, South Australia, 1845-1851", *History of Research In Mineral Resources*, pp193-200, http://www.samininghistory.com/wp-content/uploads/2014/02/cooper2011_burracopperboom.pdf, accessed 1 October 2018.

Cornish Mining World Heritage Site website https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/the-spread-of-cornish-mining-around-the-globe/the-spread-to-other-world-regions/ accessed 1 October 2018.

Cornwall Association of South Australian website, http://www.cornishsa.org.au/ accessed 9 May 2019.

Cornwall Council website, https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/mining-characters-andsociety/work-life/, accessed 11 August 2020.

Cornwall Heritage Trust website, http://www.cornwallheritagetrust.org/discover/industry-in-cornwall/, accessed 1 October 2018.

David S. Macmillan, 'Morehead, Robert Archibald Alison (1814–1885)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/morehead-robert-archibald-alison-2478/text3329, published first in hardcopy 1967, accessed online 28 June 2019.

Department of Planning Transport and Infrastructure – Goyder Council Development Plan Consolidated – 24 November 2016, https://www.dpti.sa.gov.au/__data/assets/pdf_file/0006/249972/Goyder_Council_Development_Plan.pdf

Federal Register of Legislation – Australian Government website, https://www.legislation.gov.au/Details/C2017G00516 accessed 1 October 2018.

Gohman, Sean, "Cornish Periphery Analysis", Readings in the History of Technology, http://www.academia.edu/9097419/Cornish-Periphery_Analysis_Contextualizing_Invention_Innovation_and_the_Diffusion_of_Technological_Practice_in_the_Mid-Nineteenth_Century_Copper_Mining_Districts_of_South_Australia_and_Michigan, accessed 1 October 2018.

Heritage Information Series, "How to Carry Out Work on Heritage Buildings & Sites", https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/infocarryoutwork.pdf

Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

Heritage SA, Moonta State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Moonta_Mines accessed 1 October 2018.

Historical Cornwall website, http://www.historic-cornwall.org.uk/flyingpast/age.html, accessed 1 October 2018.

Mining in Cornwall, State Library of South Australia, http://www.slsa.sa.gov.au/BSA/Mining%20In%20Cornwall.htm, accessed 1 October 2018

Monument Australia website, http://monumentaustralia.org.au/themes/technology/industry/display/50529-%22johnny-green-%22--peacocks-chimney accessed 25 April 2019

Newcrest Mining Website, http://www.cadiavalleyheritage.com.au/, accessed 19 March 2019.

Ngadjuri South Australia, http://www.ngadjuri.com.au/country.html, accessed 1 October 2018

Regional Council of Goyder – Goyder Tourism Strategic Plan 2017; http://www.goyder.sa.gov.au/webdata/resources/files/GOYDER%20TOURISM%20STRATEGY-1.pdf

Regional Council of Goyder – Burra Tourism Concept – Feasibility Study 2015; http://www.goyder.sa.gov.au/webdata/resources/files/Burra%20Tourism%20Concept%20Feasibiltiy%20Study%20July%202015.pdf

State Library of SA (SLSA), https://digital.collections.slsa.sa.gov.au/nodes/view/815 accessed 1 October 2018.

South Australian Mining History website, http://www.samininghistory.com/wp-content/uploads/2014/03/kapunda-mine-cmp.pdf, accessed 1 October 2018.

Sydney Opera House Conservation Management Plan, https://www.sydneyoperahouse.com/our-story/conservation-management/conservation-management-plan.html accessed 1 October 2018.

UNESCO World Heritage List website, https://whc.unesco.org/en/list/1215/, accessed 1 October 2018.

Warrior et al, 2005:67 cited in Australian Government, Australian Heritage Database website, http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304, accessed 1 October 2018.

Young, David, Salt attack and rising damp: A guide to salt damp in historic and older buildings, https://www.environment.nsw.gov.au/resources/heritagebranch/heritage/HVC014SaltDamptechguideFAweb.pdf accessed 1 October 2018.

**Images**

All sourced images are referenced in relevant chapters of this Conservation Management Plan. All other images and photography is the property of Swanbury Penglase.

# 10007: National Bank

## Item Identification

| | |
|---|---|
| **Current Name of Item:** | National Bank |
| **Current Use:** | National Trust (SA) Offices |
| **Address / Location of Item:** | 1 Market Street, Burra |
| **CT Reference:** | CT 6138/717 F186792 A280 |
| **Heritage Listing Status:** | <u>State</u><br>SAHR No. 10007<br>Confirmed 8 November 1984<br>Heritage Database No. 14308<br><br><u>National</u><br>Not identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

During one of the 1850s floods of Burra Burra Creek, it was reported that large sums of money stored in the miners' dugouts were lost. However, this habit, "was not due to imprudence on the part of the miners but the lack of any banking facility in Kooringa. … One visitor, hearing of the amount of specie stored by miners in their dug-outs, referred to the creek-banks as the 'Savings bank'".[1] In April 1859, Abraham Scott and John Neales travelled to the copper mines of Burra and Kapunda, where they established the first South Australian branches of the National Bank of Australasia; a banking institution which was established in Australia in 1858 with its headquarters in Melbourne. "Shrewdly courting the mining business of Kapunda, they appointed the superintendent of the large mine as local agent at £150 a year and lightened the work by sending the Adelaide teller to run the business. These branches quickly succeeded in attracting deposits, circulating notes, and transacting the considerable exchange of business created by the sale of South Australian copper in London".[2] In April 1859, Burra's first bank, a temporary branch of the National Bank of Australasia, was opened in Kooringa. It was claimed a, "great success, and has improved the Burra money circulation. Instead of the well-known and familiar orders of the mine and smelting works for odd amounts, puzzling the arithmetic capabilities of the worthy townsfolks, we have now an abundance of gold, silver, and the well-engraved bank notes of the National Bank, in circulation, which, when seen alongside the little, unpretending orders of the Burra Mine, make the latter, as has been facetiously remarked, look uncommonly small. We understand Messrs. Drew & Co., and nearly all the principal tradesmen, have transferred their accounts, saving, as it does, the trouble and risk of remitting; and the affability of the manager has also tended to the success of what has been called the "Little Bank"".[3] With such a large population of mine and smelter workers, the National Bank clearly saw a growing opportunity for business. On 16 July 1861, tenders were called for the erection of the new premises for the National Bank of Australasia at Kooringa.[4] In 1862, the new National Bank building was constructed. It "is one of South Australia's earliest offices for the National Bank of Australasia. Its formal style … reflects Burra's prosperity as a mining town at that time, and was built at a cost of £1,500".[5] It was designed by architect Edmund Wright.[6] The "National Australia Signature Book 1" dates from when the Kooringa branch was first opened in 1859 to 1884, and contains the names, address, and occupation of the Bank's customers.[7] Customers related to the mine included miners, teamsters, mine agents, and related to the smelts included Isaac Killicoat, others included Redruth builder, James Tiver. Indeed, the signature book contains over 860 signatures.

## Description

The Bank building is a two storey structure with a chamfered corner which forms the main entrance. It is designed in the Italianate commercial style. It is constructed from Hampton quarry random rubble stone with lined pointing. It has a painted decorative, rendered cornice, pilasters, string course, rendered dressings to window and door surrounds, and an entrance cornice. A hipped timber framed roof clad with recent corrugated steel sits behind the stone parapet walls to the street frontages. There are three, rendered, decorative chimneys. There are painted timber framed, double hung, windows with glazing bars and a casement window to the rear north wing. There are also painted timber framed, panelled doors. There is a single storey section with parapet similarly constructed from Hampton quarry stone with lined pointing. There are several later single storey and two storey additions to the side and rear of the building. There are 3 later panel doors to the first floor addition. There is also a later rendered masonry addition to the north elevation. There are remnants of a painted sign on the north elevation. There are also random rubble stone boundary walls, portions of a stone outbuilding integrated into a more recent shed and some low level stone garden walls. Currently, the building is vacant.

## Significance

The National Bank of Australasia was the first bank in the Burra Burra mining townships. It was also one of the first National Bank of Australasia branches in Australia.[8] It was well patronised, improved money circulation, and countered fraudulent money order notes by reducing the risk of remitting orders from the Mine and Smelter.

## Condition Notes

The following issues were observed during the inspection:

- Lean to west end of boundary wall with deterioration to lower level (risk of collapse) and cement render repair to lower portion. Deterioration to coping.

- Minor deterioration to stone above plinth to west end of south elevation. Fibre cement cladding below floor level to east elevation probably concealing deterioration caused by rising damp.

- Deterioration to stone to corner of east elevation.

- Deterioration of pointing and stone to base of wall to rear west elevation.

- Deterioration to paint to top of chimney

- Minor deterioration of paint finishes.

- Cracks to rendered wall of rear addition, west elevation

## Endnotes

1   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p129.
2   Blainey, Geoffrey, *Gold and Paper 1858-1982: A History of The National Bank of Australia Ltd*, pp 27-28.
3   "Kooringa", *South Australian Weekly Chronicle*, 7 May 1859, p7.
4   "Classified Advertising" *The South Australian Advertiser* (Adelaide, SA: 1858 - 1889) 16 July 1861: 1
5   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
6   "KOORINGA." *South Australian Register* (Adelaide, SA: 1839 - 1900) 15 March 1862: 3
7   Burra SA Website, www.burrasa.info/pages/nab1.html, accessed 10 October 2019.
8   ANU Australian Cornish Mining Heritage Site, July 2014, p18.

## Historic Photos



Earliest known photograph of the National Bank, 1879. Source: Burra Record, 17 February 1909



Undated: Source: The Burra History Group Inc.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase          *Street View (Market Street)*



2018: Source: Photograph taken by Swanbury Penglase          *Rear View (West)*

2018: Source: Photograph taken by Swanbury Penglase

*View from South*

STEP DOWN

STONE WALL
WITH BRICK
COPING

POST TO END

REFER 10007-02

STONE BOUNDARY WALL

MARKET STREET

MOUNT PLEASANT ROAD

MOUNT PLEASANT ROAD

10403

12246

10007

14426

0  5  10  15  20  25 m
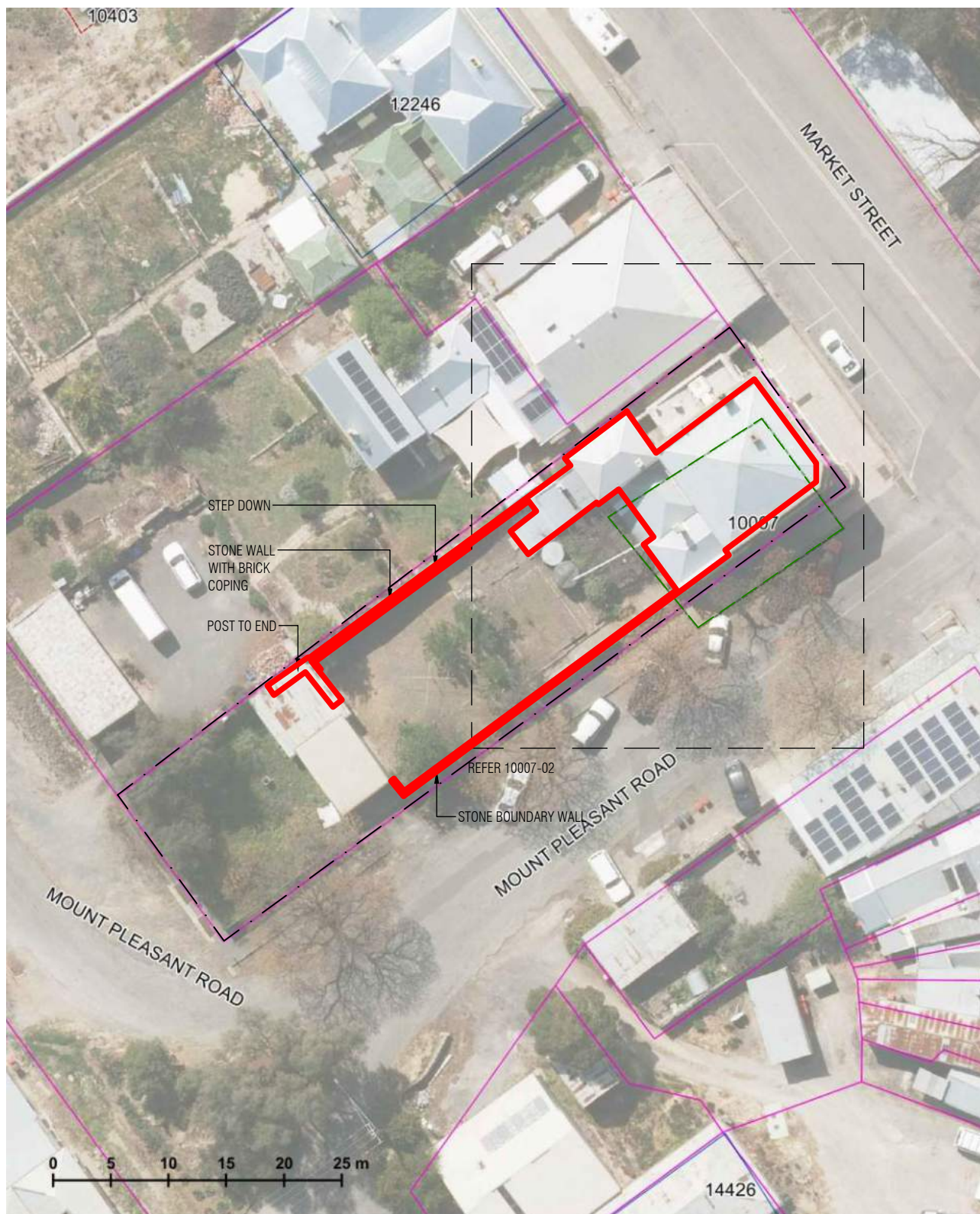
## LEGEND

— · —  TITLE BOUNDARY

━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**NATIONAL BURRA BANK BRANCH**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10007-01**

www.swanburypenglase.com
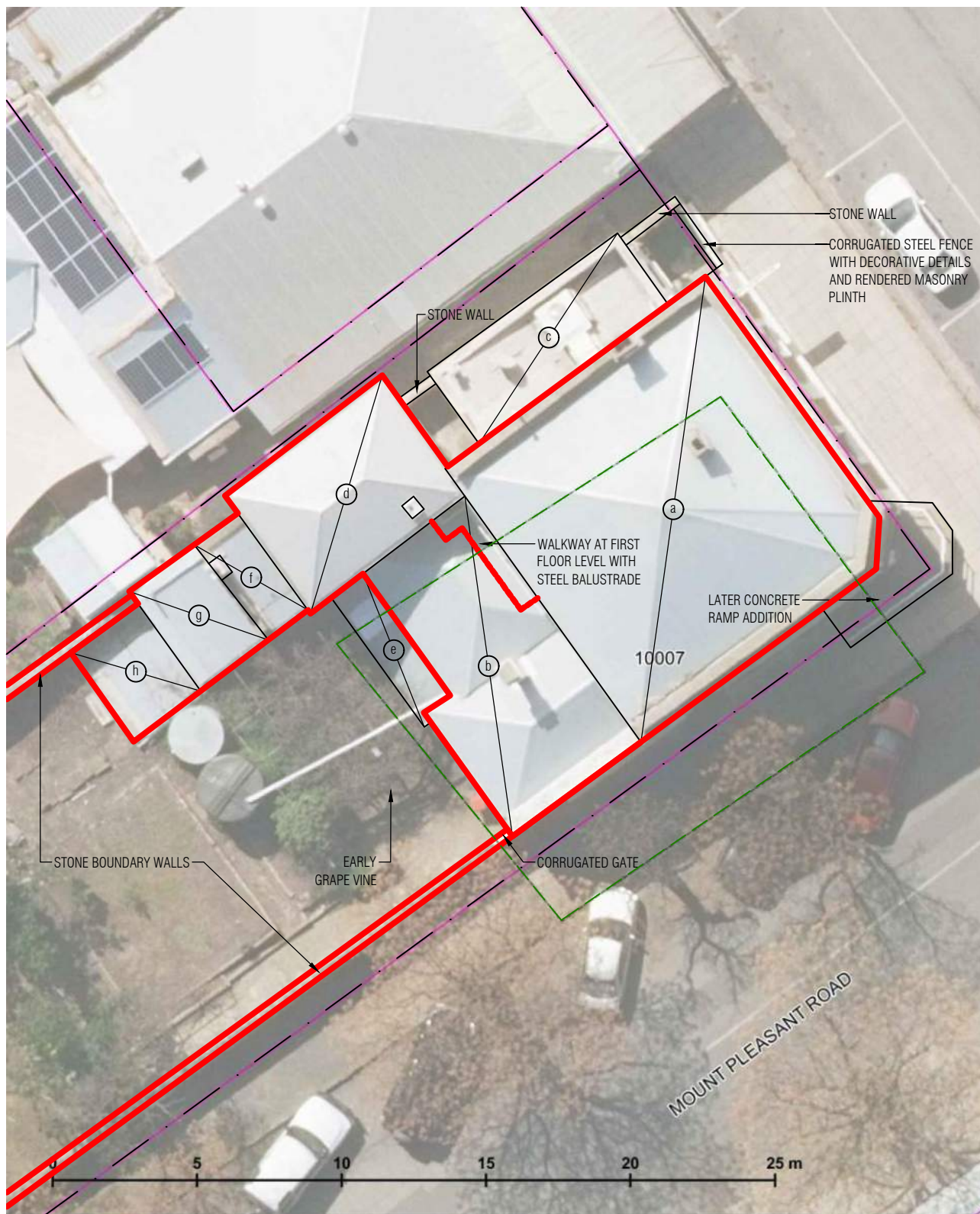
Labels on aerial image:
- STONE WALL
- CORRUGATED STEEL FENCE WITH DECORATIVE DETAILS AND RENDERED MASONRY PLINTH
- STONE WALL
- c
- d
- f
- g
- h
- a
- WALKWAY AT FIRST FLOOR LEVEL WITH STEEL BALUSTRADE
- LATER CONCRETE RAMP ADDITION
- e
- b
- 10007
- STONE BOUNDARY WALLS
- EARLY GRAPE VINE
- CORRUGATED GATE
- MOUNT PLEASANT ROAD

Scale bar: 0 5 10 15 20 25 m

## LEGEND

— · —    TITLE BOUNDARY

▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - PRIMARY TWO STOREY STONE PORTION OF ORIGINAL BUILDING
b - SINGLE STOREY STONE WITH PARAPET TO STREET FRONTAGE
c - RENDERED MASONRY ADDITION
d - TWO STOREY ADDITION WITH STONE AND BRICK GROUND FLOOR AND UPPER LEVEL CLAD WITH MINI ORB. EARLIER PAINTED GALVANIZED ROTTING
e - PART ENCLOSED SINGLE STOREY VERANDAH WITH SLATE FLAGS
f - SINGLE STOREY MASONRY WALLS WITH LATER BRICK PARAPETS-EARLIER BRICK CHIMNEY INTEGRATED AND EXTENDED THROUGH ADDITION
g - RENDERED BRICK FRAMED WITH MINI ORB CLADDING
h - MASONRY TANK

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## NATIONAL BURRA BANK BRANCH
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10007-02**

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# 10011: 9 Upper Thames Street

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling (sometime Masonic Hall, former Kooringa Primitive Methodist Church) |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 9 Upper Thames Street, Burra |
| **CT Reference:** | CT 5827/227 F186829 A317 |
| **Heritage Listing Status:** | State<br>SAHR No. 10011<br>Confirmed 8 November 1984<br>Heritage database no. 14327<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |
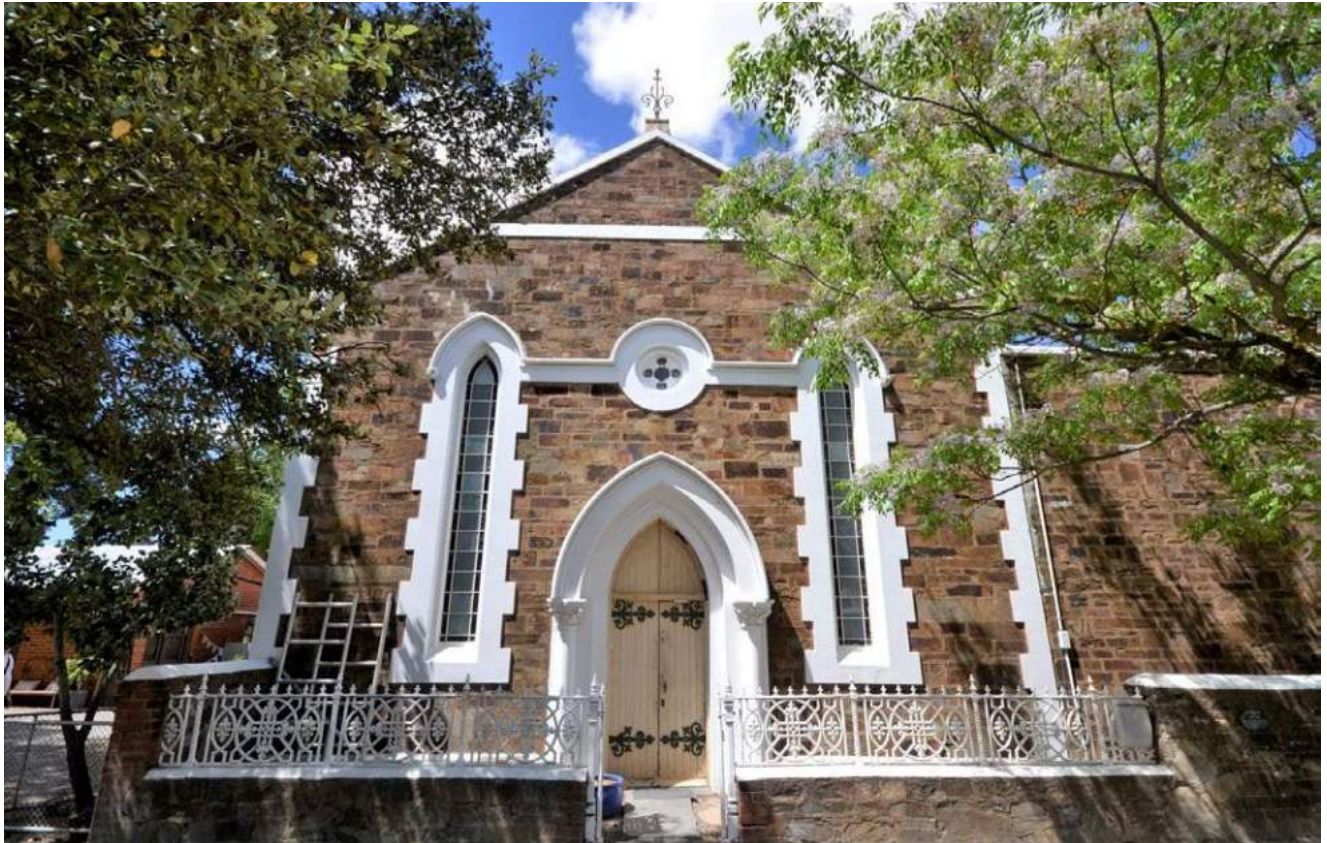


2018: Source: Photograph taken by Swanbury Penglase

## History

The Cornish brought Methodism to Burra. The three main Methodist branches were the Wesleyans, the Bible Christians and the Primitive Methodists. Primitive Methodism came to South Australia, in 1840, when John Wiltshire, from England, and others held the first open-air service in Light Square in Adelaide.

The Primitive Methodist Church is one of Kooringa's earliest churches. In 1847, Allotments 84 and 287 were leased to the Primitive Methodist Church by SAMA for a term of 999 years. In c.1849-50, the Primitive Methodist Church was built on Allotment 84 in Upper Thames Street, Kooringa.[1] However, the church was "abandoned when almost all the men went to the Victorian Goldrush. Upon their return it was re-opened in 1856 by the evangelist J.G. Wright".[2] In May 1856, the Primitive Methodists resolved to rebuild the chapel due to it being too small to hold its congregation.[3] The rebuilt chapel was opened on 24 August 1856.[4] The size of the building doubled before Wright left in c.1858.[5] Church services were well attended. In 1858, at the Chapel's second anniversary service, 400 people were present.[6] In c.1879-80, extensive modifications to remodel the building including the front facade were carried out by Sara & Dunstan for £400.[7] It was re-opened on 27 June 1880.[8] In 1883, it was intended that the rear be extended by 15 feet by the contractor I.W. Goss.[9] The chapel was re-opened on 20 January 1884 with 18 feet having been added to its length.[10] In 1900, the Wesleyans, the Bible Christians and the Primitive Methodists, joined together to form the Methodist Union. The final church service was held on 25 February 1900, "after which they were transferred to the former Wesleyan Church in Chapel Street".[11] In the same year, the Chapel and Allotment 84 were sold to Kooringa Masonic Lodge No. 6.[12] The "extension on the south side was added by the lodge in 1935 as a supper room. It was sold to become a private dwelling in 2003".[13]

## Description

The Former Kooringa Primitive Methodist Church building is a single storey structure. The front façade is constructed from coursed stone with lined pointing. It has rendered and painted: quoins; parapet coping; string courses; central oriel window; arched door surround with pilasters and capitals, and plinth. The Gothic-style, lancet windows are symmetrically placed either side of a pair of central main, Gothic-style pointed, entrance doors. The side facades are constructed from random rubble stone with red brickwork Gothic-style lancet windows. The gabled, corrugated iron clad roof sits behind the stone parapets at each end of the building. Two, decorative finials surmount the apex of the parapets. There is one red brickwork chimney which is a post-1900 addition. The lancet windows are leaded glass, with glazing bars. The main doors are timber framed. There is a lower, single storey lean-to section, with parapet, on one side of the building. The street is bounded by c.1884, decorative cast iron fence with stone base, and a higher section of stone fence.

## Significance

The former Primitive Methodist Church is significant because it is one of Kooringa's earliest churches. It represents the importance of Primitive Methodism to the religious and social lives of the predominantly Cornish population. However, the front façade dates from 1879, after the Mine closed in 1877.

## Condition Notes

The building is generally in a fair state of repair. The following issues were identified:

- Non-original 'D' gutters and PVC downpipes.
- Roof in fair condition – rust evident in places.
- Chimney in poor condition with missing pointing and is at risk.
- Termite attack to front door.
- Patch pointing to cracked masonry with cement rich mortars.

## Endnotes

1   Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011. Note – The date of construction is identified as 1847. Other sources report the date as 1850.
2   Burra Heritage Plaque.
3   Burra Record, 9 May 1856. Heritage SA Research Packet 10011.
4   "Kooringa", *Adelaide Observer*, 30 August 1856, p8.
5   Burra Heritage Plaque, and "A Pioneer Preacher", The Register, 22 June 1904, p6.
6   *Burra Record*, 2 August 1858, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011.
7   *Burra Record*, March 1880, p2.
8   "Advertising", *Burra Record*, 18 June 1880, p2.
9   *Burra Record,* 6 November 1883, p2.
10  "KOORINGA" *Yorke's Peninsula Advertiser*, 25 January 1884, p3.
11  Burra Heritage Plaque.
12  Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10011.
13  Burra Heritage Plaque.
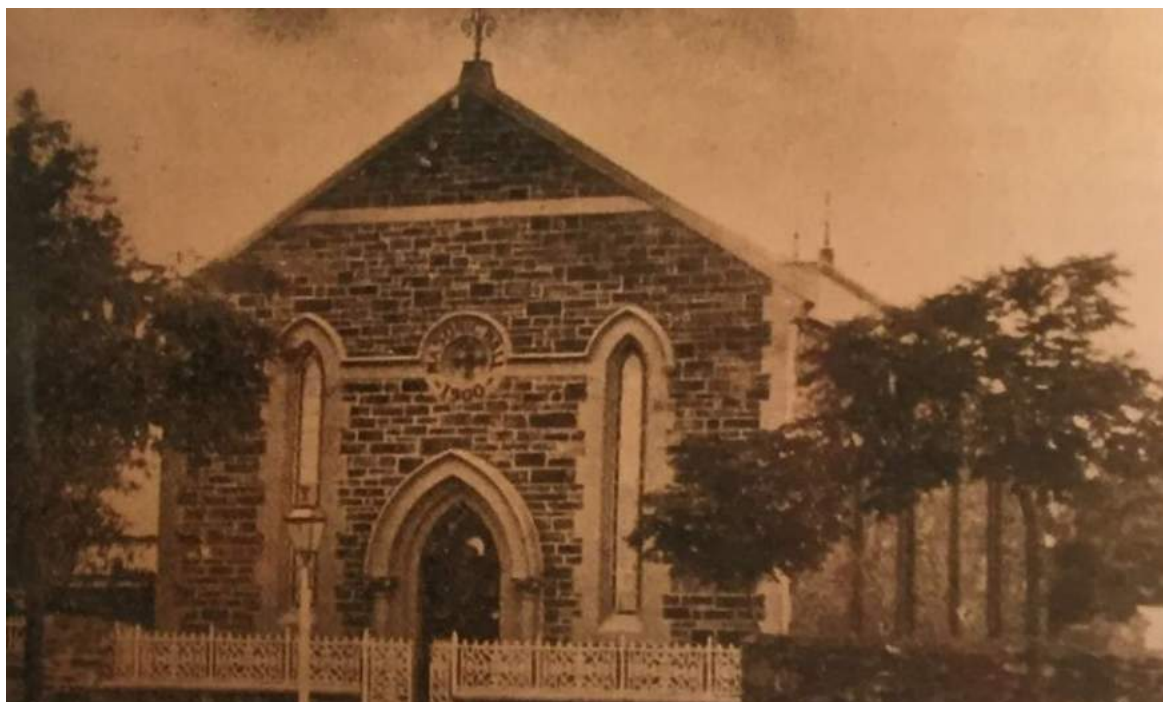
Kooringa Primitive Methodist Church, undated: Source: The Burra History Group Inc.

## Current Photos
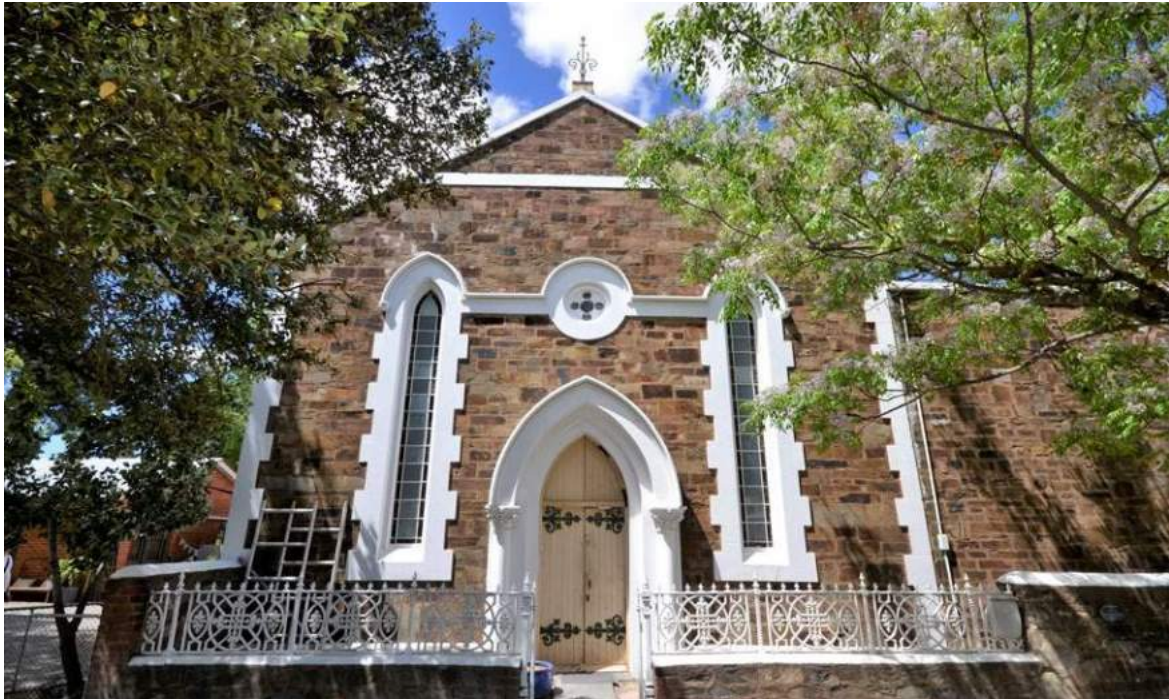


2018: Source: Photograph taken by Swanbury Penglase          *Street View (Upper Thames)*



2018: Source: Photograph taken by Swanbury Penglase          *View from West*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (North-East)*

## Other Material
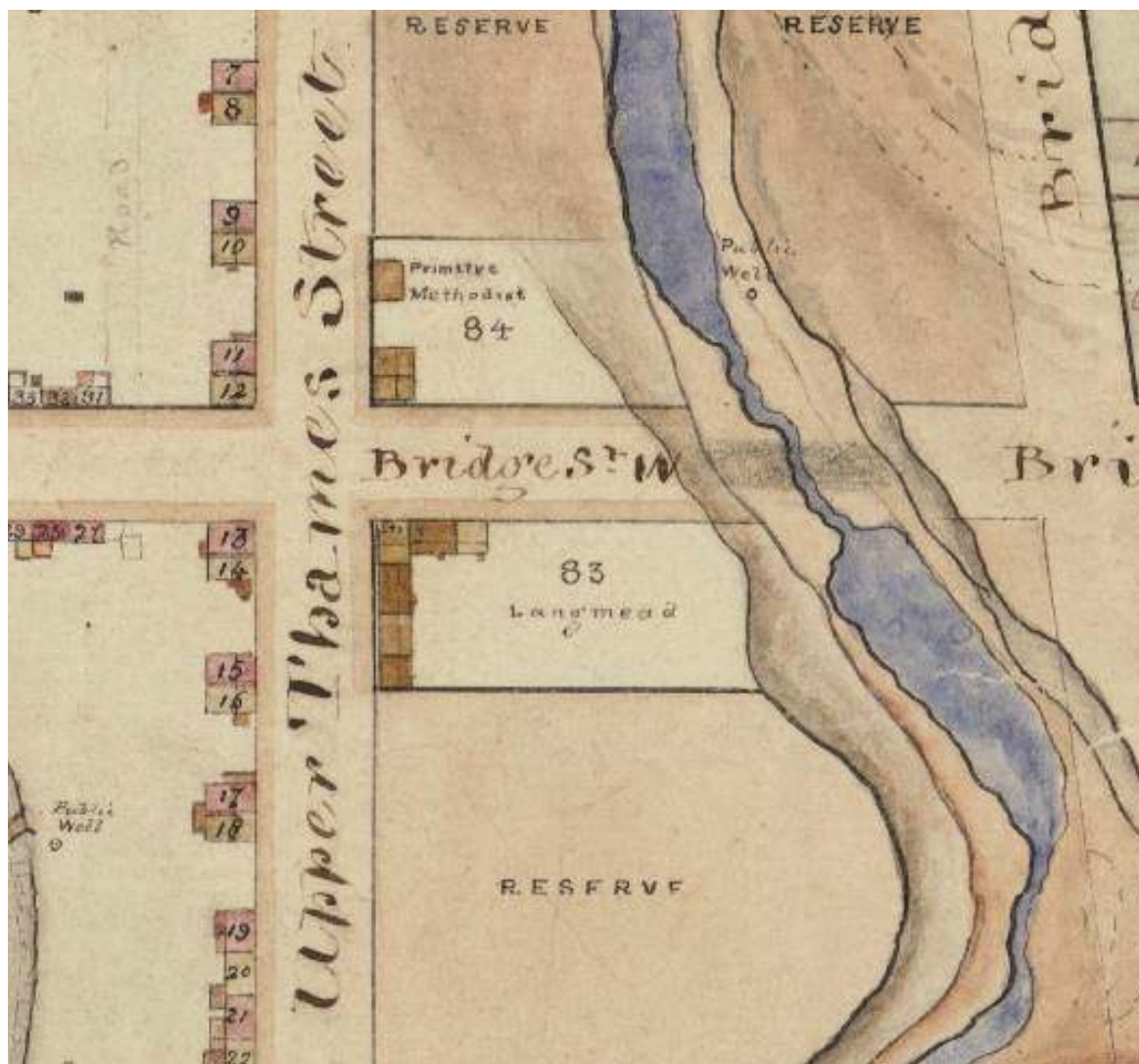


Extract from 'Rough plan and sketch of the township of Kooringa [cartographic material] : the property of the South Australian Mining Association' with the site of the original chapel (now demolished) indicated, 1849. SLSA B-1930386.

EARLY ?

BURRA CREEK

10011

UPPER THAMES STREET

BRIDGE STREET WEST

10030

10031

LLOYD STREET

CHURCH STREET

0   5   10   15   20   25 m

## LEGEND

— · —   TITLE BOUNDARY

━━━   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

## DWELLING, 9 UPPER THAMES STREET
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10011-01**

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VISIBLE JOIN IN MASONRY

b

d

a

10011

c

e

1880s FENCE

STONE FENCE

STONE PARAPET

UPPER THAMES STREET

0    5    10    15    20    25 m

## LEGEND

— · —   TITLE BOUNDARY

━━━   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - SINGLE STOREY STONE & RED BRICK HALL BUILDING
c.1850/1880, FORMER PRIMITIVE METHODIST CHURCH
b - 1883 ADDITION
c - 1930s ADDITION - SUPPER ROOM
d - CONCRETE BLOCK ADDITION
e - MODERN VERANDAH

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## DWELLING, 9 UPPER THAMES STREET
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10011-02**

# 10013: Office (former Burra Bible Christian Chapel)

## Item Identification

| | |
|---|---|
| **Current Name of Item:** | Office (former Burra Bible Christian Chapel) |
| **Current Use:** | National Trust (SA) Museum |
| **Address / Location of Item:** | Kingston Street, Burra |
| **CT Reference:** | CT 5861/674 F186794 A282 |
| **Heritage Listing Status:** | State<br>SAHR No. 10013<br>Confirmed 8 November 1984<br>Heritage Database No. 14387 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Cornish brought Methodism to Burra. The three main Methodist branches were the Wesleyans, the Bible Christians and the Primitive Methodists. In England, Methodism had "undergone a series of changes during the early 1800s, including the appearance of Bible Christian Methodists, predominantly in the villages of East Cornwall and North Devon. It is not surprising then, that many of the Cornish miners who came to Burra were of this faith, and that Bible Christian work in South Australia began in Burra".[1] In 1850, the Bible Christian Chapel was built on the south-west corner of Paxton Square on land set aside by the SAMA. It was the first Bible Christian Chapel built in South Australia and perhaps the first of "more than 500 Bible Christian chapels in Australia".[2] In 1850, two missionaries, James Way and James Rowe, were sent to South Australia from England. Rowe travelled to Burra and became the Reverend at the Bible Christian Chapel. In 1852, a "manse" was attached to the Chapel for Rowe and his family".[3] This was later demolished in 1971. During the 1851-52 Victorian gold rush, the congregation was diminished, however, when the miners returned from Victoria, the congregation prospered. In 1853, it was reported that the chapel and mission were no longer in debt following a successful anniversary celebration which raised £27/3/5. In c. 1856, the chapel was enlarged.[4] In 1859, James Way (father of Samuel Way) became the Superintendent and "a religious revival resulted in 300 converts and over 500 children attending Sunday School".[5] In c1859-60, a new church was built, on the corner of Bridge Terrace and Bridge Street East, to accommodate the growing congregation however, this was demolished in 1909 due to structural instability. During this time the original Chapel was used for meetings and as a Sunday School. In 1900, the Wesleyans, the Bible Christians and the Primitive Methodists, joined together to form the Methodist Union. As a result, the Chapel was closed and the building was used as a shop and later as a saddlery, mechanics shop and store-house.

## Description

The former Bible Christian Chapel is a single storey structure. It is an early symmetrical hall and is constructed from random rubble stone with two large stone buttresses to the west elevation. There is some lined pointing to parts of the walls. It has squared stone dressings to corners and openings. There is a timber framed hipped roof clad with corrugated steel in continuous sheets with a rear north lean-to skillion roof, and "D" profile eaves gutters. There are moulded timber fascias and barges and one low height red brickwork chimney. The windows have stone heads and sills, and the main south entrance door has a red brickwork arch. Generally, there are painted timber framed, double hung windows but there are casement windows to the north. There are a pair of two panel doors and fanlight with glazing bars. Ledged and braced door to the north. Internally, there is a mini-orb ceiling with raked perimeter, and fibre cement sheet with battens to the skillion. There are cast iron columns, painted render to the internal walls and a more recent brick floor. The building adjoins a more recent structure to the east.

## Significance

The former Bible Christian Chapel is significant because it is South Australia's first Bible Christian Church and likely to be Australia's first. It represents the importance of the Bible Christian branch of Methodism to the religious and social lives of the predominantly Cornish population. It dates from the earliest period when the Mine was first established. This was when the Mine was its most successful and profitable.

## Condition Notes

The following issues were observed during the inspection:

- Vertical cracks to render around chimney to northwest corner.
- Blistering paint at low level to west end of south internal wall.
- Fine cracks over west side of window opening and door to north wall.
- Paint condition fair, poor to fascia of west elevation
- Deterioration of stone at low level either side of north door
- Low level deterioration to stone and pointing on west elevation
- Open joints to tops of buttresses
- Low level deterioration to stone to south elevation

## Endnotes

1   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

2   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p302.

3   "Paxton Square, Burra S.A." Burra History Group pamphlet (compiled by Eric Fuss and Meredith Satchell), 2019

4   Burra Heritage Plaque

5   Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10013.

## Historic Photos
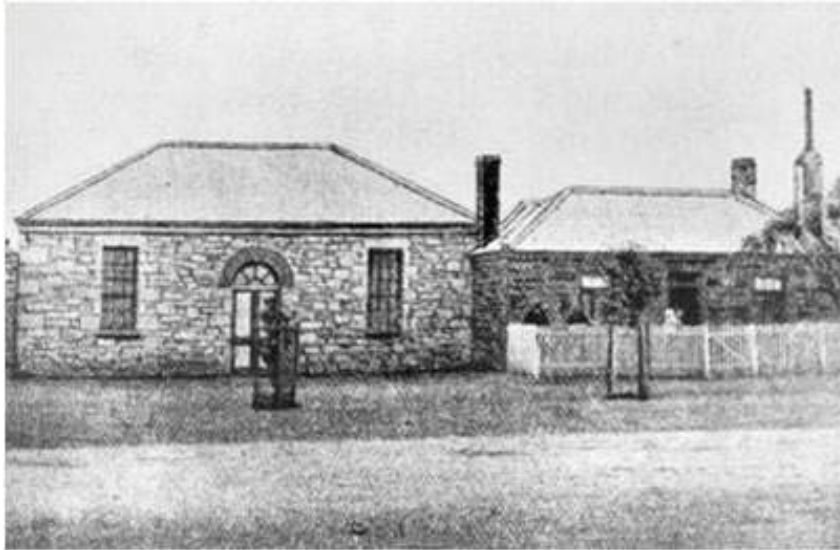


Bible Christian Chapel, undated. Source: The Burra History Group Inc.



Kooringa, 1872, showing the Bible Christian Chapel enlarged. Source: Courtesy of the Burra History Group.

Various dates: Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*Rear Elevation*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

## Other Material

BIBLE CHRISTIAN CHAPEL, BURRA   (PAXTON SQUARE)

Chromology

| | |
|---|---|
| 1778 | William O'Bryan born in Cornwall (Founder of Bible Christian Methodist Church.) |
| 1847 | Weslyan Methodist Church built in 1847 (demolished and replaced in 1914). |
| 1850 | Bible Christian Chapel and mission home built at Paxton Square. |
| | Two missionaries, James Way and James Rowe sent to Adelaide from England. |
| 1853 | Third anniversary celebration of the Church reported in the Register, 23/8/1853 V12. "The third anniversary of the Bible Christian Chapel at Kooringa was held on the 15th August, three impressive sermons having been preached by the Reverend W. Farsmon on the previous sabbath. On Monday, 15th, a public tea meeting was held in the chapel and the most liberal provision was made for the cheering repast. On the removal of the tables Mr. Burgess took the chair and conducted the business of the meeting in the most orderly and efficient manner....... The total receipts amounted to 27/3/5 Pounds, a sum sufficient to liquidate the only remaining liabilities, so that the chapel and mission house are now free from debt......." |
| 1859 | The Rev. James Way became superintendent – conversion of 250 adults and 70 children. "A noble sanctuary to seat 600 was built, 800 Pounds was raised." |
| | Demolished in 1909 (corner of Bridge Street and Lower Bridge Street). |
| 1862 | Joseph Hancock succeeded J. Way. |
| 1900 | Methodist Union. |
| 1902 | Methodist Church  tr. part of land to John Snell, Storekeeper, for 140 Pounds. |
| 1959 | Edward Thomas Baulderstone and Doris Mavis Baulderstone became owners. |

Source: Heritage SA Research Packet 10013.

10159

10159

10013

BRIDGE TERRACE

REFER 10013-02

KINGSTON STREET

BURRA CREEK

KINGSTON STREET
10006

0   5   10   15   20   25 m

## LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**OFFICE (FORMER BURRA BIBLE CHRISTIAN CHAPEL), KINGSTON STREET**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10013-01**

www.swanburypenglase.com

W. CHIMNEY

10013

RED BRICK ARCH
OVER MAIN
ENTRANCE

BUTTRESSES

BRIDGE TERRACE

0    5    10    15    20    25 m

## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

- - - -    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - SINGLE STOREY STONE BUILDING

**swanbury penglase**

**OFFICE (FORMER BURRA BIBLE CHRISTIAN CHAPEL), KINGSTON STREET**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10013-02**

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## Item Identification

| | |
|---|---|
| **Current Name of Item:** | Former Redruth Police Station, Cells and Stables |
| **Current Use:** | National Trust (SA) Museum / Private Dwelling |
| **Address / Location of Item:** | Helston Street, Burra |
| **CT Reference:** | CT 6212/21 T200801 A31 |
| **Heritage Listing Status:** | State<br>SAHR No. 10014<br>Confirmed 1 September 1983<br>Heritage Database No. 14328 |
| | National<br>Not identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Shortly after the establishment of the Burra Burra Mine, law and order became an important issue. In February 1846, Ayers called for a Police Station due to the rapidly expanding population, related drinking offences, low legal drinking age, long opening hours at the town's hotels, and consequent fighting and disorderly conduct. In April 1846, Captain Finniss, the Commissioner of Police travelled to Burra and approved the establishment of a police station for two mounted and two dismounted policemen.[1] In September, there were 400 miners working at the mine and 300 draymen travelling to the mines each day.[2] Ayers temporarily housed the four constables in a rent-free cottage in Kooringa. Although SAMA agreed to lease land for a Police Station in Kooringa, it refused to grant it freehold. It is indicative of SAMA's control that "it was necessary that the town's police station be built on public land, rather than sited in the more heavily populated Kooringa".[3] Thus, Burra's first police station, cells and stables were erected in 1847 on a Police Reserve in what became the township of Redruth (two years before Redruth was laid out in 1849). The government retrospectively assigned some of the Redruth allotments for Burra's extant police station, cells and stables. The new police station and stables were constructed by R.S. Breeze, a North Adelaide builder, and completed in mid-1847.[4] In 1851, the police force included three constables and three mounted police for a population of 5,000. In 1872-73 new cells, stables and a stable yard were added to the Police Station. In 1878 the original Police Station was demolished and a new one built in its place. From 1861 to 1877, the Redruth Courthouse and Gaol were well utilised. Approximately 450 labourers, 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, were imprisoned, at different times over this period, in the Redruth Gaol. They had their offences committed and/or convicted at the Redruth Courthouse.[5] This suggests that the Redruth Police were busy maintaining law and order within the mining town.

## Description

The Police Station complex incorporates the Police stables (1847), Police cells, stables and stable yard (1873), and Police Station (1878). The Police Stables building is a small single storey structure. It is constructed from random rubble stone which has been limewashed on all walls except one which faces the grassed reserve. It has an exposed hipped, timber framed roof with timber shingles with no eaves. It has one timber louvred window which faces the cobbled yard. There is a pair of timber shutters which face the grassed reserve, and there is one timber door which opens onto the later stable.

The Police cells is a single storey structure constructed from random rubble stone with lined pointing. All walls are limewashed except for the side wall facing Tregony Street, and the gable parapet wall facing the Stable Yard. There is a small, lean-to stone WC attached to the Cells which has timber boards to the WC seat. There is a gabled, corrugated iron clad roof with stone gable parapets each end, and no eaves. There is a whitewashed interior to the cells with a vaulted ceiling and slate flags to the floor. Timber plank benches are built into the walls. There are timber Cell doors complete with bolts and viewing hole.

The Stables are constructed from random rubble stone and some walls are limewashed. It has a hipped corrugated iron clad roof with no eaves. There are timber louvred windows and a door. Internally the floor is paved with stone with an open bluestone culvert, and there are later timber horse stalls. The stable yard (and cobbled yard adjacent the Police Station) is defined by tall, random rubble stone with lined pointing. There are later render repairs in parts. There are several timber doors which provide access. The stable yard is paved with stone and includes an open culvert formed with stone.

The Police Station building is a single storey structure. It recalls c.1880s Villa-style dwellings in design but is larger and incorporates an additional symmetrical, stepped front. It is constructed from coursed stone with lined pointing. The side wall which faces the grassed reserve is rendered and painted. It has rendered and painted quoins, plinth, corbels, window and door surrounds. It has a hipped, corrugated sheeting roof with four decorative chimneys. It has a small, front skillion verandah with timber posts, capitals and brackets. It has timber, double hung, windows with glazing bars and a timber panelled front door. There are later, lightweight additions with skillion roofs to the side and rear of the building, and on the site in general.

## Significance

The Redruth Police stables (1847), Police cells, stables and stable yard (1873), and Police Station (1878) played an important role in establishing law and order in the townships. Although, the Police Station was constructed outside the period of significance it is through its association with the early period of policing and the continuation of this, that it remains significant.

## Condition Notes

The following issues were observed during the inspection:

**Boundary walls**
- Stone deterioration from 1200 to 1500mm to northwest corner
- Stone deterioration from 400 to 1200mm to part north elevation
- Stone deterioration to 1200mm to part west elevation

**Cobbled Yard**
- Flaking whitewash to top of Cobbled Yard walls and to 500mm on part south wall
- Loose pointing and flaking whitewash to 800mm on part of west wall
- Minor flaking of whitewash to 500mm to part north wall
- Patches of flaking whitewash at top and to approx. 600mm on east wall

**Original stable**
- Fine crack to south wall
- Deterioration of timber shingles particularly cappings to original Stables (1847)
- Fine crack to junction to later stable

**Later Stable**
- Areas of flaking paint to timberwork

**Cells**
- Stone deterioration to 1000mm to WC block to west wall
- Crack to lintel to WC block
- Flaking whitewash over opening
- Flaking whitewash full height on west wall
- Rust to steel spreader plates
- Flaking whitewash to coping, gable and at low level to 700mm on south wall
- Rot to timber lining in cell door

## Endnotes

1    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p252.
2    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p252.
3    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
4    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p253.
5    State Records of SA (SRSA) GRG54/210 (Unit 1)
     Register of prisoners and charge books - Redruth Gaol, from 1861

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*View from North-East*

2018: Source: Photograph taken by Swanbury Penglase

*Rear Courtyard*
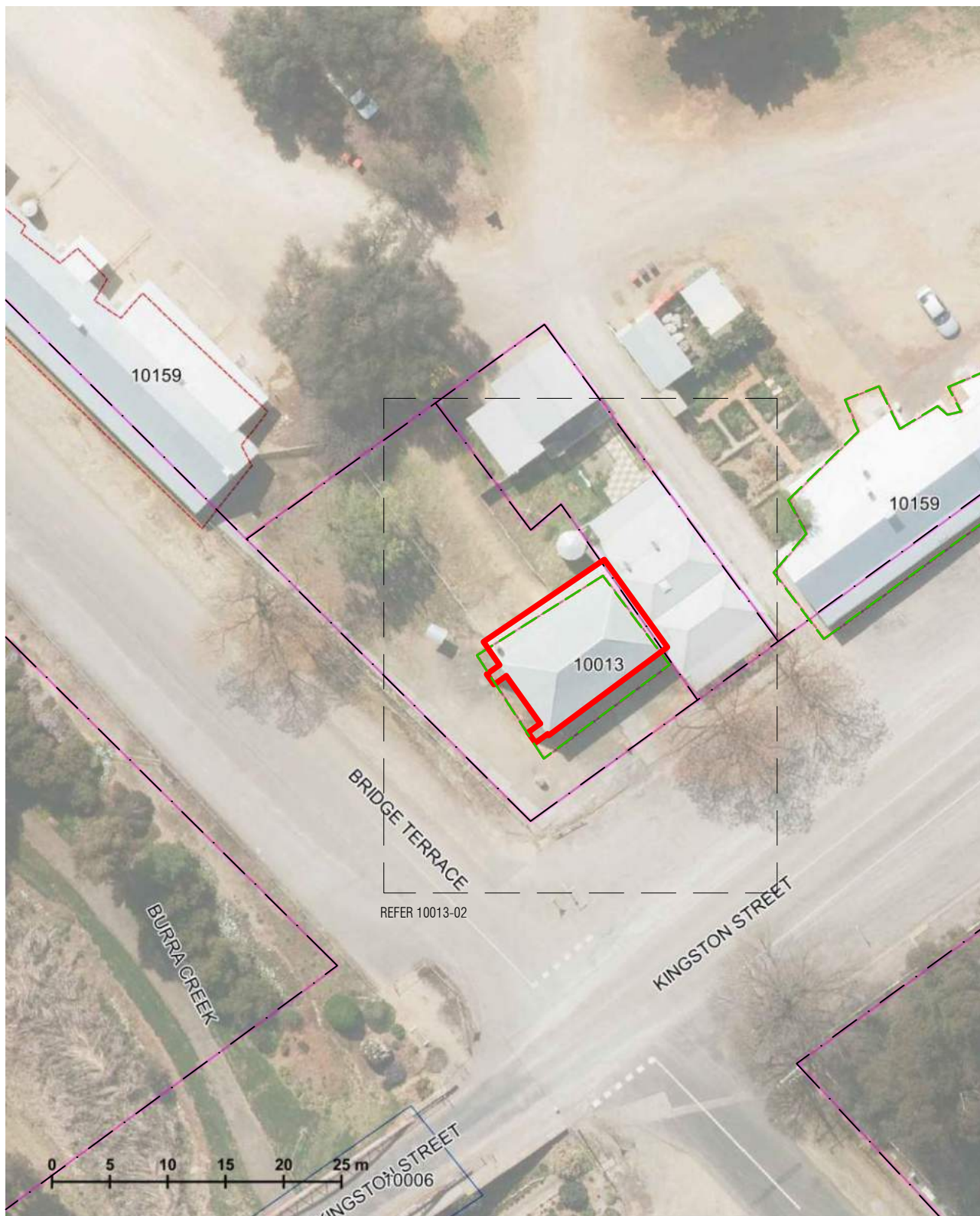


2018: Source: Photograph taken by Swanbury Penglase

*Central Courtyard*

2018: Source: Photograph taken by Swanbury Penglase

*View from Central Courtyard*



2018: Source: Photograph taken by Swanbury Penglase

*Interior View 1847 Section*

2018: Source: Photograph taken by Swanbury Penglase  *View towards Rear Courtyard*

2018: Source: Photograph taken by Swanbury Penglase    *Stables 1873 Section*

## Other Material



1878. Elevation. Source: LLSAM
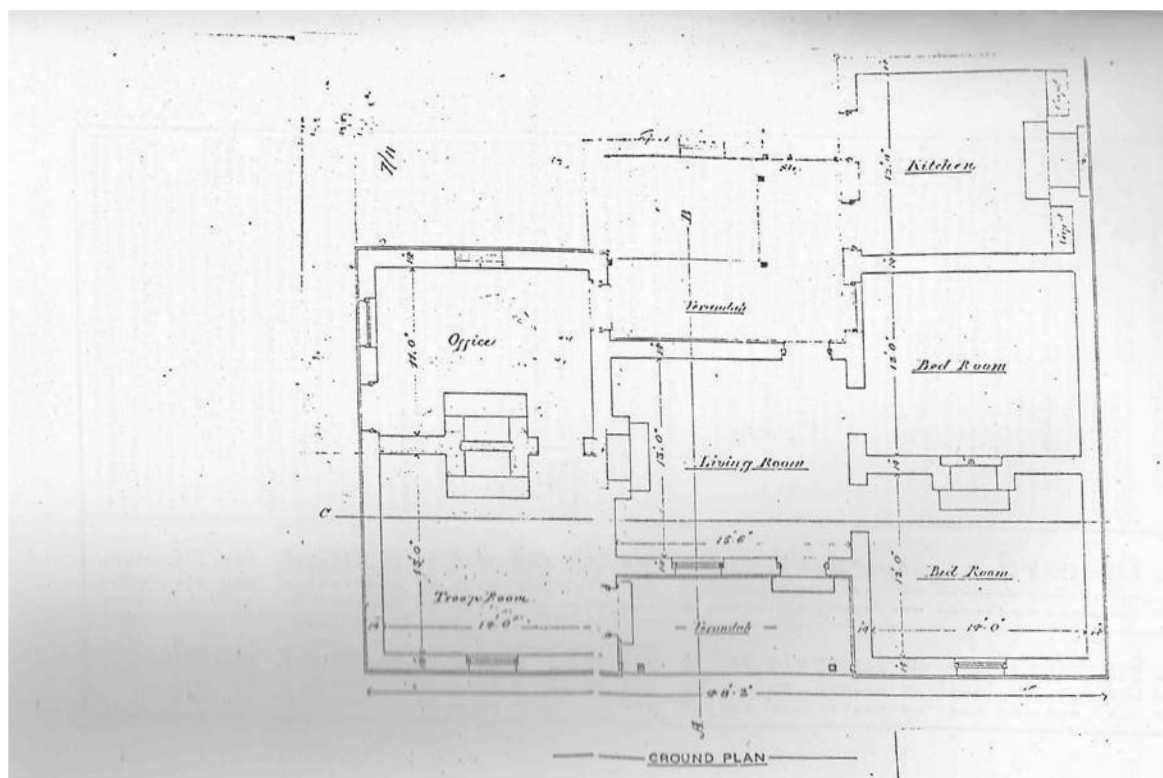


1878. Ground Floor. Source: LLSAM
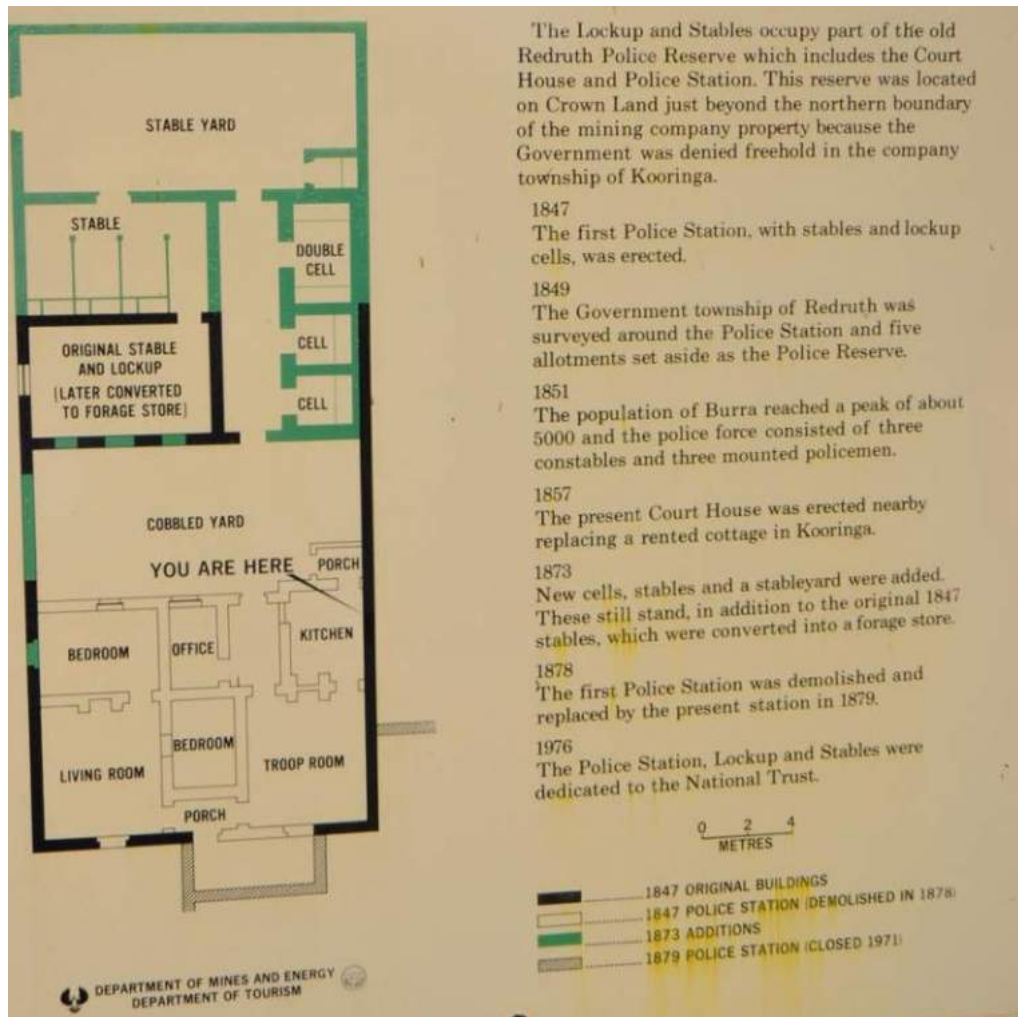
The Lockup and Stables occupy part of the old Redruth Police Reserve which includes the Court House and Police Station. This reserve was located on Crown Land just beyond the northern boundary of the mining company property because the Government was denied freehold in the company township of Kooringa.

**1847**
The first Police Station, with stables and lockup cells, was erected.

**1849**
The Government township of Redruth was surveyed around the Police Station and five allotments set aside as the Police Reserve.

**1851**
The population of Burra reached a peak of about 5000 and the police force consisted of three constables and three mounted policemen.

**1857**
The present Court House was erected nearby replacing a rented cottage in Kooringa.

**1873**
New cells, stables and a stableyard were added. These still stand, in addition to the original 1847 stables, which were converted into a forage store.

**1878**
The first Police Station was demolished and replaced by the present station in 1879.

**1976**
The Police Station, Lockup and Stables were dedicated to the National Trust.

0  2  4
METRES

1847 ORIGINAL BUILDINGS
1847 POLICE STATION (DEMOLISHED IN 1878)
1873 ADDITIONS
1879 POLICE STATION (CLOSED 1971)

2018: Source: Photograph taken by Swanbury Penglase          *On Site Signage*
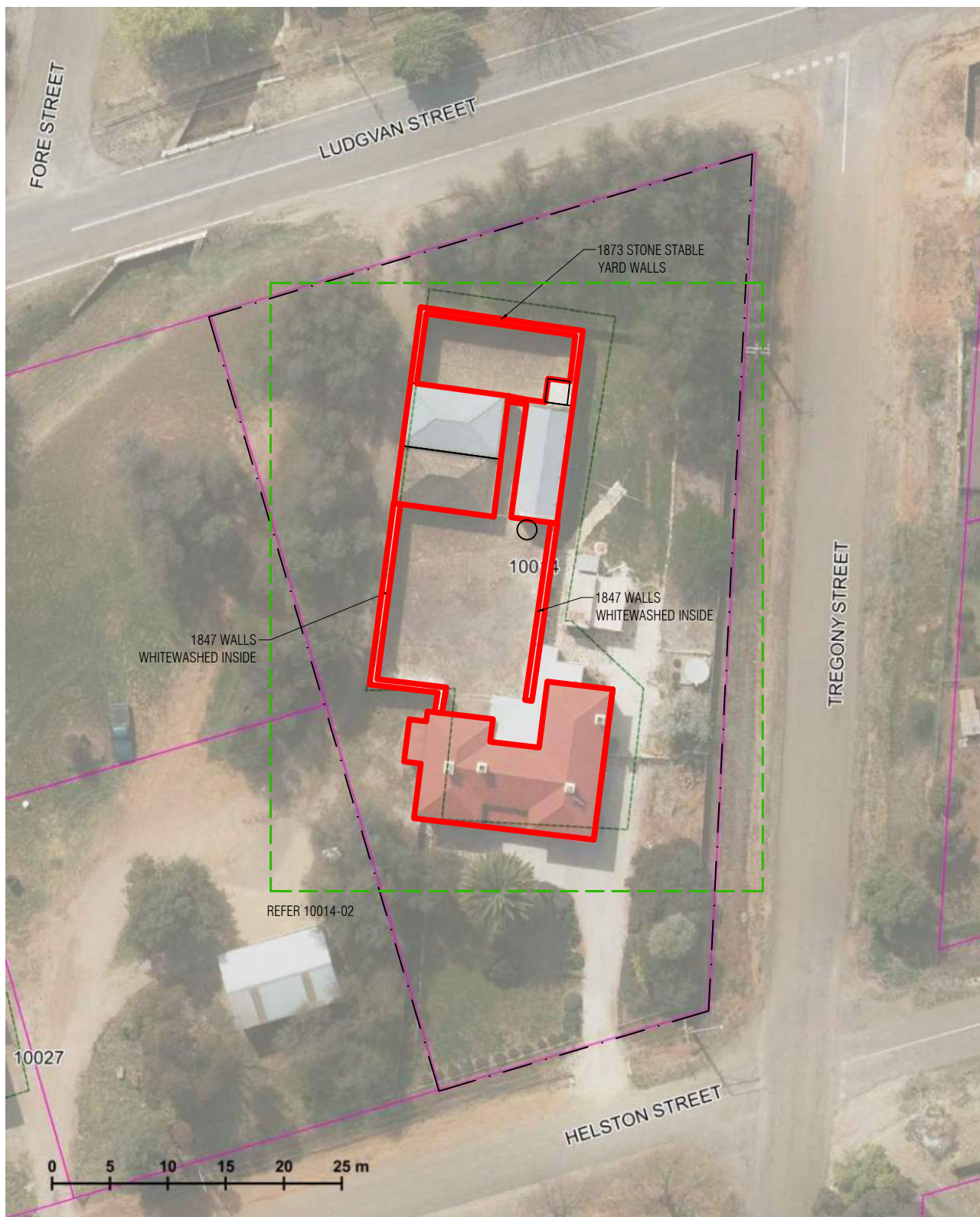
1873 STONE STABLE
YARD WALLS

10014

1847 WALLS
WHITEWASHED INSIDE

1847 WALLS
WHITEWASHED INSIDE

1847 WALLS
WHITEWASHED INSIDE

REFER 10014-02

10027

FORE STREET

LUDGVAN STREET

TREGONY STREET

HELSTON STREET

0   5   10   15   20   25 m

— · — TITLE BOUNDARY

——— SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury
penglase**

**FORMER REDRUTH (NORTH BURRA) POLICE STATION, CELLS & STABLES**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10014-01**

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COBBLE STONE
PAVING W DRAIN

COBBLE STONE PAVING
WITH PATH TO WEST SIDE

10014

MASS CONCRETE
TANK STAND

COBBLE STONE PAVING
WITH SURFACE DRAIN
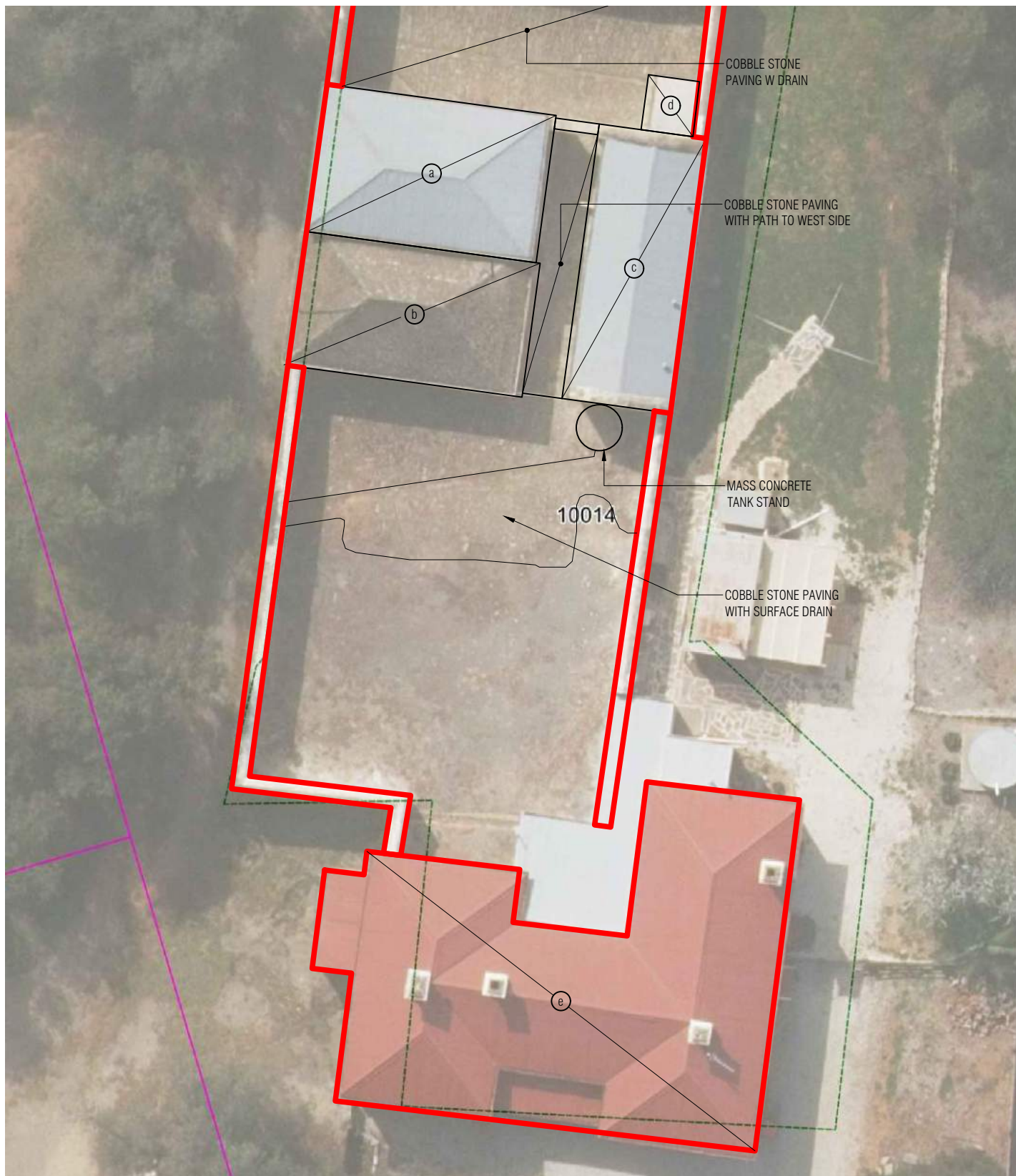
— · —  TITLE BOUNDARY

━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:200

STRUCTURES KEY

a - 1873 SINGLE STOREY STONE STABLE
b - 1847 WHITEWASHED STONE SINGLE STOREY STONE STABLE WITH
TIMBER SHAKE ROOF
c - 1873 SINGLE STOREY STONE CELLS
d - 1873 SINGLE STOREY TOILET
e - 1878 SINGLE STOREY STONE POLICE STATION

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**FORMER REDRUTH (NORTH BURRA) POLICE STATION, CELLS & STABLES**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10014-02**

www.swanburypenglase.com

# 10018 & 10022: St Mary's Anglican Church & Hall

## Item identification

| | |
|---|---|
| **Current name of item:** | St Mary's Anglican Church and Hall |
| **Current use:** | Church and Hall |
| **Address/Location of Item:** | Market Street, Burra |
| **CT Reference:** | CT 6158/820 F53993 A5 |
| **Heritage Listing Status:** | State<br>SAHR No. 10018<br>Confirmed 24 July 1980<br>Heritage database no. 14311 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |
| | State<br>SAHR No. 10022<br>Confirmed 8 November 1984<br>Heritage database no. 14313 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The first Anglican services were held in Kangaroo Street in 1847. In February 1848, the SAMA donated a site on the corner of Ware and Church Streets (Allotment No. 52 and 53) to the Church of England for the purposes of a school. The SAMA donated various sites in Kooringa to many different denominations. The building, which became known as the first Church of St Mary, was completed mid-1849 and was used both as a school and temporarily as a church, being reported as being able to hold 250 parishioners. The building was funded by subscription (mainly subscribers in Adelaide) and a Government Grant. In 1849, W. Paxton donated a clock to the building.[1]

Church of England Reverend, John Charles Bagshaw, had arrived in Kooringa c.1847-1848. "Bagshaw's salary (and that of his successor, Pollitt) was largely met by the Patent Copper Company which had engaged Bagshaw in England to act as chaplain at their smelting works in Burra".[2]

In 1879, a new St Mary's Church was constructed as by that time the original church had become badly dilapidated, poorly sited and too small for the congregation. The SAMA donated the site, which was one acre, for the new church.[3] The memorial stone was laid on 3 July 1879 by the Lord Bishop of Adelaide, Reverend Short and was opened on 18 January 1880. The new Church was built by the Burra firm Sara and Dunstan at a cost of £4000 and designed to seat 350 by architect William McLagan, who came to live in Burra from Melbourne. Two coloured glass windows crafted by Edward Brooks, one of South Australia's early stained-glass makers, were relocated into the new building from the earlier church.[4] The building also contains a stained glass window installed in 1895 which depicts the Burra Mine in the background of a religious scene.[5] The first St Marys building was demolished in the later 1880s.

The importance of the congregation can be seen in the election of G.S. Kingston, who was an adherent of the Church of England and "was supported in Kooringa by Rev. James Pollitt and practically voted in [as the member for the District of Burra] by Pollitt's parishioners".[6] One of the Trustees of the Church was Captain Isaac Killicoat.[7] Killicoat was a Cornish mine manager who worked at the renowned Tresavean copper mine in Cornwall.[8] In c.1848-54, he was appointed Mine Agent at Burra for the English and Australian Copper Company (formerly the Patent Copper Company).[9] Killicoat worked at the Burra Smelts and superintended the purchase of ore from the SAMA for twenty years.[10]

The Church Hall was originally built as a schoolroom, the foundation stone being laid on 12 July 1893 and was officially opened on 24 September of the same year.[11]

## Description

St Mary's Anglican Church is a large single storey structure. It is constructed from bluestone with rendered dressings. It is a substantial Church which is symmetrical in design. It has two gabled entrance porticos with lancet arched door openings. There are prominent stone buttresses to the porticos. It has a large central gabled section which has a large decorative tracery window. These elements sit in front of the main gabled stone front façade wall. It has a gabled roof clad with corrugated roof sheeting. The sides of the Church are punctuated with stone buttresses and lancet windows. It also has a bay window on the side facing the road. There is a rear gabled section with a decorative tracery window similar to the front façade. There is an attached skillion roof with parapet which sits over rear entrance doors.

The hall is random rubble with a projecting plinth and rendered quoins to corners. It has a timber framed roof clad in short sheet corrugated galvanised steel. The gutters are 'D' profile. Windows are painted timber to the hall and painted steel to a lean-to addition constructed of concrete blockwork, with a front wall of stone.

## Significance

Although the Cornish community was largely Methodist by persuasion, is was not universally so, and the Church of England was also an important influence on the community, including the relationship with the Smelting works and several important individuals associated with the Mine. The current church however was built in 1879, but connections are apparent in the two windows relocated from the previous building as well as the later window which integrates the mine as a backdrop.

## Condition Notes

The church building is in a good state of repair and/or restoration retaining most of the structure's early features. The integrity of the early construction materials and building layout has been retained. The form, design, use and function of the building have been substantially maintained. The following issues were observed:

- Leak in north corner of east transept with blistering of plaster finishes internally.
- Deteriorated door threshold to north elevation.
- Minor cracking to rendered window sills to east side.

The hall is generally is good condition with minor cracking through mortar joints below the coping to the west elevation to the southern end. Timberwork is generally weathered due to lack of paint cover.

## Endnotes

1  Devenport, John, *St Mary's Church, Burra: the first 150 years*, (Burra: The Anglican Parish of SA, 1997).
2  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), pp297, 300.
3  "St Mary's Church, Burra", *South Australian Chronicle and Weekly Mail*, 12 July 1879, p 2. https://trove.nla.gov.au/newspaper/article/93968757?searchTerm=St%20marys%20burra%20mining%20%20%20%20%20%20 %20%20%20%20%20%20&searchLimits=exactPhrase|||anyWords|||notWords|||requestHandler|||dateFrom|||dateTo|||l-advstate=Sou th+Australia|||sortby
4  Devenport, *St Mary's Church, Burra: the first 150 years*.
5  Devenport, *St Mary's Church, Burra: the first 150 years*, p69.
6  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p300.
7  Devenport, *St Mary's Church, Burra: the first 150 years*.
8  "The Late Captain Killicoat", *The Express and Telegraph*, 23 January 1886, p3.
9  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p187.
10 Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p187.
11 "St Mary's Sunday-School" *Burra Record*, 19 July 1893, p.3 & "Sparks" *Burra Record*, 27 September 1893 p.3

## Historic Photos



St Mary's Church, c.1880. Source: State Library of South Australia (SLSA) B18896



St Mary's Church, c.1880. Source: SLSA SRG 94/10/18/105

St Mary's Church and Church Hall, undated. Source: The Burra History Group



St Mary's Church and Church Hall. Source: Heritage South Australia Research File, 1978

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## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (North-West)*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*



2018: Source: Photograph taken by Swanbury Penglase

*View within East Transept*

BURRA CREEK

MARKET STREET

10018

REFER 10018-02

10022

MOUNT PLEASANT ROAD

ST JOSEPH LANE

0  5  10  15  20  25 m

— · —  TITLE BOUNDARY

———  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:1000

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**ST MARY'S ANGLICAN CHURCH & HALL**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10018-01**

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LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

—— EXISTING SAHR SHAPE FILE

SCALE: 1:200

STRUCTURES KEY

a - STONE CHURCH & TRANSEPTS
b - STONE SINGLE STOREY CHANCEL
c - SINGLE STOREY STONE NARTHEX
d - SINGLE STOREY STONE PORCHES

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## ST MARY'S ANGLICAN CHURCH
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10018-02**

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# 10019: Former South Australian Mining Association Store Room, Yard and Walls

# 10049: Former South Australian Mining Association Storeman's Dwelling

## Item identification

| | |
|---|---|
| **Current name of item:** | Former South Australian Mining Association Store Room, Yard and Walls |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | Market Street, Burra |
| **CT Reference:** | CT 5731/762 F186979 A467 |
| **Heritage Listing Status:** | State<br>SAHR No. 10019<br>Confirmed 26 November 1981<br>Heritage database no. 14392<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |

| | |
|---|---|
| **Current name of item:** | Former South Australian Mining Association Storeman's Dwelling |
| **Current Use:** | Private Residence |
| **Address/Location of Item:** | Market Street, Burra |
| **CT Reference:** | CT 5731/762 F186979 A467 |
| **Heritage Listing Status:** | State<br>SAHR No. 10049<br>Confirmed 24 July 1980<br>Heritage database no. 20500<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In 1847, the SAMA Storeroom, Yard and Walls were built at the mine entrance and used as a depot for mining machinery, tools, timber (firewood for fuel) and iron. The high wall aimed to discourage theft of these valuable materials. The Yard contains remnants of several buildings dating from 1846 to 1852 including "ruins of a workshop (which was possibly the first – but unsuccessful – smelter, built around 1846 or 1847), and a weighbridge, along with evidence of other structures which served as offices, stabling and storage".[1] The Storeman's Dwelling, also built in 1847, may have been designed by architect George Strickland Kingston, given its early date which coincides with when Kingston was SAMA's surveyor, town planner and architect. However, it "cannot be confidently attributed to Kingston".[2] Also Kingston was involved in the design and construction of SAMA's first smelter.[3] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that there were fourteen houses on the Mine site associated with Mine operations.

## Description

The SAMA Storeman's Dwelling is a single storey structure which is attached to the SAMA's Storeroom. It is constructed from random rubble stone with red brickwork quoins to windows. It has a large skillion corrugated iron clad roof with a section of gabled roof and adjacent smaller skillion. There are timber, casement, multipaned windows. One of the stone walls continues as a boundary wall. The SAMA Storeroom is a tall, single storey building. It is constructed from random rubble stone with painted red brickwork quoins to door and window openings. There are two gable parapets; one parapet is constructed from red brickwork and in part bluestone with a red brickwork coping. The other parapet is stone with a red brickwork coping and a central red brickwork chimney at the apex of the parapet. The Storeroom has a large, gabled roof with a corrugated iron clad dormer window. There is an attached skillion roof section which is corrugated iron clad with a red brickwork chimney. There is a central timber framed door on the longest elevation facing the road, and there are timber framed, casement multipaned windows, as well as timber framed double hung windows. There is a rear lean-to section which is constructed from random rubble stone with red brickwork quoins to current and former openings. It has a skillion, corrugated iron clad roof with a red brickwork chimney and abuts the Storeroom parapet wall. The Yard and Walls are expansive and consist mainly of random rubble stone walls, dry stone walling, and high level random rubble stone walls however some are ruins. Some of these walls are integrated with other building ruins on the site, of which there are many.

## Significance

The SAMA Storeman's Dwelling, Storeroom, Yard & Walls dates from the earliest period of the Mine when it was first established and operated as a deep-rock, underground mine. This was when the Mine was its most successful and profitable. The buildings were built in a prominent location on a main road and reflect the importance of supporting functions, and their buildings, to the primary mining operations. It is believed that this may also be the site for the Mine's first smelter. The SAMA Storeman's Dwelling, Storeroom, Yard & Walls is the "earliest surviving building of the Burra Mines and dates from 1847".[4]

## Condition Notes

The following issues were observed during the inspection:

- Store is in generally fair condition

Main Issues:
- Almost entirely repointed in cement
- Windows missing to east to north lean-to (pigeon infestation)
- Paint to timberwork
- Pointing to chimneys & fretting bricks
- Minor cracking
- Trees close to back of walls
- Original timber shakes extant under iron roofing.

## Endnotes

1  ANU Australian Cornish Mining Heritage Site, July 2014, p6.
2  Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, pp590-591.
3  Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
4  ANU Australian Cornish Mining Heritage Site, July 2014, p6.

## Historic Photos



Former SAMA Storeman's Residence, Yard & Walls, undated. Source: The Burra History Group Inc.



Former SAMA Storeman's Residence, Yard & Walls, c.1979. Source: Heritage SA.

Stone wall at Burra mine site, South Australia, ca. 1970. Source: Heritage SA.

2018: Source: Photograph taken by Swanbury Penglase

*View in Yard from North*



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Market Street)*

2018: Source: Photograph taken by Swanbury Penglase                    *View of Store Room from South*



2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*

2018: Source: Photograph taken by Swanbury Penglase

*View of Boundary Walls from North*



2018: Source: Photograph taken by Swanbury Penglase

*Boundary Wall Detail*

2018: Source: Photograph taken by Swanbury Penglase

*View from North-West*

## Other Material



Store and Timber Yard, c.1852. Source: SLSA Map C 178

Part of "The Township of Graham" map showing the Former Mine Stores, 1875. Source: State Library of South Australia Map C41

BURRA CREEK

MARKET STREET

10019

REFER 10019-03

REFER 10019-04

REFER 10019-02

10049

REFER 10019-05    REFER 10019-06

10021

WEST STREET

0  5  10  15  20  25 m

## LEGEND

— · —    TITLE BOUNDARY

▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:1000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF
THE WALLED AREA AND STRUCTURES WITHIN THE WALLED
AREA. THE STORES HAVE HIGH ARCHAEOLOGICAL POTENTIAL

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**FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10019-01**

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STONE QUOIN

STONE WITH W. QUOINS

LARGER DOOR OPENING
CONVERTED TO WINDOW

INFILLED ARCHED OPENING

NO CEILING

W

FP

a

PARAPET

b

STORMWATER OUTLET

BOARDED BARN DOORS
WITH SLATE FLAGS

c

10019

ARCHED OPENING

SKYLIGHT

d

f

10049

FULL HEIGHT PERIMETER WALL
IN ORIGINAL DETAIL

1.2m HIGH STONE

g

e

BR

0   5   10   15   20   25 m

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - STONE WALLED LEAN-TO. CGI ROOF IN GOOD CONDITION, WITH 'D' GUTTERS
b - STONE LEAN-TO
c - STORE BUILDING, STONE WALLS WITH BRICK DRESSINGS TO OPENINGS
d - EARLY LEAN-TO
e - LATER INFILL
f - INFILLED TIMBER FRAMED VERANDAH
g - CONCRETE BLOCK

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## FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10019-02**

FLUSHED AND LINED IN
CEMENT. CEMENT CAPPING

10019

HATCHED AREA SHOWS
EXTENT OF SUSPECTED
FILL

WALL CUT FOR
FARM GATE

## LEGEND

— · —  TITLE BOUNDARY

———  SIGNIFICANT PORTION OF THE STRUCTURE

— — —  EXISTING SAHR SHAPE FILE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE
WHOLE OF THE WALLED AREA AND STRUCTURES
WITHIN THE WALLED AREA. THE STORES HAVE HIGH
ARCHAEOLOGICAL POTENTIAL

SCALE: 1:250

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**FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10019-03**

www.swanburypenglase.com

BR. QUOINS

CHANGE OF STONE TYPE

INFILL? (FORMER OPENING)

10019

## LEGEND

— · — TITLE BOUNDARY

— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE
WHOLE OF THE WALLED AREA AND STRUCTURES
WITHIN THE WALLED AREA. THE STORES HAVE HIGH
ARCHAEOLOGICAL POTENTIAL

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## FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10019-04**

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DOES NOT APPEAR ENGAGED TO PERIMETER WALL

10019

DEAD TREE

SECTIONS OF WALL STANDING TO 3m

CGI

ST

COLLAPSED STONE WALL

CGI

h

OPENING

W

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE WALLED AREA AND STRUCTURES WITHIN THE WALLED AREA. THE STORES HAVE HIGH ARCHAEOLOGICAL POTENTIAL

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## FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

10019-05

10019

STONE RUIN WITH
BR. CHIMNEY

CGI

STONE WALLING

CGI

h

STONE WALLING

## LEGEND

— · — · —  TITLE BOUNDARY

———  SIGNIFICANT PORTION OF THE STRUCTURE

— — —  EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

h - CGI & STONE WALL SHED (NOT INSPECTED INTERNALLY - MAY BE FURTHER EVIDENCE OF EXTENT MAY BE REVEALED BY CLOSER INVESTIGATION)

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE WALLED AREA AND STRUCTURES WITHIN THE WALLED AREA. THE STORES HAVE HIGH ARCHAEOLOGICAL POTENTIAL

**swanbury penglase**

# FORMER SA MINING ASSOCIATION STORE ROOM, YARD & WALLS
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10019-06**

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# 10020: Peacock's Chimney [Cornish]

## Item Identification

| | |
|---|---|
| **Current Name of Item:** | Peacock's Chimney [Cornish] |
| **Current Use:** | N/A |
| **Address / Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 5515/722 F1763 A1 |
| **Heritage Listing Status:** | State |
| | SAHR No. 10020 |
| | Confirmed 24 July 1980 |
| | Heritage database no. 14373 |
| | |
| | National |
| | Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In c.1857-58, Peacocks Enginehouse was completed by Messrs Blackler and Hollow. It was designed to house Burra Burra Mine's second beam rotative engine, a 30-inch engine imported from the Perran Foundry in Cornwall. Used as a winding engine, it was known as Peacocks Engine, named after William Peacock, a SAMA Director. The "winding engine hauled from several shafts in the mine and was the longest serving engine at the mine".[1] It operated from 1858 to 1877 when the Mine closed. In 1916, the engine was sold. In c.1971-72, the enginehouse and chimney were demolished to make way for the twentieth century open-cut mine. The chimney served the Boilerhouse associated with the Peacock's Winding House. In the same year, the dismantled chimney was rebuilt near the entrance of the mine.[2]

## Description

Peacock's Chimney provides a landmark entry to the mine site. In c.1971-72, the chimney was dismantled due to the demolition of the enginehouse to make way for the modern open-cut. It was reconstructed on the current site by the National Trust of SA using stone and red brickwork. It has a rectangular base on which the tapered circular chimney stack sits. The majority of the chimney is built of stone but the upper section is constructed of red brickwork, which is also used to form a projecting stringcourse below the top. The metal, painted figure at the top of the chimney is "Johnny Green" – the mascot of the early Burra Burra miners.

## Significance

Peacock's "Cornish-style"[3] Chimney was associated with Peacock's Enginehouse and dates from the earliest period of the Mine when it was first established and operated as a deep-rock, underground mine. However, the Chimney was demolished and rebuilt in a different location. Thus, its integrity and authenticity has been affected. Although its form reflects the original structure and is an important visual symbol of Cornish copper mines, its siting does not relate to the original operation of the Mine.

## Condition Notes

The structure was found to be in good condition at the time of the inspection with no issues of note observed.

## Endnotes

1   ANU Australian Cornish Mining Heritage Site, July 2014, p7.
2   Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012).
3   ANU Australian Cornish Mining Heritage Site, July 2014, p7.

## Historic Photos



Burra Burra Mine showing Peacock's Chimney with adjoining enginehouse before it was re-sited, undated.
Source: The Burra History Group Inc.
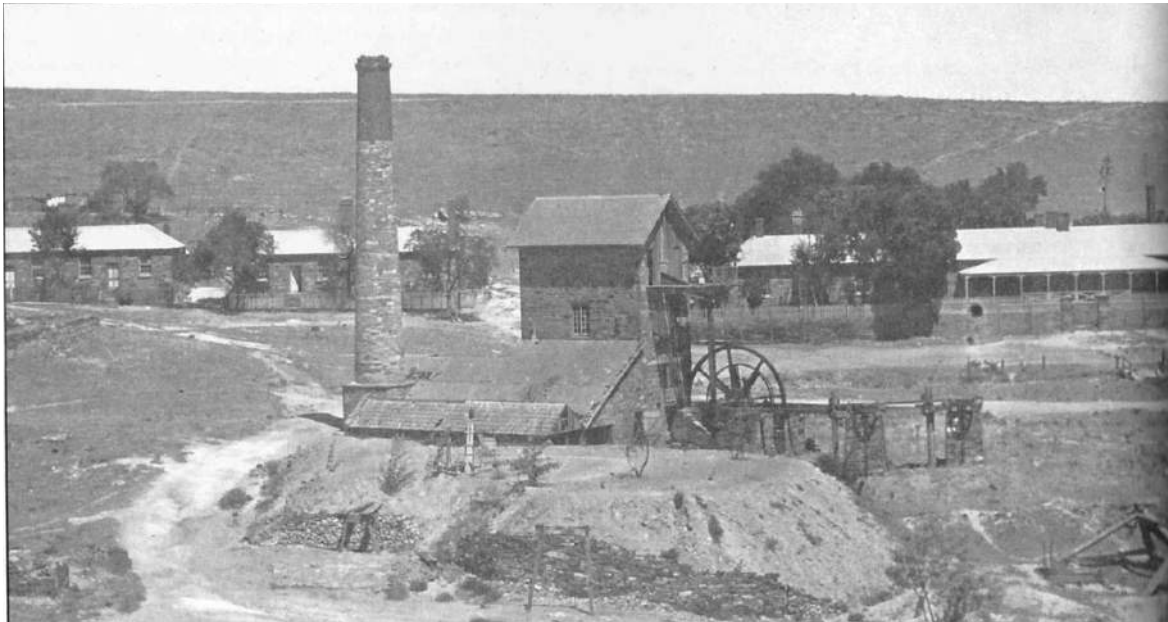


"Peacocks Enginehouse, c.1890". Source: Drew, Greg, and Connell, J.E. *Cornish Beam Engines in South Australian Mines*, p.90.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*



2018: Source: Photograph taken by Swanbury Penglase

*View within Context*

2018: Source: Photograph taken by Swanbury Penglase

*View from North*

WEST STREET

MARKET STREET
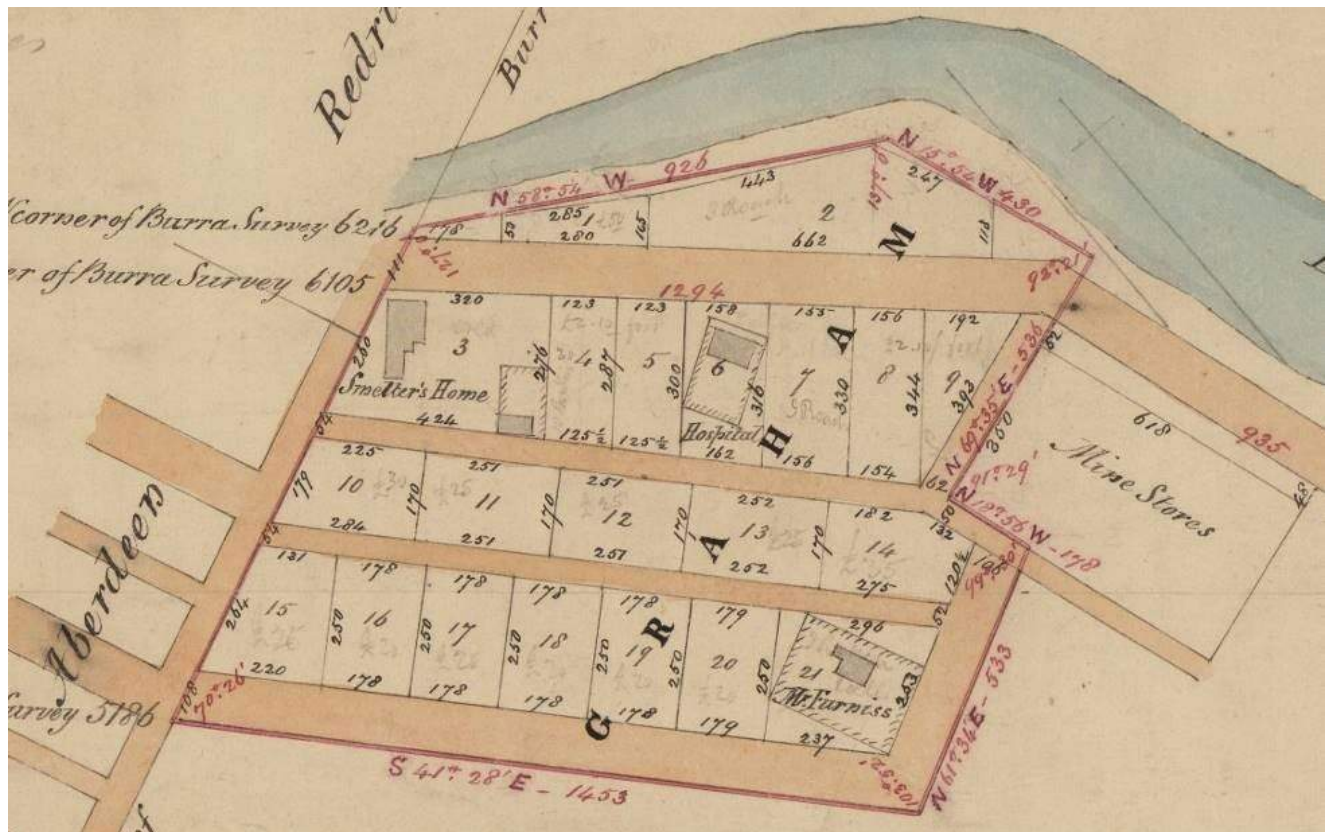
10020

REFER 10020-02

0    5    10    15    20    25 m

## LEGEND

— · — TITLE BOUNDARY

──── SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

## PEACOCK'S CHIMNEY (CORNISH)
## 18188 CMP for Australian Cornish Mining Sites

July 04, 2019

**10020-01**

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CIRCULAR TAPERED CHIMNEY
CONSTRUCTED OF STONE WITH
BRICK UPPER SECTION

RECTANGULAR STONE BASE

10020

0    5    10    15    20    25 m

— · —    TITLE BOUNDARY

————    NATIONALLY SIGNIFICANT PORTION OF THE STRUCTURE

— — —    EXISTING SAHR SHAPE FILE

SCALE: 1:200

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penglase

**PEACOCK'S CHIMNEY (CORNISH)**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10020-02**

# 10021: Mine Bridge [Stone Arch]

## Item Identification

| | |
|---|---|
| **Current Name of Item:** | Mine Bridge [Stone Arch] abutments and wall on east side of Market Street |
| **Current Use:** | Road Bridge |
| **Address / Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 0000/0000 H200800 ROAD RESERVE |
| **Heritage Listing Status:** | State<br>SAHR No. 10021<br>Confirmed 8 November 1984<br>Heritage database no. 14391 |
| | National<br>Not identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In December 1867, it was reported that the Central Road Board had failed to "complete the road near the Mine Store and making the bridge … [and it] is in a very dangerous condition for anyone passing in a cart on a dark night".[1] In 1868, the Central Road Board contracted Messrs J. Tiver and W. Woollacott to construct the bridge. It was designed by "their Superintending Surveyor Mr A. Macauley."[2] On the 8 May 1868, it was reported that the bridge was "progressing favourably"[3] and it was completed soon after. It linked the mining townships of Kooringa and Redruth/Aberdeen. It "helped to channel the water produced by the copper mining operations, which entered Burra Creek via Mine Creek".[4] It was constructed from Hampton quarry stone with a Mintaro coping. The "arch has a span of about 4.5m. Plans to widen and straighten the road were drawn up in the late 1930's and this has resulted in the removal of the western parapet."[5]

## Description

The single arch bridge was constructed from stone from the Hampton quarry with parapet walls, and stone coping, to the roadway. It has a stone vault with stone voussoirs and central keystone to the arch. It has two integrated stone buttresses/piers either side of the vault. The abutments either side are built into the creek banks. A string course sits above the keystone and runs the length of the bridge. There are supporting wing walls either side of the main bridge structure. The roadway has been widened on the west side resulting in the loss of the west parapet. The western side of the vault has a more recent concrete retaining wall with culvert.

## Significance

The Mine Bridge is significant because of its close association with the development of the Burra Burra Mine. It linked the two mining townships of Kooringa and Redruth/Aberdeen, in addition to channelling water produced by the Mine.

## Condition Notes

The following issues were observed during the inspection:

▪ Significant deterioration to face of stonework to east wall below springing off vault

▪ Significant deterioration to face of stonework to top two courses below coping of parapet

▪ Stone to external corners of walls below vault is in poor condition

▪ Stone coping missing to top of north pier

▪ Surface of pointing deteriorated throughout with only few indications of original ironed joints

▪ Surface corrosion of iron cramps to coping

## Endnotes

1    *The Register*, 10 December 1867, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10021.
2    Burra Heritage Plaque
3    *The Register*, 8 May 1868, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10021.
4    Heritage SA Bridges and Stone walls.
5    Burra Heritage Plaque

## Historic Photos



Bridge with two parapets, c. 1920's. Source: Courtesy of the Burra History Group.
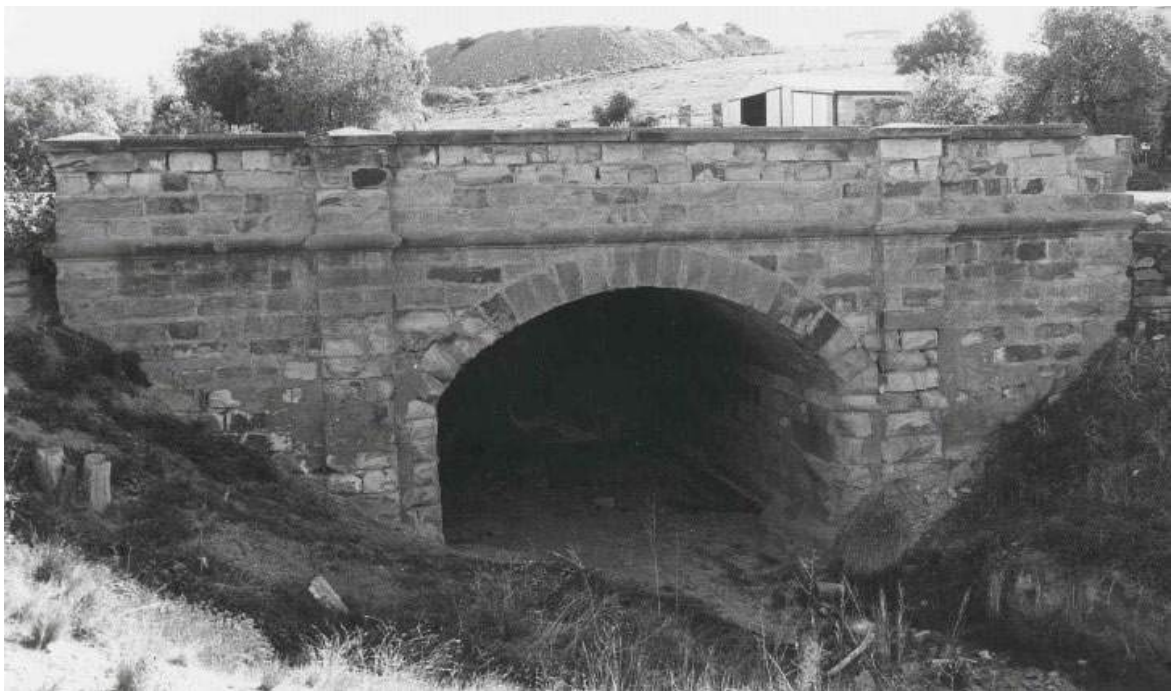


Mine Bridge, 1983. Source: Heritage SA research packet

Mine Bridge, Internal Wall, 1983. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*



2018: Source: Photograph taken by Swanbury Penglase

*View from North-East*

2018: Source: Photograph taken by Swanbury Penglase

*View from South-East*

MARKET STREET

10021

REFER 10021-02

WEST STREET

10019

10049

10989

0    5    10    15    20    25 m

LEGEND

— · —    TITLE BOUNDARY

━━━━    SIGNIFICANT PORTION OF THE STRUCTURE

– – – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**MINE BRIDGE (STONE ARCH)**
**18188 CMP for Australian Cornish Mining Sites**

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**10021-01**

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MARKET STREET

STONE ARCH UNDER ROAD

10021

WEST STREET

0    5    10    15    20    25 m

## LEGEND

— · —   TITLE BOUNDARY

⬛⬛⬛   SIGNIFICANT PORTION OF THE STRUCTURE

▬ ▬ ▬   EXISTING SAHR SHAPE FILE

SCALE: 1:200

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# MINE BRIDGE (STONE ARCH)
# 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10021-02**

# 10023: Former Bon Accord Mine Site

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Bon Accord Mine Site (including Mine Buildings, Wall Sections and Slag Heap) |
| **Current Use:** | National Trust (SA) Museum and Short Term Accommodation |
| **Address/Location of Item:** | Railway Terrace, Burra |
| **CT Reference:** | CT 5795/566 F186976 A464, CT 5795/567 F186975 A463 |
| **Heritage Listing Status:** | State |
| | SAHR No. 10023 |
| | Confirmed 24 July 1980 |
| | Heritage database no. 14316 |
| | |
| | National |
| | Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In November 1840, with a projected capital of £100,000, the Scottish Australian Investment Company was founded in Aberdeen, Scotland. On a surety of £5000 and the condition that he took 1000 shares in the company, Robert Archibald Alison Morehead was appointed the company's Australian manager. Morehead arrived in Australia in 1841. Amongst other investments, predominantly in New South Wales mortgages and property, the company invested in wool, coal and copper mining.[1]

Conjointly with the North British Australian Company, the Scottish Australian Investment Company purchased a block of 347 acres immediately north of the Burra Burra Mine in April 1846.[2]. In 1848, it was reported that, the proprietors "who reside in New South Wales or parts more distant",[3] were represented by Mr Morehead and Mr Belcher, and German, Captain Ey, formerly of the Burra Burra Mine, superintended the mine. The "speculators were a group of Aberdeen capitalists … although there were no visible indications of copper lodes, the purchasers were gambling on the possibility that the adjacent Burra Burra Mine lodes extended into their section".[4] The mine was known as the 'Bon Accord Mine' apparently after the motto of the Aberdeen coat of arms. No ore body of substance was discovered, and mining operations ceased in 1849. To help recoup some of their investment, the joint company decided in 1849 to lay out a second 'outside' township. Predictably the new township was named Aberdeen. In 1857 the Scottish Australian and North British Australian Company sold their shares in the mine, reserving a 5% royalty on any ore raised, and it was made over to a new company.[5] Despite advice to the contrary,[6] mining recommenced at the Bon Accord Mine, and shortly after, in 1859, mine offices, blacksmith's forge, carpenter's shop, and a manager's residence were built. A 50-inch Cornish Beam pumping engine (formerly Roach's Engine) was re-erected at the Bon Accord Mine. It operated from 1860 to 1863. However, this second venture failed too, and the mine closed in 1863.[7] Despite extensive explorations for over nearly two decades, the mine failed to locate an important lode. A second township 'New Aberdeen', adjoining 'Old Aberdeen' was subdivided on the company's section in 1872, shortly after completion of the railway to Burra which terminated within the Bon Accord boundaries".[8]

From 1884 to 1905, the Burra Corporation used one of the mine shafts for the town's water supply. From 1905 to 1966 the South Australian Government used the main shaft to supply Burra with water, building a pump house over the shaft in 1908. In 1966, Burra was connected to the Murray pipeline. The site is operated by the National Trust (SA) as a museum and interpretive centre.

## Description

The Bon Accord Mine Buildings comprise the former main shaft, subsequently enclosed within a shed as part of the Burra Waterworks, and two separate stone structures, being the managers residence and the mine office/shop/forge with portions of the surrounding stone walls. The large pump shed is clad with corrugated sheeting and painted. It now provides an entrance to the Bon Accord shaft. There is a collection of corrugated clad sheds and a stone structure set into the ground with a gable corrugated sheeting roof.

The manager's residence is a single storey structure constructed from stone. It has a stone parapet with red brickwork coping and a string course from which springs a bullnose verandah to the front of the building. The parapet continues around the side of the building and curves downwards to a rear lean-to constructed from stone. There are several red brickwork chimneys. There are a series of different roofs including a skillion roof, curved roof, and gable roof, and rear skillion, all clad with corrugated iron sheeting. There is an additional lightweight lean-to at the side.

The mine office/shop/forge is a long single storey structure with a basement. It is constructed from stone and has a distinctive barrel roof. It has curved stone parapets each end with red brickwork copings. At one end, the parapet has a central red brickwork chimney. The building has a series of arched brickwork window and door openings. At high-level are timber framed, diamond paned windows. It has timber framed doors and timber framed windows with diamond paned glazing. There is a pair of large, timber framed double doors clad with corrugated sheeting to the Blacksmith's Shop to the eastern end. A skillion verandah is at the rear of the building with steps to a raised, stone verandah plinth. This provides access to the Mine Offices. There is a long, adjoining, stone wall which defines the yard. The wall is stepped to follow the ground level and has several supporting stone buttresses. Adjoining, there is a stone wall (only part remains) which defines the other side of the yard.

## Significance

The Bon Accord Mine is significant because it illustrates the speculative nature of early mining in Australia, however it was largely unsuccessful. Dating from the early mining period at Burra in the 1850s, the Bon Accord Mine demonstrates the form and layout of a copper mine on a compact site which can be readily interpreted.

## Condition Notes

The buildings are generally in a fair state of repair. The following issues were noted:

- Rising damp and cracking to stone wall of Blacksmith's shop

- Rising damp and salt attack to walls of mine office and shop. Inappropriate cement mortar repairs are exacerbating the salt attack

- Major crack (2-9mm) to wall of manager's residence

- Rising damp to walls of manager's residence

- Roof in poor condition to building adjacent waterworks building

- Major rising damp and salt attack to stone wall adjacent waterworks building

- Trees pushing out wall adjacent waterworks building

## Endnotes

1   David S. Macmillan, 'Morehead, Robert Archibald Alison (1814–1885)', Australian Dictionary of Biography, National Centre of Biography, Australian National University, http://adb.anu.edu.au/biography/morehead-robert-archibald-alison-2478/text3329, published first in hardcopy 1967, accessed online 28 June 2019.
2   "MINES AND METALS." *Adelaide Observer,* 11 December 1847: p4.
3   Royal South Australian Almanack for 1848. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10023
4   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* p120.
5   "GENERAL TRADE LIST." *The Shipping Gazette and Sydney General Trade List,* 15 June 1857: p.145.
6   "THE BON ACCORD MINING COMPANY." *Adelaide Times,* 10 June 1857: p.3.
7   "REDRUTH:" *South Australian Weekly Chronicle,* 29 August 1863: p.2.
8   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877,* pp120-121.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*
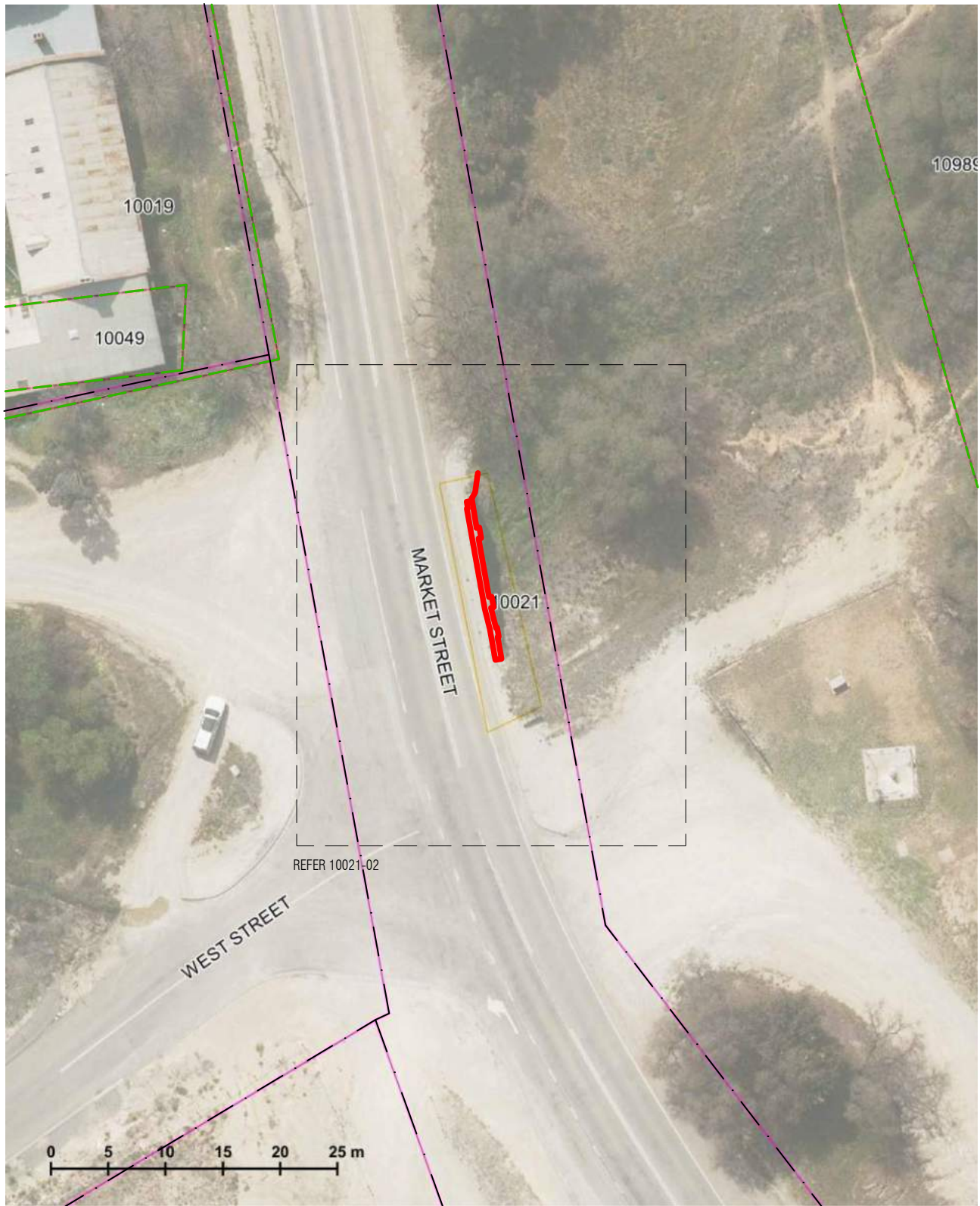


2018: Source: Photograph taken by Swanbury Penglase

*View from South-East*

2018: Source: Photograph taken by Swanbury Penglase

*View from South-West*



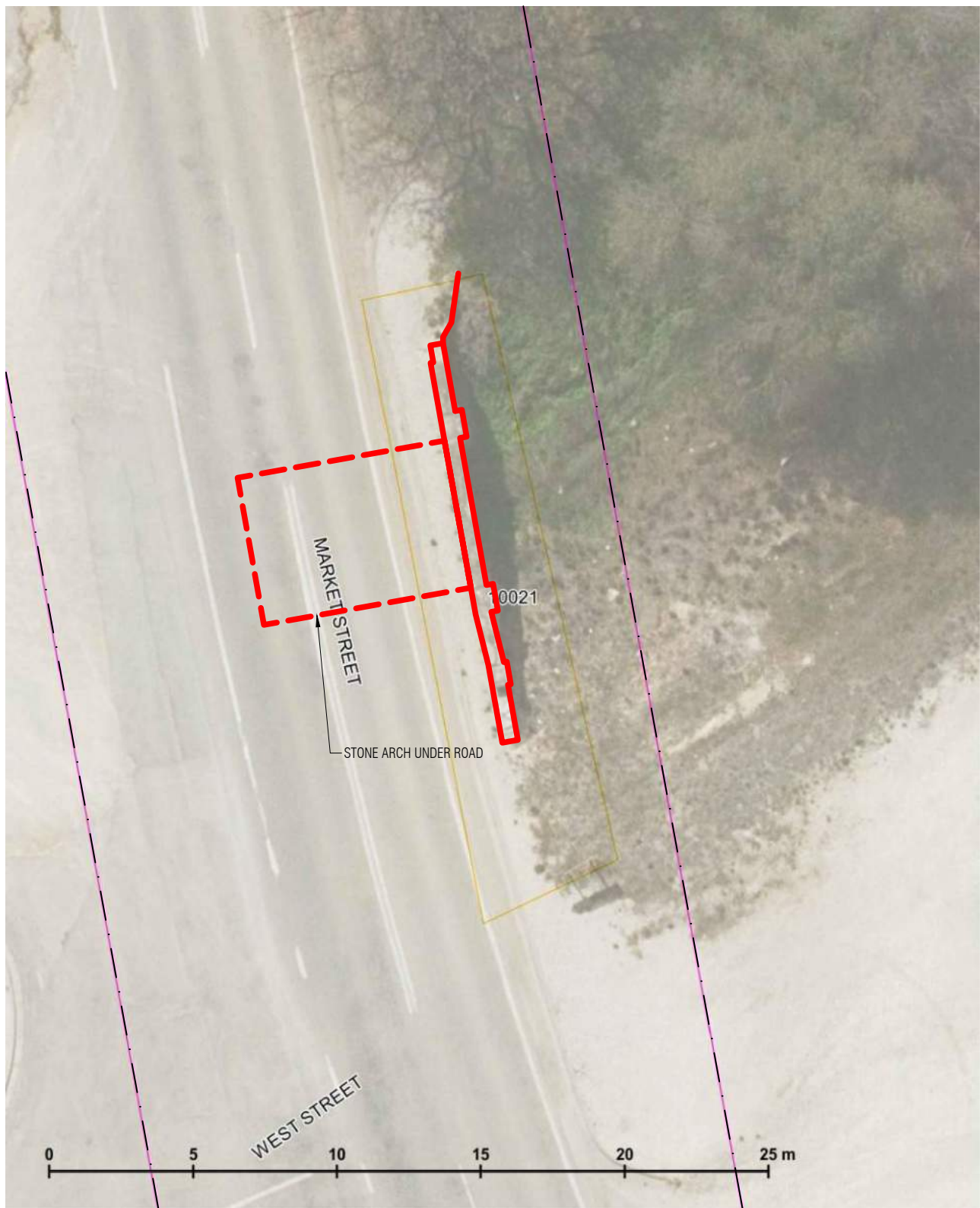2018: Source: Photograph taken by Swanbury Penglase

*View from North*

2018: Source: Photograph taken by Swanbury Penglase

*View from North-East*



2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

Map labels:
- MOREHEAD STREET
- RAILWAY TERRACE
- WEST STREET
- LINKSON STREET
- OLD CART & SIGN
- TAILINGS HEAP WITH STONE BASE
- OUTDOOR RELICS CART & PLOUGH
- 10023
- OLD IRON GATE PAD
- OLD IRON GATE VEHICLE
- BED & BREAKFAST
- TIMBER SLEEPER & STONE WALL, NOW GALVANISED STEEL
- MODERN SHED
- IRON GATES AT ENTRY
- OLD TANK
- OUTDOOR RELIC MUSEUM MINE CARTS & BEAMS & BOILERS
- REFER 10023-03
- REFER 10023-02

Scale bar: 0 5 10 15 20 25 m

## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:1000

swanbury penglase

# FORMER BON ACCORD MINE SITE
# 18188 CMP for Australian Cornish Mining Sites

September, 2019

10023-01

**Labels on plan:**

WALL FOOTINGS

STONE PARAPET

CONTINUATION OF WALL

10023

BR. WC - LATER

10023

STONE WALL, BUTTRESSED. BR. STRING COURSE & RUBBLE RENDER SHELTER CAPPING WITH EMBEDDED GLASS

IRON TURNSTILE IN NEW OPENING

10023

10023

OUTDOOR RELIC MUSEUM

STONE TANK STAND

STONE LEAN TO

STONE WALL

10023

STONE PARAPETS WITH BROKEN CAPPINGS

10023

REPORTED 1859 CGI — SOLID FLOOR

## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:250

## STRUCTURES KEY

a - BULL NOSED VERNADAH WITH 'D' GUTTER
b - EARLY STONE ADDITION
c - EARLY STONE ADDITIONS
d - OLDEST PORTION - STONE ORIGINALLY CURVED GALV.
e - EARLY VERANDAH
f - ENCLOSED VERANDAH - STEEL & ASBESTOS CLAD
g - BLACKSMITH SHOP ADDITION (C?)
h - STONE STORES BUILDING
i - VERANDAH

**swanbury penglase**
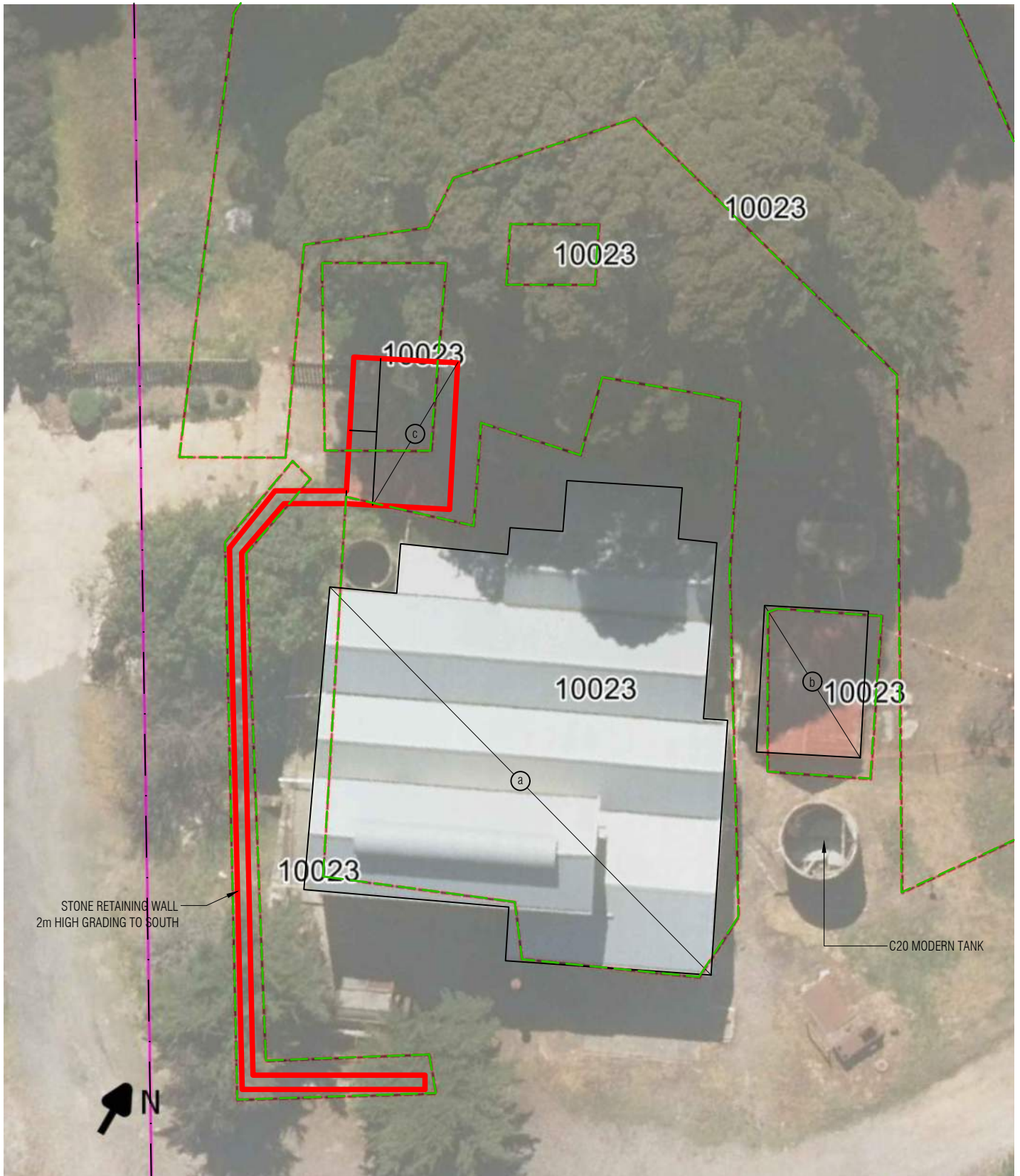
## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

╌╌╌ EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - 1908 BON ACCORD SHAFT TIMBER FRAMED SHED - CGI CLAD & ROOFED
b - STONE SUNKEN WATER TANK - CGI ROOF
c - STONE SUNKEN ROOM - CGI ROOF

STONE RETAINING WALL
2m HIGH GRADING TO SOUTH

C20 MODERN TANK

**swanbury penglase**

## FORMER BON ACCORD MINE SITE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10023-03**

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# 10024: Former Burra Smeltsyard and Storehouse

## Item Identification

| | |
|---|---|
| **Current Name of Item:** | Former Burra Smeltsyard and Storehouse |
| **Current Use:** | Not occupied |
| **Address / Location of Item:** | Smelts Road, Burra |
| **CT Reference:** | CT 5879/402 F186995 A483 |
| **Heritage Listing Status:** | <u>State</u><br>SAHR No. 10024<br>Confirmed 6 May 1982<br>Heritage database no. 14321 |
| | <u>National</u><br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Smeltsyard and Store was built in 1849. According to some sources, it included stables for up to 100 horses, and a blacksmith's shop.[1] They were built using slag blocks from the Smelter. The Smeltsyard was the "main service centre for … [the Chilean] mule teams and wagons they hauled".[2] In 1863, it was described as "stables for 30 horses, besides loose boxes for half a dozen more; there are also commodious yards and paddocks for the mules, and every appliance and convenience necessary for repairing the wagons, and shoeing the animals".[3] In 1877, the Smeltsyard was first used for Burra's Agricultural Show, continuing until 1885.

## Description

Former Burra Smeltsyard & Storehouse is located on the east side of Smelts Road opposite the Managers Residence and Office. It is comprised of a large rectangular stone walled yard orientated parallel to Smelts Road whose northwest end is no longer present. Various masonry structures are located against the inside faces of the walls. One of which is a single storey structure constructed of stone. It has a hipped roof clad with corrugated roof sheeting. It has a skillion verandah at the rear. There are remnants of timber door and window frames.

## Significance

The Smeltsyard and Store are part of the Smelts Historic Site. They were built in 1849 and thus date from the earliest period of the Burra Burra Mine and Smelter. Their construction strongly relates to the smelter as they are constructed from slag blocks. The extent of the yard, and its location adjacent the smelter, illustrates the scale of the Smelts operation and the supporting infrastructure. This was in the form of stables and stores which housed the horses, mules and wagons which were used for transportation. The site includes "areas of substantial archaeological deposits and archaeological potential that will provide significant evidence of industrial work life for free settlers in Australia".[4]

## Condition Notes

The following issues were observed during the inspection:

Perimeter stone wall
- Wall to Smelts Road leaning out
- Part wall to Smelts Road collapsed
- Major crack to corner of wall to Smelts Road
- Stones collapsed at base of wall
- Substantial cracking in wall along Smelts Road
- Deterioration of brickwork at wall openings
- Rising damp and salt attack at NE corner of wall
- Partial collapse of wall NE corner
- Minor cracking and hole in NE corner wall
- Rising damp and salt attack of buttresses along N wall
- Collapsed sections of N wall

Stone "cottage" structure
- Lintel collapse to single storey stone "cottage"
- Timber rotten along roof line
- Stone at risk of collapse above door

SE masonry structure

- Major cracks
- Section of wall collapsed and at risk of further collapse
- Deterioration of brickwork to windows

## Endnotes

1   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2   Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.
3   Austin, J.B., *The Burra and Port Smelting Works*, 1863, pp100-101.
4   ANU Australian Cornish Mining Heritage Site, July 2014, p9.

## Historic Photos



Former Smeltsyard & Storehouse, 1978. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase    *Street View (Smelts Road)*



2018: Source: Photograph taken by Swanbury Penglase    *Overall View*

2018: Source: Photograph taken by Swanbury Penglase

*View of Storehouse from North*



2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*



2018: Source: Photograph taken by Swanbury Penglase

*View within Smeltsyard Walls from South-West*

2018: Source: Photograph taken by Swanbury Penglase          *Stables*



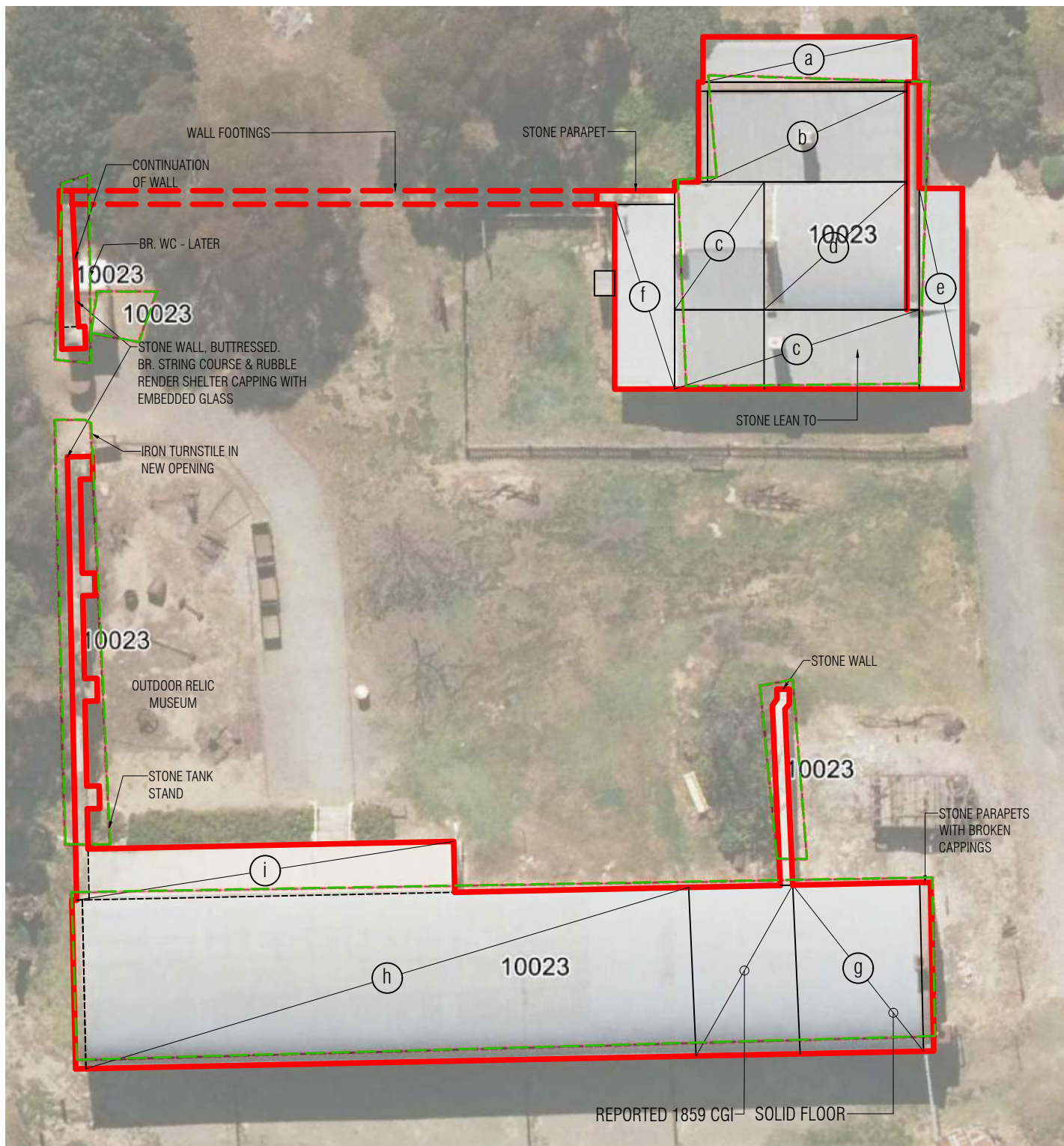2018: Source: Photograph taken by Swanbury Penglase          *View of Smeltsyard Walls from North-West*

2018: Source: Photograph taken by Swanbury Penglase

*Deterioration of Walls*

10989

10024

LOW RUINED WALL

LEANING OUT

SMELTS ROAD

REFER 10024-02

10989

0  5  10  15  20  25 m

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:1000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE YARD AND STRUCTURES WITHIN THE WALLED AREA. THE YARD HAS HIGH ARCHAEOLOGICAL POTENTIAL

**swanbury penglase**

## FORMER BURRA SMELTSYARD & STOREHOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10024-01**

www.swanburypenglase.com

DUMPED RUBBLE FROM SITE

PILES OF SLAG STONE

PEPPERCORN TREES

CHANGE OF LEVEL

FOOTINGS

10989

COLLAPSING

OLD TRUCK

c

b

d

WALL LEANING OUT

FORMER OPENING

STAIRS

10024

a

INTERNAL COLLAPSE

LOW LEVEL VOID

LATER PENS

COLLAPSED

SMELTS ROAD

NON-ORIGINAL OPENING

OLIVE TREE

VOID

OVER PREVIOUS CHIMNEY

## LEGEND

— · — TITLE BOUNDARY

SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - RUINED STORE
b - SYMMETRICAL STONE WALLED COTTAGE FARM - HIPPED CGI ROOF
c - LATER VERANDAH
d - VERANDAH - SHINGLED ROOF UNDER IRON

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE YARD AND STRUCTURES WITHIN THE WALLED AREA. THE YARD HAS HIGH ARCHAEOLOGICAL POTENTIAL

swanbury penglase

## FORMER BURRA SMELTSYARD & STOREHOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10024-02**

www.swanburypenglase.com

# 10027: Former Redruth Courthouse

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Redruth Courthouse |
| **Current Use:** | National Trust (SA) Storage |
| **Address/Location of Item:** | Sancreed Street, Burra |
| **CT Reference:** | CT 6212/20 T200801 A19 |
| **Heritage Listing Status:** | State<br>SAHR No. 10027<br>Confirmed 1 September 1983<br>Heritage database no. 14318 |
| | National<br>Not identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In September 1847, William Lang was appointed Resident Magistrate and Coroner and resided in a company cottage in Kooringa. Burra's first Courthouse was also a rented cottage in Kooringa which doubled as a schoolroom.[1] "Court cases suggest '… deplorable-looking nymphs' being drunk and disorderly on the Sabbath, of sly-grogging, of miners unable to work on 'maze Mondays' – a familiar feature of Cornish mining life. Meetings of the Burra Total Abstinence Society were often held on a Monday when bouts of weekend drinking were followed by bouts of pledge-signing by remorseful miners. Many miners found it necessary to sign the pledge weekly."[2]

"Such periods of excessive drinking and excessive repentance were confined mainly to the mining population of Burra, and to the non-conformist adherents. By 1851 the population of the Burra Burra Mine townships was heading towards 5,000 and crime was on the increase. The commonest offences were drunkenness, petty larceny and disorderly behaviour. In this respect, Burra differed little from the rest of South Australia … Burra, however, had its own particular criminal activity – forgery. Both the mining company and the smelting company paid their workmen in promissory notes, those of £1 or higher being distinguished by colour. … Forgery of paper money orders by alteration of words or figures, was common … In 1850 and 1851 charges of forgery were heard almost weekly in the little courthouse of the Resident Magistrate."[3] It was difficult to transport offenders from this cottage courthouse to the Police station in Redruth. Thus, the Redruth Courthouse was constructed in 1857. It was designed by Colonial architect, E.A. Hamilton. In 1864, the building was enlarged, and the roof was raised. In 1878, a porch was added, and further extensions were undertaken. From 1861 to 1877, approximately 450 labourers, 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, were imprisoned, at different times over this period, in the Redruth Gaol.[4] These offences were heard at the Redruth Courthouse.[5]

## Description

The Redruth Courthouse is a large, single storey structure. It was constructed from random rubble stone sourced from the Hampton quarry with lined pointing and red brickwork quoins/dressings to external corners and painted projecting plinth. It has red brickwork quoins and voussoirs to window openings. The front façade is rendered and painted, as is the later front entry portico (c.1878) which is rendered with plinth, stringcourses, cornice, door and window dressings and keystones. The render is lined to resemble ashlar and painted. The main structure has a timber framed hipped roof clad with corrugated steel short sheets with red paint finish. Scribed cappings and vents to main roof. The front portico has a later skillion corrugated steel roof. The later, rear extension (c.1878) has a hipped corrugated sheeting roof with two red brickwork chimneys. Painted timber eaves and soffit. Ogee profile eaves gutters and circular downpipes. The painted timber framed windows are mostly double hung with glazing bars and have fixed upper sashes. Painted timber panelled door with the porch doors clad with plywood externally. There is a later corrugated sheeting clad porch to the South side with operable louvres. Other structures on the site include a small random rubble stone outbuilding with a gable corrugated steel roof, and an attached corrugated sheeting lean-to with skillion roof.

## Significance
The Redruth Courthouse was constructed within the period of significance 1845-1877 and was important in terms of establishing law and order. It played a role in the lives of the miners and mining town.

## Condition Notes

The following issues were observed during the inspection:

- Poor cement pointing above south windows
- Significant cracking around quoins to northeast corner of Courtroom & east of high-level window to north elevation. Less significant cracking to west end of north elevation.
- Paint condition poor to window of west porch
- Poor stormwater disposal to base of downpipe to west porch

## Endnotes

1    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p253.
2    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p256.
3    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p258.
4    SRSA GRG54/210 (Unit 1) Register of prisoners and charge books - Redruth Gaol, from 1861
5    SRSA GRG54/210 (Unit 1) Registered prisoners and charge books - Redruth Gaol, from 1861.

## Historic Photos



1933. Redruth Courthouse. Source: SLSA B 8628.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*View from North-West*

2018: Source: Photograph taken by Swanbury Penglase          *View from South-East*



2018: Source: Photograph taken by Swanbury Penglase          *View of Former Stable from South-West*

2018: Source: Photograph taken by Swanbury Penglase        *Interior View*

## Other Material



1878. Elevation. Source: LLSAM
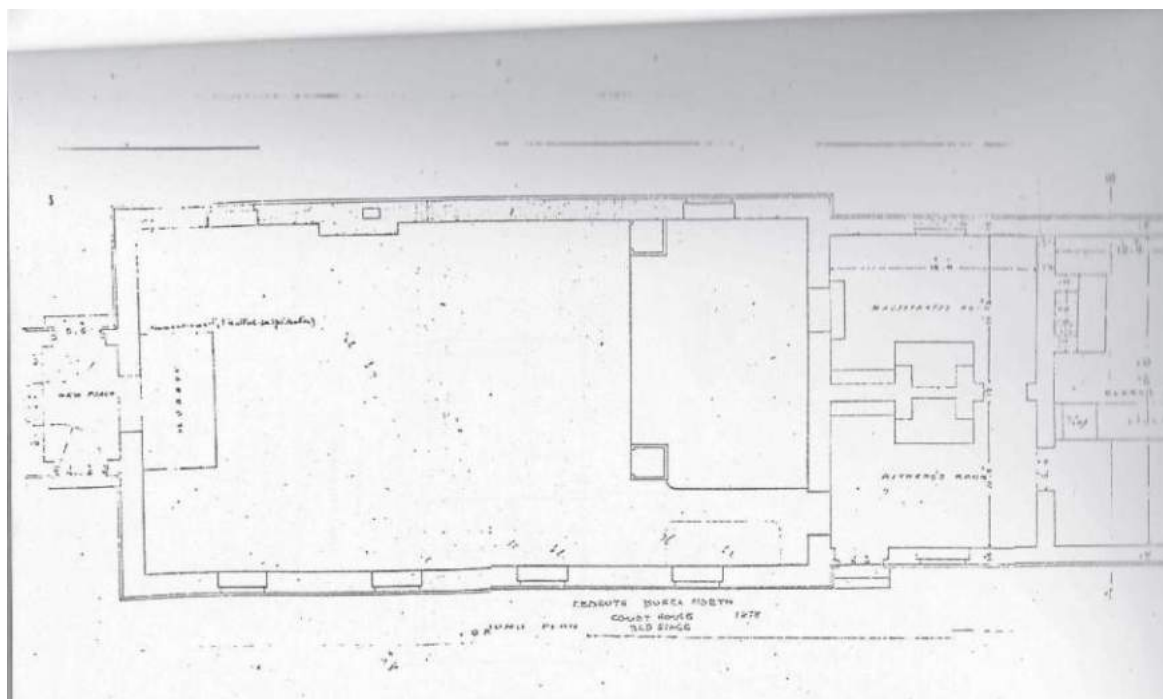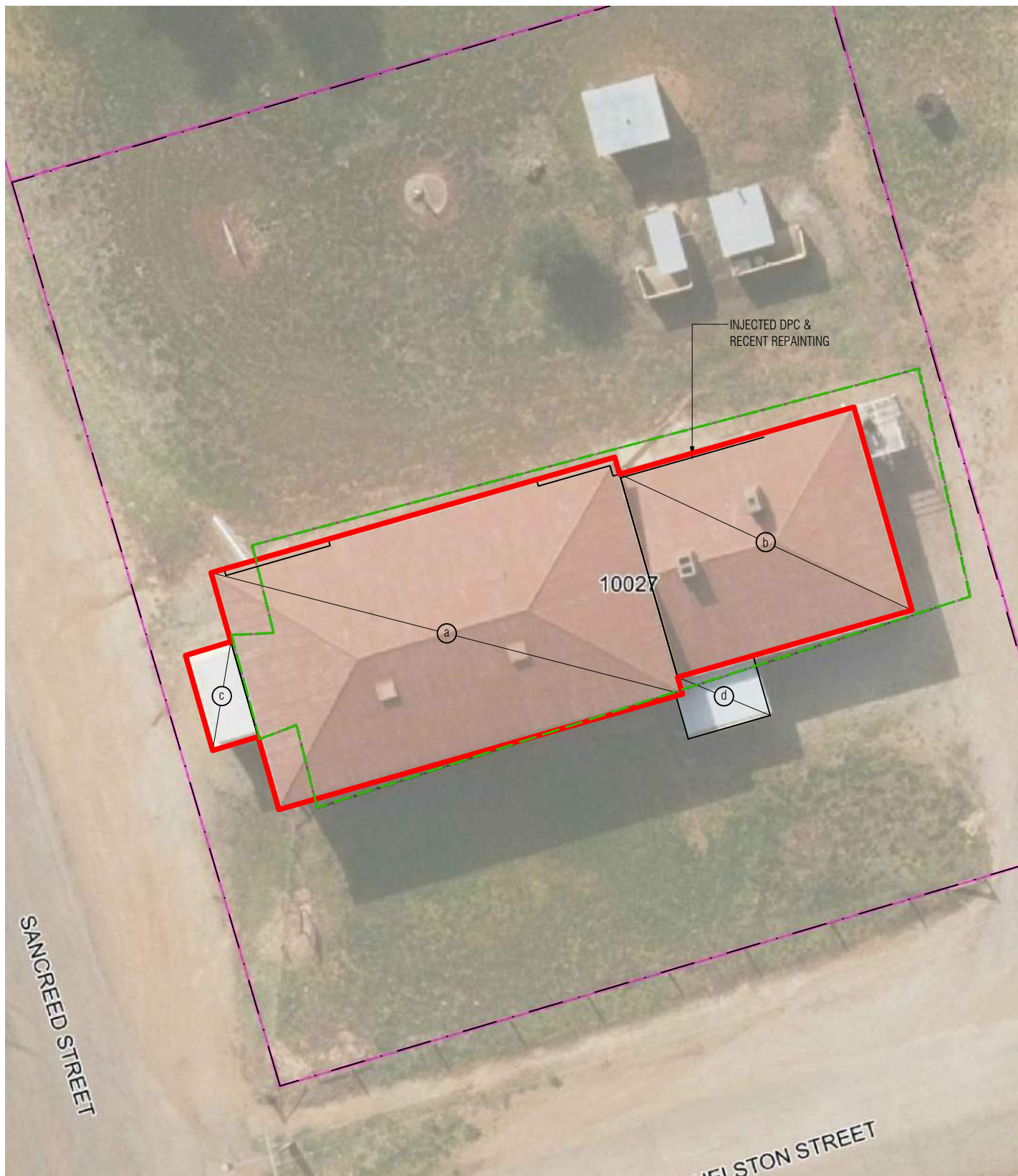


1878. Ground Floor Plan. Source: LLSAM

INJECTED DPC &
RECENT REPAINTING

10027

SANCREED STREET

HELSTON STREET

## LEGEND

— · —  TITLE BOUNDARY

▬▬▬  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - HIGH STONE SINGLE STOREY COURTROOM (1857)
b - LOWER STONE SINGLE STOREY ADDITION (1878)
c - SINGLE STOREY RENDERED MASONRY ENTRY PORCH (1878)
d - LATER FRAMED CORRUGATED STEEL CLAD / PORCH

**swanbury penglase**

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**FORMER REDRUTH (NORTH BURRA) COURTHOUSE**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10027-01**

# 10028: 6 Upper Thames Street

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling built by the South Australian Mining Association |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 6 Upper Thames Street, Burra |
| **CT Reference:** | CT 5364/405 F186800 A288 |
| **Heritage Listing Status:** | State<br>SAHR No. 10028<br>Confirmed 24 July 1980<br>Heritage database no. 14370 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, the SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by the SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only the SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings … they have remained standing long after similar buildings in the town … have cracked and collapsed. That may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[3] Indeed, it was recorded that on 9 April 1846, "Wallace finished his first cottage in the township, which is now ready to roof".[4] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The Kingston designed building is single storey built to the front boundary. Originally, it was built as a pair of two-roomed cottages but was later altered to a single four-roomed dwelling. The side of the cottage faces the street and the front of the cottage faces a garden. The cottages are constructed from Hampton quarry random rubble bluestone with lined pointing and painted red brickwork quoins to corners, doors, and some windows. Window heads are formed with red brickwork, curved voussoirs and painted red brickwork sills. The cottage has a gabled, corrugated iron sheeting roof to the front two rooms on the street, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated sheeting clad addition. The original timber shake roofing is visible under the later iron roofing. There is a later bullnose, corrugated iron front verandah which faces the garden. Windows are pairs of timber framed casements with multipaned sashes facing the street. There is a central, diagonal, bluestone chimney.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[5] These "cottages in Thames Street were among the first company housing in Australia".[6]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were noted:

- Rising damp and salt attack to sill height of wall facing Upper Thames Street

- Minor cracking to south wall

## Endnotes

1   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3   "BURRA BURRA MINES." *Burra Record*, 31 July 1907: p.2.
4   Burra Record, 31 July 1907
5   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
6   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



6 Upper Thames Street, 1978. Source: Heritage SA Research Packet



6 Upper Thames Street, c.1980. Source: Heritage SA Research Packet

Current Photos



2018: Source: Photograph taken by Swanbury Penglase                    *Exterior View*



2018: Source: Photograph taken by Swanbury Penglase                    *Street View (Upper Thames)*

2018: Source: Photograph taken by Swanbury Penglase

*View from East*



*View from North-East*
2018: Source: Photograph taken by Swanbury Penglase

Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

## LEGEND

—  ·  —  TITLE BOUNDARY

━━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - LATER VERANDAH
b - STONE WALLED c.1846-1847 KINGSTON COTTAGE. GABLE ROOFED
CGI. BR. QUOINS & D GUTTERS
c - EARLY LEAN TO - CGI CLAD

**swanbury penglase**

**6 UPPER THAMES STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10028-01**

www.swanburypenglase.com

# 10029: 8 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling built by the South Australian Mining Association |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 8 Upper Thames Street, Burra |
| **CT Reference:** | CT 5423/811 F186799 A287 |
| **Heritage Listing Status:** | State<br>SAHR No. 10029<br>Confirmed 24 July 1980<br>Heritage database no. 14340<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings … they have remained standing long after similar buildings in the town … have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[3] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The Kingston designed building is single storey built to the front boundary. Originally, it was built as a pair of two-roomed cottages but was later altered to a single four-roomed dwelling. The side of the cottage faces the street and the front of the cottage faces a garden. The cottages are constructed from Hampton quarry random rubble bluestone with lined pointing and painted red brickwork quoins to corners, doors, and some windows. Window heads are formed with red brickwork, curved voussoirs and painted red brickwork sills. The cottage has a gabled, corrugated iron sheeting roof to the front two rooms on the street, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated sheeting clad addition. The original timber shake roofing is visible under the later iron roofing. There is a later bullnose, corrugated iron front verandah which faces the garden. There are later windows facing the street. There are also pairs of timber framed casements with multipaned sashes on each of the rear skillion rooms. There is a central, diagonal, bluestone chimney.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[4] These "cottages in Thames Street were among the first company housing in Australia".[5]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were noted:

- Salt attack and rising damp to masonry to 600mm high generally to wall facing Upper Thames Street and part south wall

- Intrusive 'D' gutters and PVC downpipes

- Poorly executed re-pointing, including cement paint

## Endnotes

1   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3   "BURRA BURRA MINES." *Burra Record,* 31 July 1907: p.2.
4   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



8 Upper Thames Street, 1978. Source: Heritage SA Research Packet

Current Photos



2018: Source: Photograph taken by Swanbury Penglase                                    *Exterior View*

2018: Source: Photograph taken by Swanbury Penglase

*View from North*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Lloyd Street)*

## Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - LATER BULLNOSE VERANDAH
b - GABLED ROOF. STONE WALLED.
c - ORIGINAL SKILLION LEAN TO
d - CGI CLAD LEAN TO - MAY CONTAIN EARLY FABRIC
e - MODERN SHED

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**8 UPPER THAMES STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10029-01**

www.swanburypenglase.com

# 10030: 10 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling built by the South Australian Mining Association |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 10 Upper Thames Street, Burra |
| **CT Reference:** | CT 5796/137 F186798 A286 |
| **Heritage Listing Status:** | State<br>SAHR No. 10030<br>Confirmed 24 July 1980<br>Heritage database no. 14338 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings … they have remained standing long after similar buildings in the town … have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[3] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The Kingston designed building is single storey built to the front boundary. Originally, it was built as a pair of two-roomed cottages but was later altered to a single four-roomed dwelling. The side of the cottage faces the street and the front of the cottage faces a garden. The cottages are constructed from Hampton quarry random rubble bluestone with lined pointing and painted red brickwork quoins to corners, doors, and some windows. Window heads are formed with red brickwork, curved voussoirs and painted red brickwork sills. The cottage has a gabled, corrugated iron sheeting roof to the front two rooms on the street, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated sheeting clad addition. The original timber shake roofing is visible under the later iron roofing. There is a later bullnose, corrugated iron front verandah which faces the garden. Windows are timber framed double hung facing the street. There is a central, diagonal, bluestone chimney.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[4] These "cottages in Thames Street were among the first company housing in Australia".[5]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were noted:

- Rising damp and salt attack to 600mm high to wall facing Upper Thames Street and part south wall
- Inappropriate cement pointing repairs to masonry
- Windows replaced with double hung sashes
- PVC downpipes
- Minor cracking to street wall
- Major deflection to south wall

## Endnotes

1   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3   "BURRA BURRA MINES." *Burra Record,* 31 July 1907: p.2.
4   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



10 Upper Thames Street, 1978. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Upper Thames)*



2018: Source: Photograph taken by Swanbury Penglase

*View from North*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Lloyd Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

LEGEND

— · —  TITLE BOUNDARY

——  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:200

STRUCTURES KEY

a - c.1846-1847 KINGSTON COTTAGE WITH EARLY LEAN-TO
b - MODERN BULLNOSE VERANDAH
c - MODERN CARPORT
d - MODERN SHED

swanbury penglase

**10 UPPER THAMES STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10030-01**

www.swanburypenglase.com

# 10031: 12 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling built by the South Australian Mining Association |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 12 Upper Thames Street, Burra |
| **CT Reference:** | CT 5671/642 F186797 A285 |
| **Heritage Listing Status:** | State<br>SAHR No. 10031<br>Confirmed 24 July 1980<br>Heritage database no. 14339 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings … they have remained standing long after similar buildings in the town … have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[3] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The Kingston designed building is single storey built to the front boundary. Originally, it was built as a pair of two-roomed cottages but was later altered to a single four-roomed dwelling. The side of the cottage faces the street and the front of the cottage faces a garden. The cottages are constructed from Hampton quarry random rubble bluestone with lined pointing and painted red brickwork quoins to corners, doors, and some windows. Window heads are formed with red brickwork, curved voussoirs and painted red brickwork sills. The cottage has a gabled, corrugated iron sheeting roof to the front two rooms on the street, and a skillion roof to the rear two rooms, with a later skillion roof to another weatherboard sheeting clad addition. The original timber shake roofing is visible under the later iron roofing. There is a later bullnose, corrugated iron front verandah which faces the garden. Windows are pairs of timber framed double hung facing the street. There is a painted central, diagonal, bluestone chimney.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[4] These "cottages in Thames Street were among the first company housing in Australia".[5]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were noted:

- Rising damp and salt attack to wall facing Upper Thames Street and wall facing Church Street
- Poorly executed and inappropriate cement repointing repairs
- Painted quoins over the original stone quoins
- PVC downpipes
- Windows replaced with double hung sashes
- Intrusive air-conditioning installation
- Chimney painted

## Endnotes

1    Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2    Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3    "BURRA BURRA MINES." *Burra Record,* 31 July 1907: p.2.
4    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



12 Upper Thames Street, 1978. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Upper Thames)*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Lloyd Street)*

2018: Source: Photograph taken by Swanbury Penglase

*View from South (Bridge St W)*
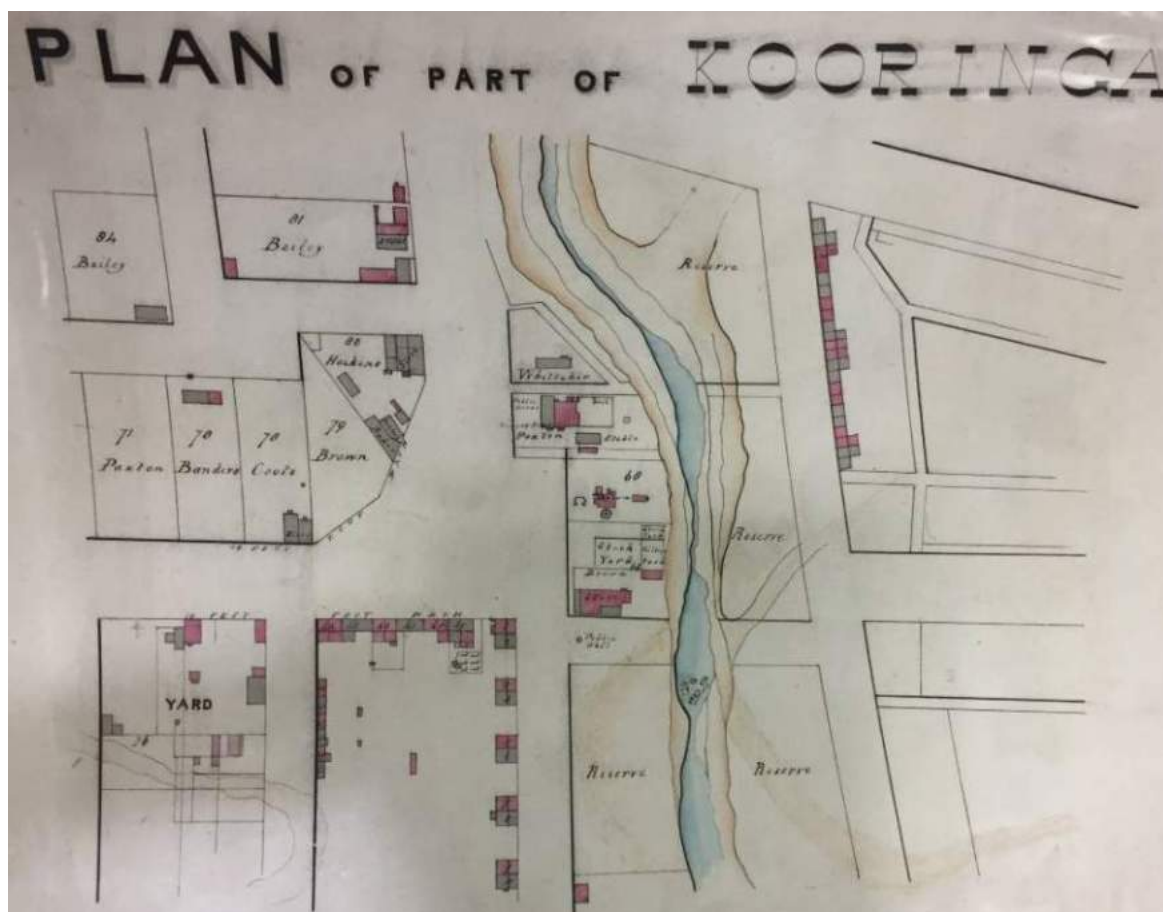


2018: Source: Photograph taken by Swanbury Penglase
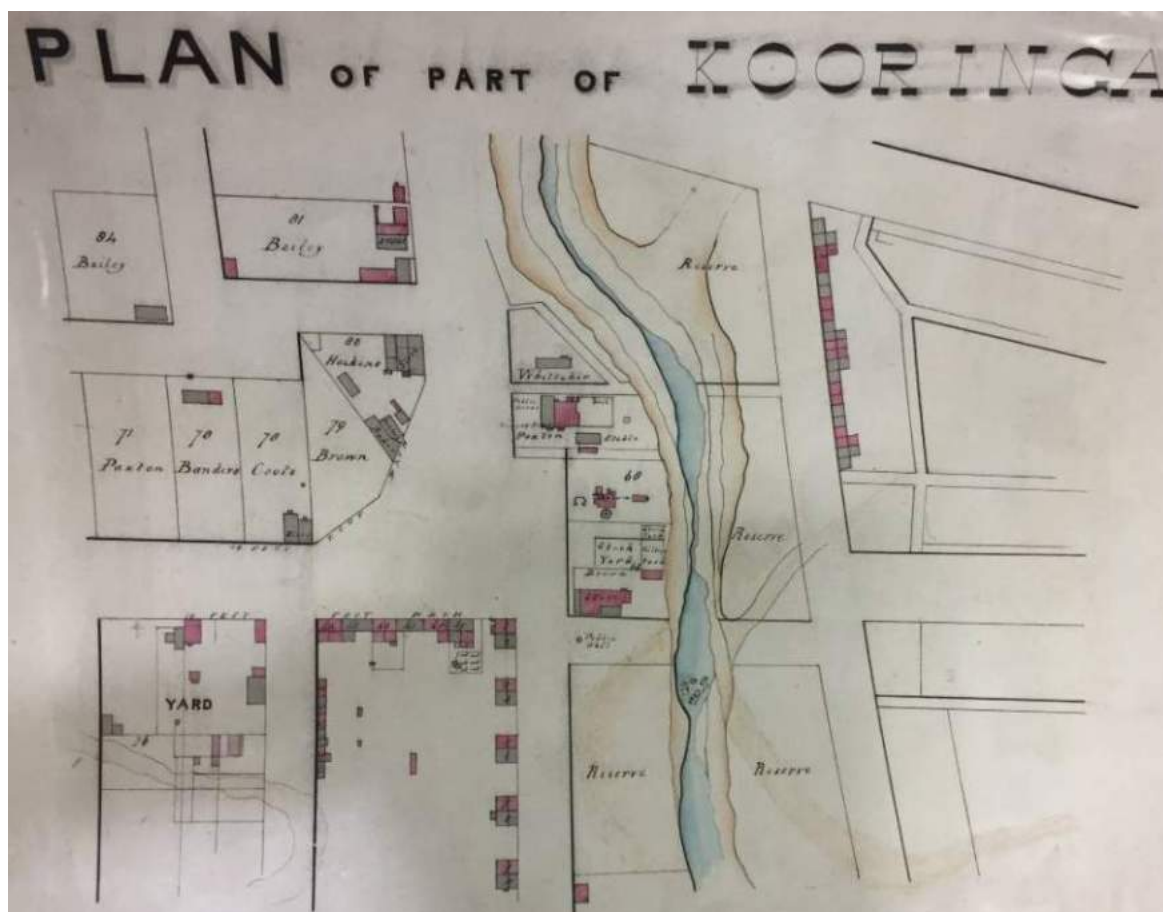
*View from North*

Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

10030

UPPER THAMES STREET

EARLY?
CHIMNEY

a

d

10031

b

c

LLOYD STREET

CGI FENCE

CHURCH STREET

| 0 | | 5 | | 10 | | 15 | | 20 | | 25 m |

## LEGEND

— · —  TITLE BOUNDARY

——— (red)  SIGNIFICANT PORTION OF THE STRUCTURE

– – – (green)  EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - MODERN BULLNOSE VERANDAH
b - c.1846-1847 KINGSTON COTTAGE
c - FIBRE CEMENT BOARDED LEAN TO
d - MODERN GARAGE

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penglase

**12 UPPER THAMES STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10031-01**

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# 10032; 10037; 10038; 10039; 10203; 10446: Attached Dwellings, 8 - 18 Truro Street ('Tiver's Row')

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Dwelling ('Tiver's Row') |
| **Current use:** | Private Dwellings and Holiday Accommodation |
| **Address/Location of Item:** | 8-18 Truro Street, Burra |
| **CT Reference:** | <u>8 Truro Street:</u><br>CT 6049/517 C25716 F1,CT 6049/523 C25716 FCP |
| | <u>10 Truro Street:</u><br>CT 6049/523 C25716 FCP, CT 6049/518 C25716 F2 |
| | <u>12 Truro Street:</u><br>CT 6049/519 C25716 F3,CT 6049/523 C25716 FCP |
| | <u>14 Truro Street:</u><br>CT 6049/520 C25716 F4,CT 6049/523 C25716 FCP |
| | <u>16 Truro Street:</u><br>CT 6049/521 C25716 F5,CT 6049/523 C25716 FCP |
| | <u>18 Truro Street:</u><br>CT 6049/522 C25716 F6,CT 6049/523 C25716 FCP |
| **Heritage Listing Status:** | <u>State</u><br>8 Truro Street: SAHR No. 10203<br>Confirmed 24 July 1980<br>Heritage database no. 14336 |
| | 10 Truro Street: SAHR No. 10032<br>Confirmed 24 July 1980<br>Heritage database no. 14329 |
| | 12 Truro Street: SAHR No. 10446<br>Confirmed 24 July 1980<br>Heritage database no. 14331 |
| | 14 Truro Street: SAHR No. 10037<br>Confirmed 24 July 1980<br>Heritage database no. 14333 |
| | 16 Truro Street: SAHR No. 10038<br>Confirmed 24 July 1980<br>Heritage database no. 14334 |
| | 18 Truro Street: SAHR No. 10039<br>Confirmed 24 July 1980<br>Heritage database no. 14335 |
| | <u>National</u><br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |

2018: Source: Photograph taken by Swanbury Penglase

## History

In response to the SAMA's refusal to grant freehold land in Kooringa, the South Australian Government laid out its own township named Redruth in 1849. The town was named after Redruth in Cornwall. The first allotments were auctioned in August 1849. Redruth's early housing consisted of attached row housing. This was privately built housing for miners, as opposed to the company housing provided by the SAMA in Kooringa. James Tiver (1829-1909) arrived in South Australia in 1854 from Bristol (not Cornwall).[1] He was a mason who worked at the Burra Smelting Works. In 1856, Tiver built six stone, double fronted, row cottages in Redruth. He constructed the first (middle house) for his family and the others for Redruth miners. They were designed with four interconnected rooms with no passage and are stepped to follow the gradient of the street and are built on-the-street. "Following the traditional pattern of Cornish villages, the front wall was set on the footpath and the building was without a verandah. Its siting and internal layout offered utmost economy in the use of land and utilisation of floor space … Without apparent site limitations, the size of the dwellings must have been determined either by the cost of building or traditional Cornish space standards".[2]

In 1987 the row of cottages was bought by Barry and Maureen Wright[3] with a vision to restore and adapt them for tourist accommodation. Work commenced in 1991 under the guidance of Flightpath Architects and included the addition of an amenities block to the rear of each cottage.[4] The row of cottages was contained on a single land title until 2009 when 7 allotments were created under a community title such that each row house was on its own allotment and the balance of land to the rear and to the eastern end owned by the community.[5]

## Description

The single storey attached symmetrical cottages are built on the front boundary. They were constructed from Hampton quarry random rubble bluestone with lined pointing. Each has an attached, stepped, gabled parapet corrugated iron sheeting roof to the front on the street and a corrugated iron skillion roof to the rear and rear lean-to. There are two shared chimneys with the cottage at 8 Truro Street. The cottages have a central timber door and generally have two timber framed, multipaned windows each side facing the street. Several original casement windows along Truro Street have been replaced with double-hung sashes.

## Significance

Tiver's Row housing dates from the early period of the Burra Burra Mine. They are a good example of miners' cottages exemplifying a typical, modest housing which reflect not only the social and economic standing of the miners, but also the building traditions of early migrants. The cottages are constructed from local materials and are utilitarian in design characterised by their small size, and their attachment.

## Condition Notes

The building is in a good state of repair and has good integrity. The form, design, and use of the building as dwellings has been substantially maintained.

The following issues were identified in the inspection:

- Gutters full of leaf litter
- Generally rising damp to 200mm high and poorly executed repairs to pointing at low level and around openings
- Breaking out of render flashings between walls
- Pulling away of timber fascias
- Corrosion to roof (although generally sound)
- Later cement render to chimneys
- Breaking out of mortar below render

## Endnotes

1   "OBITUARY." *Burra Record,* 17 March 1909: p.3.
2   Pikusa, Stefan. Heritage SA Research Packet 10203.
3   CT 2075/21
4   Flightpath submission for the 2003 Edmund Wright Heritage Awards
5   SA Lands Titles Office Community Title Plan C25716

Historic Photos



8-18 Truro Street, 1978. Source: Heritage SA research packet

Current Photos



2018: Source: Photograph taken by Swanbury Penglase                    *Street View (8 Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase                    *View from South-West (8 Truro Street)*

2018: Source: Photograph taken by Swanbury Penglase

*View of Boundary Wall from South-West*



2018: Source: Photograph taken by Swanbury Penglase

*Street View (10 Truro Street)*

2018: Source: Photograph taken by Swanbury Penglase
*Street View (12 Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase
*Street View (14 Truro Street)*

2018: Source: Photograph taken by Swanbury Penglase

*Street View (16 Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Street View (18 Truro Street)*

## Other Material
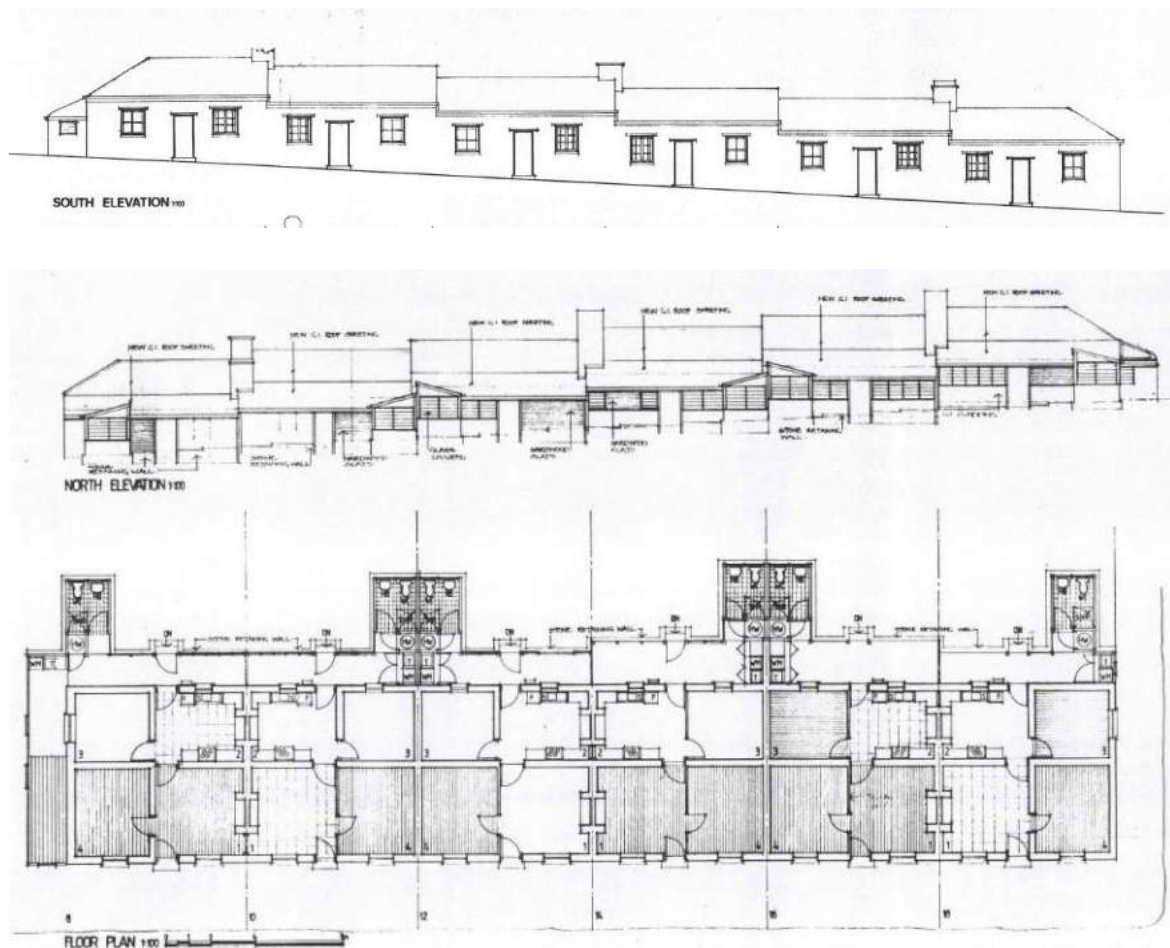


Extracted plans and elevations from Flightpath Architects drawings, 1989.

WEST ELEVATION 1:100

EAST ELEVATION 1:100

SITE PLAN 1:500
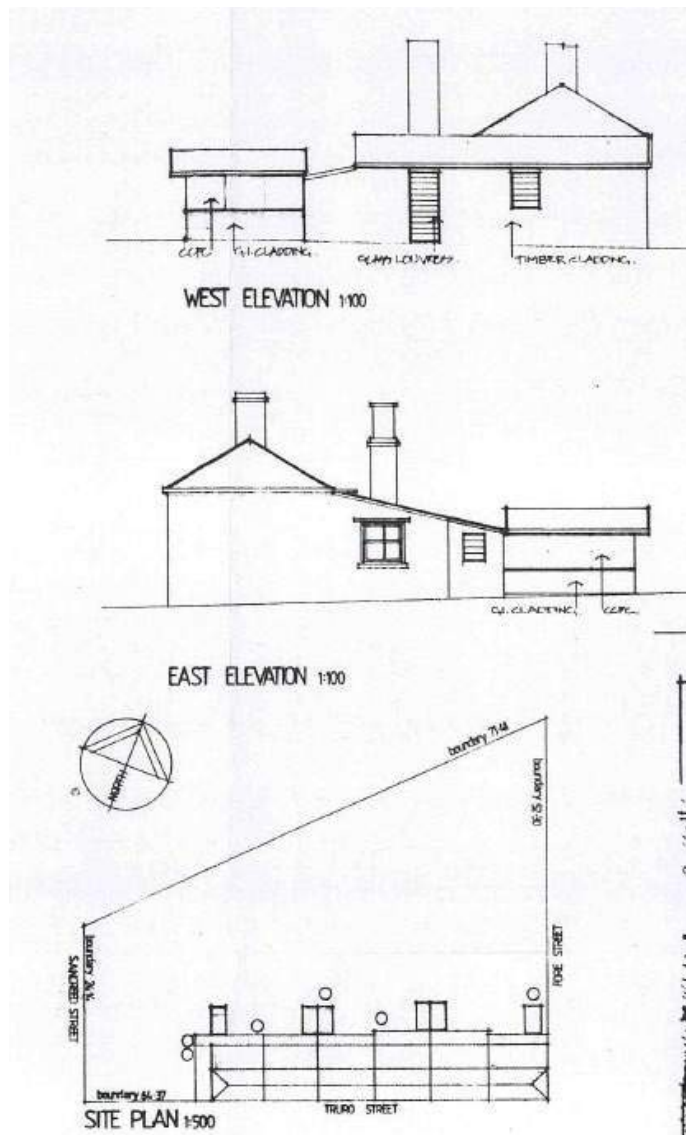
Extracted site plan and elevations from Flightpath Architects drawings, 1989.

LEGEND

— · —     TITLE BOUNDARY

▬▬▬     SIGNIFICANT PORTION OF THE STRUCTURE

– – –     EXISTING SAHR SHAPE FILE

SCALE: 1:500

**ATTACHED DWELLING ('TIVER'S ROW') 10 TRURO STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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**swanbury penglase**

September, 2019

**10032-01**

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## LEGEND

— · — · — ·    TITLE BOUNDARY

———    SIGNIFICANT PORTION OF THE STRUCTURE

— — —    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - ENCLOSED VERANDAH, DATE UNKNOWN – MAY CONTAIN EARLY FABRIC
c - c.2003 BATHROOM ADDITIONS
d - c.2003 CARPORT

**swanbury penglase**

## ATTACHED DWELLING ('TIVER'S ROW') 10 TRURO STREET, BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10032-02**

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## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

- - -    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - ENCLOSED VERANDAH, DATE UNKNOWN  MAY CONTAIN EARLY FABRIC
c - c.2003 BATHROOM ADDITIONS
d - c.2003 CARPORT

**swanbury penglase**

**ATTACHED DWELLING ('TIVER'S ROW') 14 TRURO STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10037-01**

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## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

╌╌╌ EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - ENCLOSED VERANDAH, DATE UNKNOWN MAY CONTAIN EARLY FABRIC
c - c.2003 BATHROOM ADDITIONS
d - c.2003 CARPORT

**swanbury penglase**

## ATTACHED DWELLING ('TIVER'S ROW') 16 TRURO STREET, BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10038-01**

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## LEGEND

— · —    TITLE BOUNDARY

▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - MODERN ADDITIONS
c - c.2003 CARPORT
d - MODERN SHED

**swanbury penglase**

## ATTACHED DWELLING ('TIVER'S ROW') 18 TRURO STREET, BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10039-01**

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INFILLED BULL
NOSE VERANDAH

10032

10203

10

TRURO STREET

0    5    10    15    20    25m

## LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

‒ ‒ ‒   EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - ENLOSED VERANDAHS, DATE UNKNOWN  MAY CONTAIN EARLY FABRIC
c - c.2003 BATHROOM ADDITIONS
d - c.2003 CARPORT

**swanbury penglase**

**ATTACHED DWELLING ('TIVER'S ROW') 8 TRURO STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10203-01**

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## LEGEND

— · — TITLE BOUNDARY

▬▬▬ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1856 STONE ROW COTTAGE
b - ENCLOSED VERANDAH. DATE UNKNOWN  MAY CONTAIN EARLY FABRIC
c - c.2003 BATHROOM ADDITION
d - c.2003 CARPORT

**ATTACHED DWELLING ('TIVER'S ROW') 12 TRURO STREET, BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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**swanbury penglase**

September, 2019

**10446-01**

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# 10033: 9 Truro Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Cottage |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 9 Truro Street, Burra |
| **CT Reference:** | CT 5225/608 F125912 A4 |
| **Heritage Listing Status:** | State<br>SAHR No. 10033<br>Confirmed 24 July 1980<br>Heritage database no. 14337 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In response to the SAMA's refusal to grant freehold land in Kooringa, the South Australian Government laid out its own township named Redruth in 1849 against the northern boundary of the SAMA section. It was named after Redruth in Cornwall. The first allotments were auctioned in August 1849 and Redruth's early housing consisted of attached row housing. This was privately built housing for miners, as opposed to the company housing provided by the SAMA in Kooringa. In c.1850s, a row of three attached "early Cornish-style dwellings"[1] were constructed at 9-13 Truro Street, Redruth. They are stepped to follow the gradient of the street and are built on-the-street boundary.

The cottages were constructed at different times, although the dates of completion of each stage are unknown. The staging is evident in the change of masonry detailing from stone (11, 13) to brick quoins. 9 Truro Street appears to be the last in the group. In 1960 the land was brought under the Real Property Act and the resulting new title included Part Lot 90 (on which the dwelling sits) and a larger Part Lot 89 to the west. This configuration of land ownership continues today.[2]

## Description

The single storey attached symmetrical row cottage is built on the front boundary. It was constructed from Hampton quarry random rubble bluestone with white lined pointing and painted red brickwork quoins to corners, doors and windows. It has painted red brickwork, curved voussoirs to windows and painted red brickwork sills. The roof is a gabled form and is clad with corrugated iron sheeting roof to the front on the street, and a skillion roof to the rear. It has one red brickwork chimney and two painted chimneys. There is a central timber door and two timber double hung multipaned windows facing the street.

## Significance

The Truro Street row cottages date from the early period of the Burra Burra Mine. They are early modest, miners' cottages which reflect not only the social and economic standing of the miners, but also the building traditions of early migrants. They are constructed from local materials and are utilitarian in design characterised by their small size, and their attachment.

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence. The following issues were noted in the inspection:

- Cement pointing generally and poorly executed repairs
- Open joints to chimney
- Faux heritage exterior light is intrusive

## Endnotes

1    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2    CT 2739/60

## Historic Photos



9, 11, 13 Truro Street, 1978. Source: Heritage SA Research Packet



Stacey, Wes. "Dirt road leading to Cornish miners' housing, Redruth Town, Burra, South Australia, ca. 1970":, 1968. National Library of Australia website, www.nla.gov.au/nla.obj-152096812, accessed 26 June 2019.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase

*View within Context*

**View from South-West**
2018: Source: Photograph taken by Swanbury Penglase

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase          *Street View (Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase          *Detail of dilapidation of Truro Street facade*

TRURO STREET

STONE WALLING
TO 1m HIGH

10034

10036

10033

HIGH PEPPER
TREE

REFER 10033-02

SHED

FORE STREET

0    5    10    15    20    25 m

## LEGEND

— · —    TITLE BOUNDARY

——    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500

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## ATTACHED DWELLING, 9 TRURO STREET, (REDRUTH) BURRA
## 18188 CMP for Australian Cornish Mining Sites

**10033-01**

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MODIFIED ROOF FORM. C?
NOT CONSTRUCTED CONTEMPORARY
WITH OTHER COTTAGES?

10036

10033

ⓐ

W. CHIMNEY

FC. CLAD

STONE

COLORBOND ROOFING

0    5    10    15 m

## LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:100

## STRUCTURES KEY

a - SINGLE STOREY STONE BUILDING

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## ATTACHED DWELLING, 9 TRURO STREET, (REDRUTH) BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10033-02**

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# 10034: 13 Truro Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Cottage |
| **Current use:** | Vacant Dwelling |
| **Address/Location of Item:** | 13 Truro Street, Burra |
| **CT Reference:** | CT 5736/169 F186894 A382 |
| **Heritage Listing Status:** | State<br>SAHR No. 10034<br>Confirmed 6 May 1980<br>Heritage database no. 14332<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In response to the SAMA's refusal to grant freehold land in Kooringa, the South Australian Government laid out its own township named Redruth in 1849 against the northern boundary of the SAMA section. It was named after Redruth in Cornwall. The first allotments were auctioned in August 1849 and Redruth's early housing consisted of attached row housing. This was privately built housing for miners, as opposed to the company housing provided by the SAMA in Kooringa. In c.1850s, a row of three attached "early Cornish-style dwellings"[1] were constructed at 9-13 Truro Street, Redruth. They are stepped to follow the gradient of the street and are built on-the-street boundary.

The cottages were constructed at different times, although the dates of completion of each stage are unknown. The staging is evident in the change of masonry detailing. The two attached cottages at 13 Truro Street appear to be the earliest in the group. In 1949 the land was brought under the Real Property Act and the resulting title was Part Lot 90.[2]

## Description

The dwelling at 13 Truro Street consists of two single storey attached symmetrical cottages built on the front boundary. Prior to 1978 the two cottages appear to have been joined and the street doorway to the eastern-most cottage bricked up.[3] The cottages were constructed from Hampton quarry random rubble bluestone with lined pointing. The roof to the front portion over rooms facing the street is a gabled form, clad with corrugated iron sheeting. At the rear, there is a part hipped and gabled roof which forms a box gutter with the front roof, and a skillion roof to the side at the rear. There are two chimneys. To the street façade is a central timber door to the west cottage and two timber framed, multipaned windows each side facing the street. The pattern of opening is repeated on the eastern cottage, although the door has been bricked up.

The interior was not inspected but is believed to contain slag stone walls. Several early outbuildings are apparent in the yard, but not inspected.

## Significance

The Truro Street cottages date from the early period of the Burra Burra Mine. They are early, modest, miners' cottages which reflect not only the social and economic standing of the miners, but also the building traditions of early migrants. They are constructed from local materials and are utilitarian in design characterised by their small size, and their attachment.

## Condition Notes

The building is generally in a poor state of repair and is at risk. The building is not maintained and appears currently unoccupied.

The following issues were noted in the inspection:
- Roof serviceable, but in poor to fair condition
- Rising damp/salt attack to stonework
- Cement pointing and poorly executed repairs
- No perimeter paving
- Chimneys missing pointing and the west chimney is partially collapsed
- Paint cover to timberwork, windows and doors is poor

## Endnotes

1   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2   LT A/124
3   Refer Heritage SA photographs from 1978.

## Historic Photos



9, 11, 13 Truro Street, 1978. Source: Heritage SA Research Packet



TRURO STREET COTTAGES    Burra

These 1850s Cornish-style miners' row cottages were built in government township of Redruth, now Burra North, are an integral part of Burra's copper mining history.

Truro Street Cottages. C.1978. Source: Heritage SA Research Packet

Kitchen interior of 13 Truro St. c.1978. Source: Heritage SA Research Packet



Slag block wall to west, interior of 13 Truro St. c.1978. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Truro Street)*



2018: Source: Photograph taken by Swanbury Penglase

*View within Context*

2018: Source: Photograph taken by Swanbury Penglase

*View of former 15 Truro Street from North-East*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Trembeth Street)*

TRURO STREET

10034

10036

10033

REFER 10034-02

EARLY/ORIGINAL?
STONE WALLING
(APPEARS REBUILT)

BROKEN IN PLACES FOR
DRIVEWAY ACCESS

COLLAPSED &
REBUILT AS DRYSTONE

FARM GATE

COLLAPSED

TIMBER POST END

CONTINUES AS STAR PICKER
& CHICKEN WIRE FENCE

TREMBETH STREET

0   5   10   15   20   25 m

## LEGEND

— · — TITLE BOUNDARY

▬▬▬ SIGNIFICANT PORTION OF THE STRUCTURE

▬ ▬ ▬ EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - PAIR OF STONE ROW COTTAGES
b - SHEDDING, CONTAINING EARLY COMPONENTS
c - LEAN-TO ADDITION. MAY CONTAIN EARLY COMPONENTS (NOT
INSPECTED).

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penglase

# ATTACHED COTTAGE, 13 TRURO STREET, (REDRUTH) BURRA
# 18188 CMP for Australian Cornish Mining Sites

SLATE KERB

BR. CHIMNEY

ORIGINAL DOOR BRICKED UP

CGI TANK

CHIMNEY

10034

10036

STONE

0      5      10      15 m
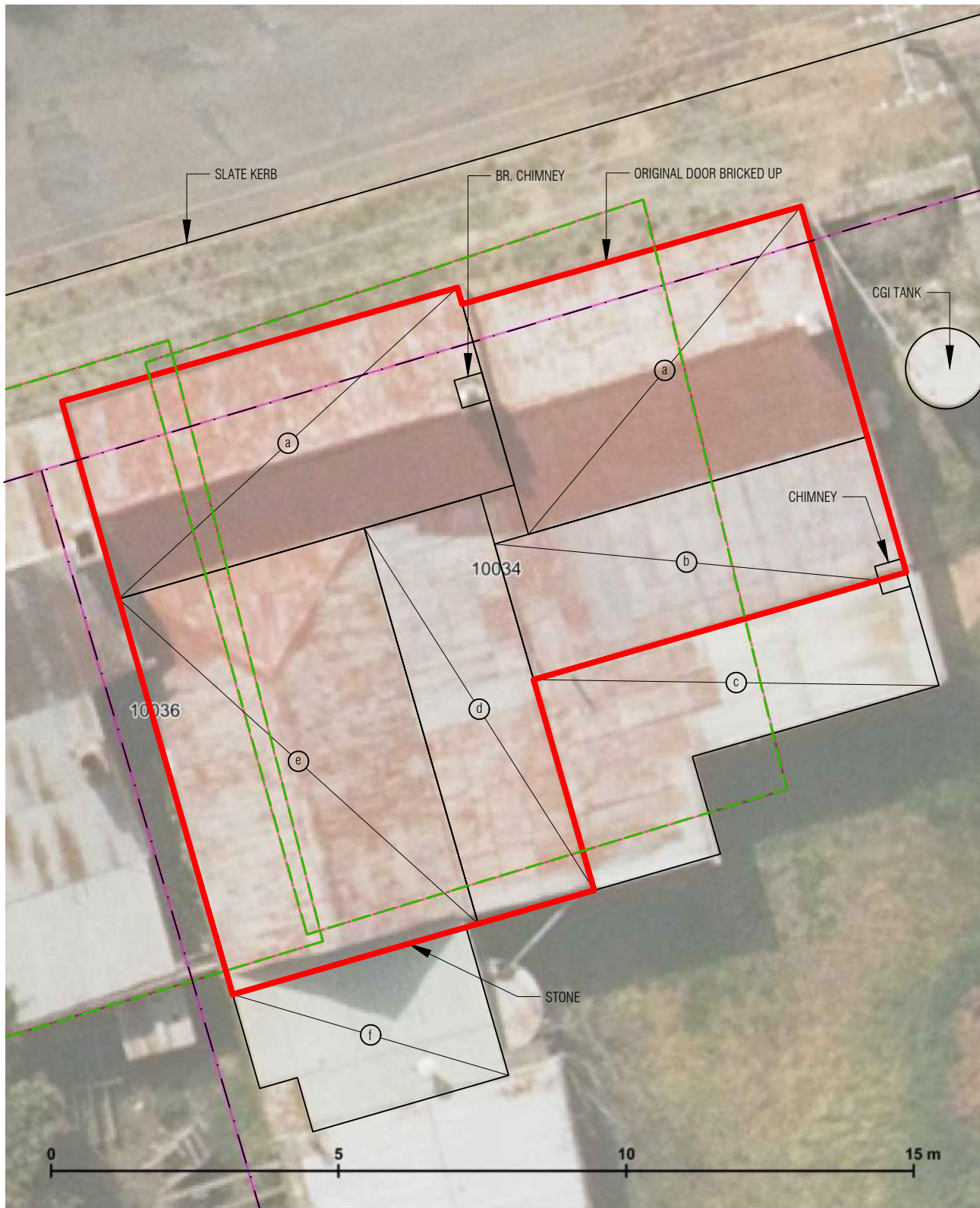
## LEGEND

— · —  TITLE BOUNDARY

▬▬▬  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:100

## STRUCTURES KEY

a - SINGLE STOREY STONE WALLED COTTAGE - GABLED ROOF
b - ASBESTOS CLAD LEAN TO - CONCRETE FLOOR. MAY CONTAIN EARLY COMPONENTS.
c - VERANDAH - MODERN. FLAT ROOF.
d - ASBESTOS CLAD LEAN-TO. MAY CONTAIN EARLY COMPONENTS (NOT INSPECTED).
e - DID NOT INSPECT
f - LATER VERANDAH CGI

**swanbury penglase**

# ATTACHED COTTAGE, 13 TRURO STREET, (REDRUTH) BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10034-02**

www.swanburypenglase.com

# 10036: 11 Truro Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Cottage |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 11 Truro Street, Burra |
| **CT Reference:** | CT 5815/573 F186893 A381 |
| **Heritage Listing Status:** | State<br>SAHR No. 10036<br>Confirmed 6 May 1980<br>Heritage database no. 14330 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In response to the SAMA's refusal to grant freehold land in Kooringa, the South Australian Government laid out its own township named Redruth in 1849 against the northern boundary of the SAMA section. It was named after Redruth in Cornwall. The first allotments were auctioned in August 1849 and Redruth's early housing consisted of attached row housing. This was privately built housing for miners, as opposed to the company housing provided by the SAMA in Kooringa. In c.1850s, a row of three attached "early Cornish-style dwellings"[1] were constructed at 9-13 Truro Street, Redruth.

The cottages were constructed at different times, although the completion date of each stage is unknown. The staged development is evident in the change of masonry detailing. In 1960, 11 Truro Street was brought under the Real Property Act and the resulting title included Part Lot 90 (on which the dwelling sits) and a larger Part Lot 89 to the rear through to the street behind.[2] This configuration of land ownership continues today.

## Description

The single storey attached symmetrical cottage is built on the front boundary. It is constructed from Hampton quarry random rubble bluestone with lined pointing. To the street façade is a central timber door and two timber framed, multipaned windows each side. The roof over the two rooms facing the street is a gabled form, clad with corrugated iron sheeting. At the rear, there is a lean-to roof also clad in corrugated iron. There is one chimney to the east gable.

## Significance

The Truro Street cottages date from the early period of the Burra Burra Mine. They are early, modest, miners' cottages which reflect not only the social and economic standing of the miners, but also the building traditions of early migrants. They are constructed from local materials and are utilitarian in design characterised by their small size, and their attachment.

## Condition Notes

The building is generally in a poor state of repair and is at risk. The building is not well maintained and appears currently unoccupied.  The following issues were noted in the inspection:

- Roof serviceable, but in poor to fair condition with red rust evident
- Rising damp/salt attack to stonework
- Cement pointing and poorly executed repairs.
- Chimney missing pointing and at risk of collapse
- Paint cover to timberwork, windows and doors is poor. As a result the timberwork is weathered.
- Holes in end gable – barge missing

## Endnotes

1    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2    CT 2739/62

## Historic Photos



9, 11, 13 Truro Street, 1978. Source: Heritage SA Research Packet



**TRURO STREET COTTAGES    Burra**
These 1850s Cornish-style miners' row cottages were built in
government township of Redruth, now Burra North, are an
integral part of Burra's copper mining history.

Truro Street Cottages. C.1978. Source: Heritage SA Research Packet

TRURO STREET

10034

10036

10033

REFER 10036-02

TREMBETH

0    5    10    15    20    25 m

## LEGEND

— · — · —    TITLE BOUNDARY

▬▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**ATTACHED COTTAGE, 11 TRURO STREET, (REDRUTH) BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10036-01**

www.swanburypenglase.com

BR. CHIMNEY

10034

10036

10033

0    5    10    15 m

## LEGEND

— · — — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:100

## STRUCTURES KEY

a - SINGLE STOREY SYMMETRICAL STONE BUILDING - GABLED ROOF
b - LEAN-TO ADDITION. MAY CONTAIN EARLY COMPONENTS (NOT INSPECTED).

**swanbury penglase**

## ATTACHED COTTAGE, 11 TRURO STREET, (REDRUTH) BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10036-02**

www.swanburypenglase.com

# 10040: 2 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Stone Cottage built for the South Australian Mining Association |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 2 Upper Thames Street, Burra |
| **CT Reference:** | CT 5616/32 D22256 A1 |
| **Heritage Listing Status:** | State<br>SAHR No. 10040<br>Confirmed 24 July 1980<br>Heritage database no. 14325 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings ... they have remained standing long after similar buildings in the town ... have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). Construction of the stonework began on the cottages in December 1845. The first cottage is believed to have been completed in April 1846.[3] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The Kingston designed building is single storey built to the front boundary. It is attached to the Cottage located at 4 Upper Thames Street. Originally, it was built as one pair of two-roomed cottages. The Cottages remained separate but were extended. There were side entrances off the street and the longest side of the cottage faced the street however it was later altered with a new door opening on the street which became the front of the Cottage. It was constructed from Hampton quarry random rubble bluestone. The Cottage was extended and includes a later second window facing the street. There is a red brickwork sill to the original window and red brickwork quoins to the later front door and window. There are red brickwork voussoirs to the later window. It has a gabled, corrugated iron sheeting roof to the front two rooms, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated sheeting clad addition. It has timber, double hung, multipaned windows, and a timber panelled door. There is a central, diagonal, bluestone chimney between the Cottages.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[4] These "cottages in Thames Street were among the first company housing in Australia".[5]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features, however, of the group of surviving SAMA cottages, 2 Upper Thames St is the most modified. A one-room wide addition has been made to both sides and door openings added to Upper Thames Street. The building is well maintained and is currently occupied as a residence.

The following issues were noted in the inspection:

▪ Rising damp and salt attack to wall facing Upper Thames Street and part north wall

▪ Original windows to Upper Thames Street are lost.

## Endnotes

1 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2 Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3 "BURRA BURRA MINES." *Burra Record,* 31 July 1907: p.2.
4 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5 Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



2 and 4 Upper Thames Street, 1978. Source: Heritage SA Research Packet



2 and 4 Upper Thames Street. C.1978. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase        *Street View (Upper Thames Street)*





2018: Source: Photograph taken by Swanbury Penglase        *View from North*

Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

TRURO STREET

10034

10036

10033

REFER 10036-02

TREMBETH S

0   5   10   15   20   25 m

LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

- - -   EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**ATTACHED COTTAGE, 11 TRURO STREET, (REDRUTH) BURRA**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10036-01**

www.swanburypenglase.com

BR. CHIMNEY

10034

10036

10033

0    5    10    15 m

## LEGEND

— · — TITLE BOUNDARY

▬▬▬ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:100

## STRUCTURES KEY

a - SINGLE STOREY SYMMETRICAL STONE BUILDING - GABLED ROOF
b - LEAN-TO ADDITION. MAY CONTAIN EARLY COMPONENTS (NOT INSPECTED).

**swanbury penglase**

## ATTACHED COTTAGE, 11 TRURO STREET, (REDRUTH) BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10036-02**

# 10041: 4 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Attached Stone Cottage built for the South Australian Mining Association |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 4 Upper Thames Street, Burra |
| **CT Reference:** | CT 5437/188 D22256 A2 |
| **Heritage Listing Status:** | State<br>SAHR No. 10041<br>Confirmed 24 July 1980<br>Heritage database no. 14326 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. The cottages located at 2-12 Upper Thames Street were built by SAMA on their land in their company town of Kooringa. The cottages were then rented to its miners. There are six pairs of two-roomed cottages. They were designed by George Strickland Kingston (1807-1880).[1] Kingston was not only SAMA's surveyor and town planner but also its architect. Although, "in architectural terms, the cottages are hardly spectacular, and their inexpensive and utilitarian design makes them artistically remote from most of Kingston's urban buildings … they have remained standing long after similar buildings in the town … have cracked and collapsed. That in itself may be a commendation of Kingston's constructional knowledge".[2] Kingston called for tenders due on the 10 November 1845. William Keates was appointed the stonemason and was responsible for the stonework of the cottages. Subsequently, Kingston called for tenders for prefabricated timberwork (to be constructed in Adelaide and transported to Burra) for the cottages. On 25 November 1845, builder, R.G. Bowen's tender was accepted for the prefabricated timberwork (mainly for the cottage rooves). The first cottage is believed to have been completed in April 1846.[3] The remaining cottages were still in construction in July 1846 and it is unclear when they were completed. Each cottage had only two rooms, one room under the gable roof and one room under the lean-to roof. They had earthen floors, large chimney stacks which were diagonal to the walls and one chimney served two rooms of each pair of cottages.

## Description

The single storey Hampton stone cottage is built on the front boundary and is attached to the Cottage located at 2 Upper Thames Street. Originally, it was built as one pair of two-roomed cottages. The cottages remained separate but were extended. There were side entrances off the street and the longest side of the cottage faced the street however it was later altered with a new door opening on the street which became the front. No 4. was extended and includes a later second window facing the street. There is a red brickwork sill and quoins to the original window and red brickwork quoins to the later front door and window. It has rendered and painted window heads, and red brickwork sills. The roof is a gabled form, clad with corrugated iron sheeting roof to the front two rooms, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated sheeting clad addition. It has one timber framed window which is double hung and multipaned, and there is another double hung window adjacent. There is a central, diagonal, bluestone chimney between the Cottages.

## Significance

The cottages were constructed c.1846-47 by SAMA for its miners and are an early example of company housing. They are also an example of the work of renowned pioneer Colonial architect George Strickland Kingston. The cottages are one of earliest collections of residential buildings in Australia which are still occupied.[4] These "cottages in Thames Street were among the first company housing in Australia".[5]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were noted:

- Original street windows lost in conversion to two houses.
- Rising damp and salt attack to sill height of wall facing Upper Thames Street
- Minor cracking to south wall
- Rising damp and salt attack to wall facing Upper Thames Street and part south wall

## Endnotes

1    Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia.
2    Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, p 589.
3    "BURRA BURRA MINES." *Burra Record,* 31 July 1907: p.2.
4    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Historic Photos



4 Upper Thames Street, c.1970s. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase                    *View from South-East*



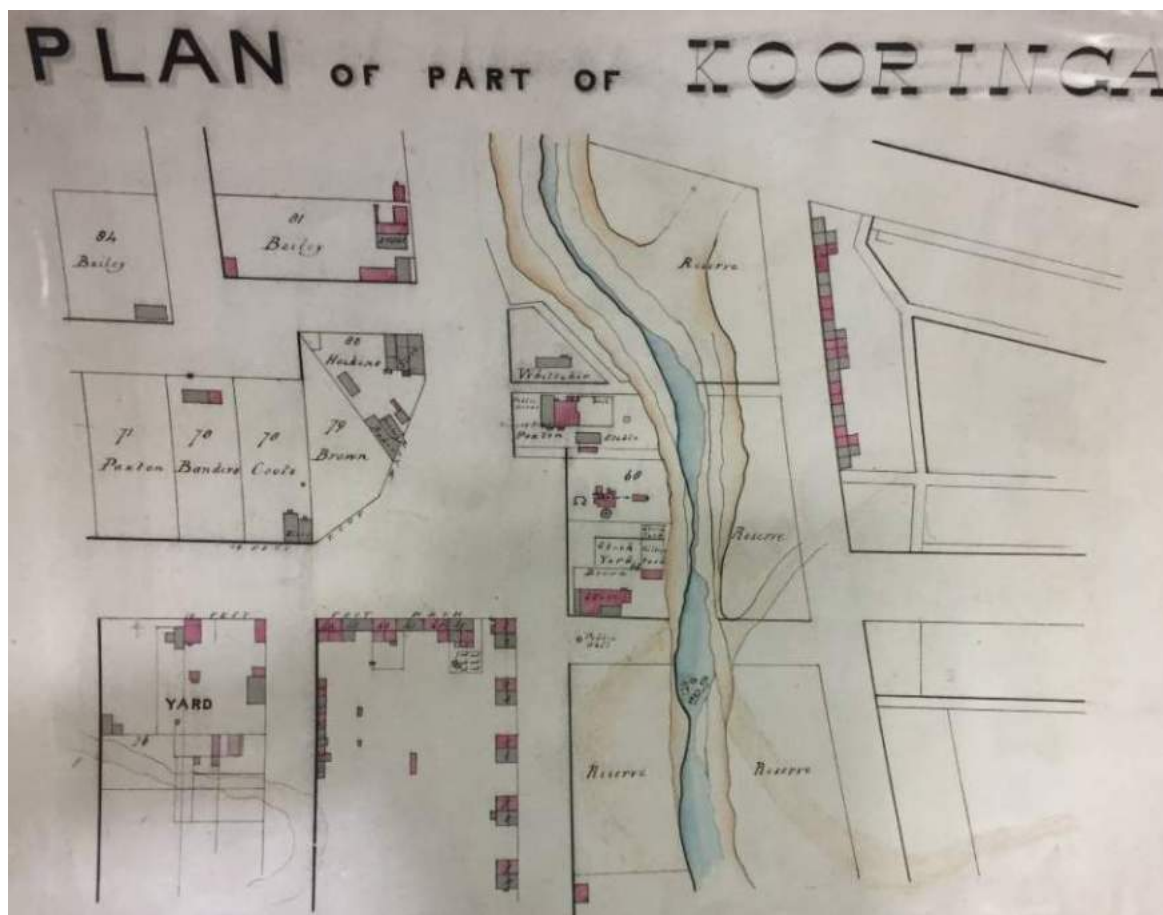2018: Source: Photograph taken by Swanbury Penglase                    *Street View (Upper Thames Street)*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Lloyd Street)*

Other Material



Plan of 2-12 Upper Thames Street Cottages, undated. Source: State Library of South Australia Map C 14.

10040

10041

10028

a

b

c

d

ORIGINAL SHINGLE
ROOF UNDER

LLOYD STREET

UPPER THAMES ST

0    5    10    15    20    25 m
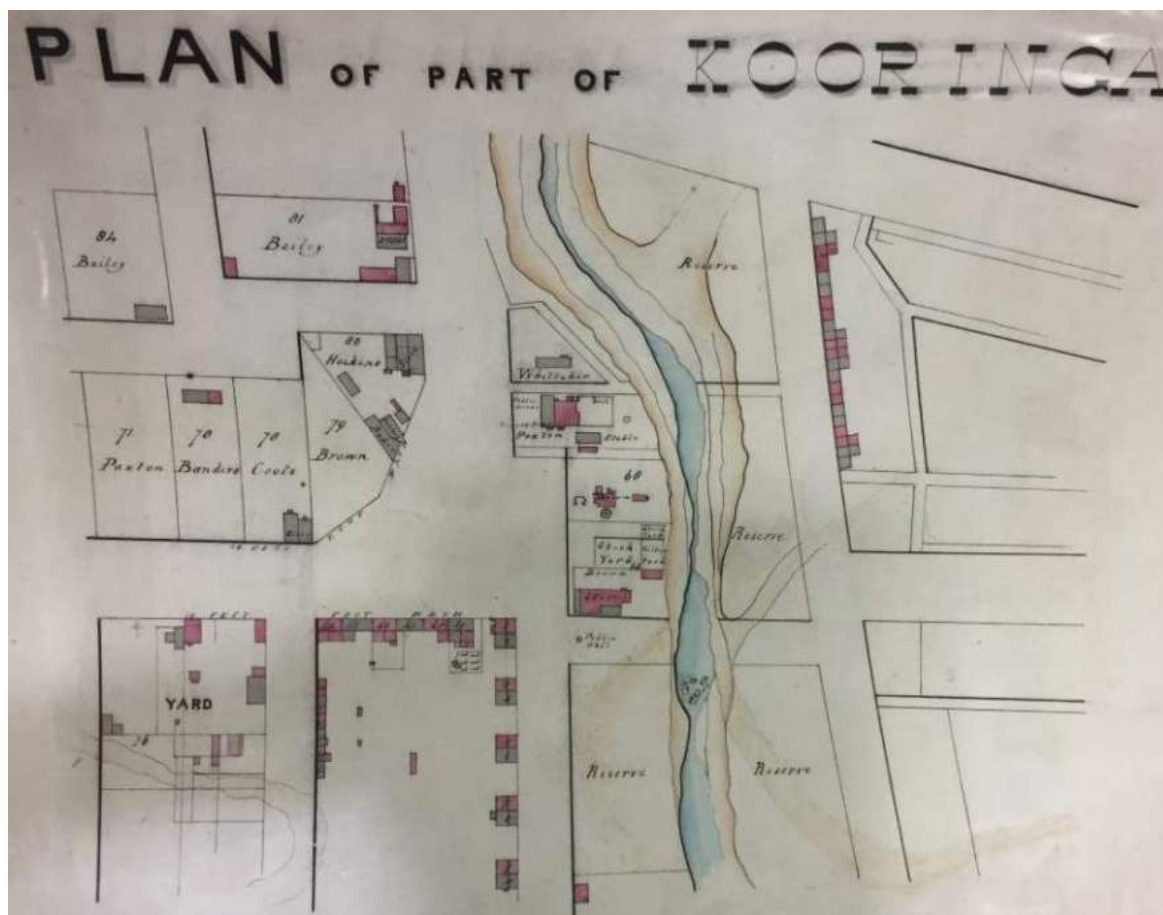
## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

╴ ╴ ╴    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - c.1846-1847 KINGSTON COTTAGE
b - EARLY ADDITION OF SINGLE ROOM DEPTH. DATE UNKNOWN.
c - LEAN-TO ADDTION. MAY CONTAIN EARLY ELEMENTS.
d - MODERN SHED

swanbury
penglase

## ATTACHED COTTAGE, 4 UPPER THAMES STREET, BURRA
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10041-01**

# 10042: Former Redruth Gaol

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Redruth Gaol (sometime Girls Reformatory) |
| **Current use:** | National Trust (SA) Museum |
| **Address/Location of Item:** | Tregony Street, Burra |
| **CT Reference:** | CT 6212/16 H200800 S3530 |
| **Heritage Listing Status:** | State<br>SAHR No. 10042<br>Confirmed 24 July 1980<br>Heritage database no. 17650<br><br>National<br>Not identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In December 1855, tenders were called for the new Redruth Gaol until this time the lock up at the Redruth Police Station was used as the gaol, being designated as such in 1851. The Gaol was built after Thomas Perry, the gaoler at the police cells, had complained to the Presiding Magistrate that he had more prisoners and lunatics than he could accommodate in the lock-up".[1] Completed in August 1856 by Watson and Morris, it had cost £3,200. The Redruth Gaol was the first gaol built outside of Adelaide, thus it was South Australia's first country gaol. The Gaol was sometimes referred to as "Perry's Hotel".

The "Register of all persons brought to Her Majesty's Gaol at Redruth in the Province of South Australia" details the prisoner's name, offence, the court they were committed, and court convicted, religion, and trade amongst other information from 1861 to 1880.[2] The majority of offenders were labourers. From 1861 to 1877, there were approximately 450 labourers who were committed and/or convicted at Redruth Court. Presumably these labourers lived locally and worked at the mine where SAMA employed "men labourers" as their lowest paid, unskilled labour.[3] Miners were also represented in Redruth Gaol. From 1861 to 1877, there were approximately 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, who were imprisoned, at different times over the period, in the Redruth Gaol. Most of them described themselves as belonging to the Church of England. Sailors, shoemakers, and housewives were also frequently imprisoned. Of these imprisoned miners, most of them where committed and convicted by the Redruth Court. Alterations to the Gaol building were made in 1863 and 1877. It accommodated the gaolkeeper, turnkey, and 30 prisoners both male and female. The Gaol closed in 1894. In 1897, the building was renovated and used as the Redruth Girls' Reformatory. The Reformatory closed in 1922.

## Description

The front section of the Gaol is single storey and essentially symmetrical in design. This is comprised of two separate buildings; one which was the Gaolkeeper's Quarters, to the left, and the other was the Turnkey's Quarters, to the right. These two buildings are separated by a central, entrance courtyard or sally port which is located behind the front façade. The front façade has a pair of central timber double gates within the arched opening while the façade walls have a painted rendered finish with plinths, entablature and a stepped parapet top to each of the buildings. There are rendered quoins to corners, windows and the gate opening. The windows either side are multipaned and have vertical bars. The high level Hampton quarry random rubble bluestone walls abut the rendered façade on each side and enclose yards to the sides of each of the buildings. There are two additional windows in this wall, to the left, which are multipaned with vertical bars. There are two chimneys in each of the buildings. The roofs are similar to each building being hipped corrugated steel concealed behind parapets with side skillions.

The secure section of the Gaol is two-storey and housed the Kitchen, Store and Cells. It was constructed from Hampton quarry random rubble bluestone with red brickwork quoins, many of which are painted. It has both a hipped roof to one part and a lower gable corrugated steel sheeting roof to the section housing the cells. There are two large, rendered chimneys. There are various timber framed windows, doors, cell doors with bolts and cell windows with vertical bars. There is a timber stair to the two storey section located within the west yard. The building is centrally located with high level random rubble bluestone walls which enclose the adjacent exercise yards each side. Broken glass is evident to the top of the walk to the western yard. There is a limewashed, random rubble bluestone building in each of the exercise yards which served as the WC. Internally, in the cells building, there are arched openings.

## Significance

The Redruth Gaol was constructed within the period of significance 1845-1877 and was part of the structure of this mining town. There were not only large numbers of labourers imprisoned but also miners were represented in the Redruth Gaol statistics. It was South Australia's first country gaol emphasising the early importance of Burra. The "building is a notable example of its type in early colonial period Australian communities".[4]

## Condition Notes

The following issues were observed during the inspection:

Boundary walls
- Deterioration of stone to northwest wall
- Cracking to full height in southwest corner
- Pointing deterioration to northeast wall
- Pointing and stone deterioration to southeast wall
- Stone deterioration to southwest wall

Buildings
- Cracking over door to north wall of store. Wide gap to west side of store ceiling.
- Beehive to top of chimney to main building
- Flaking whitewash to stone WC's
- Flaking whitewash to First Floor of main Gaol building

## Endnotes

1  Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2  SRSA GRG54/210 (Unit 1) Register of prisoners and charge books - Redruth Gaol, from 1861
3  Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p91.
4  ANU Australian Cornish Mining Heritage Site, July 2014, p25.

## Historic Photos



1933. Redruth Gaol. Source: State Library of South Australia B 8635

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*

2018: Source: Photograph taken by Swanbury Penglase

*View of Western Yard from North*



2018: Source: Photograph taken by Swanbury Penglase

*View of Western Toilet from South*

2018: Source: Photograph taken by Swanbury Penglase                    *View of Eastern Yard from East*



2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*

***Interior View of Officials Quarters***
2018: Source: Photograph taken by Swanbury Penglase
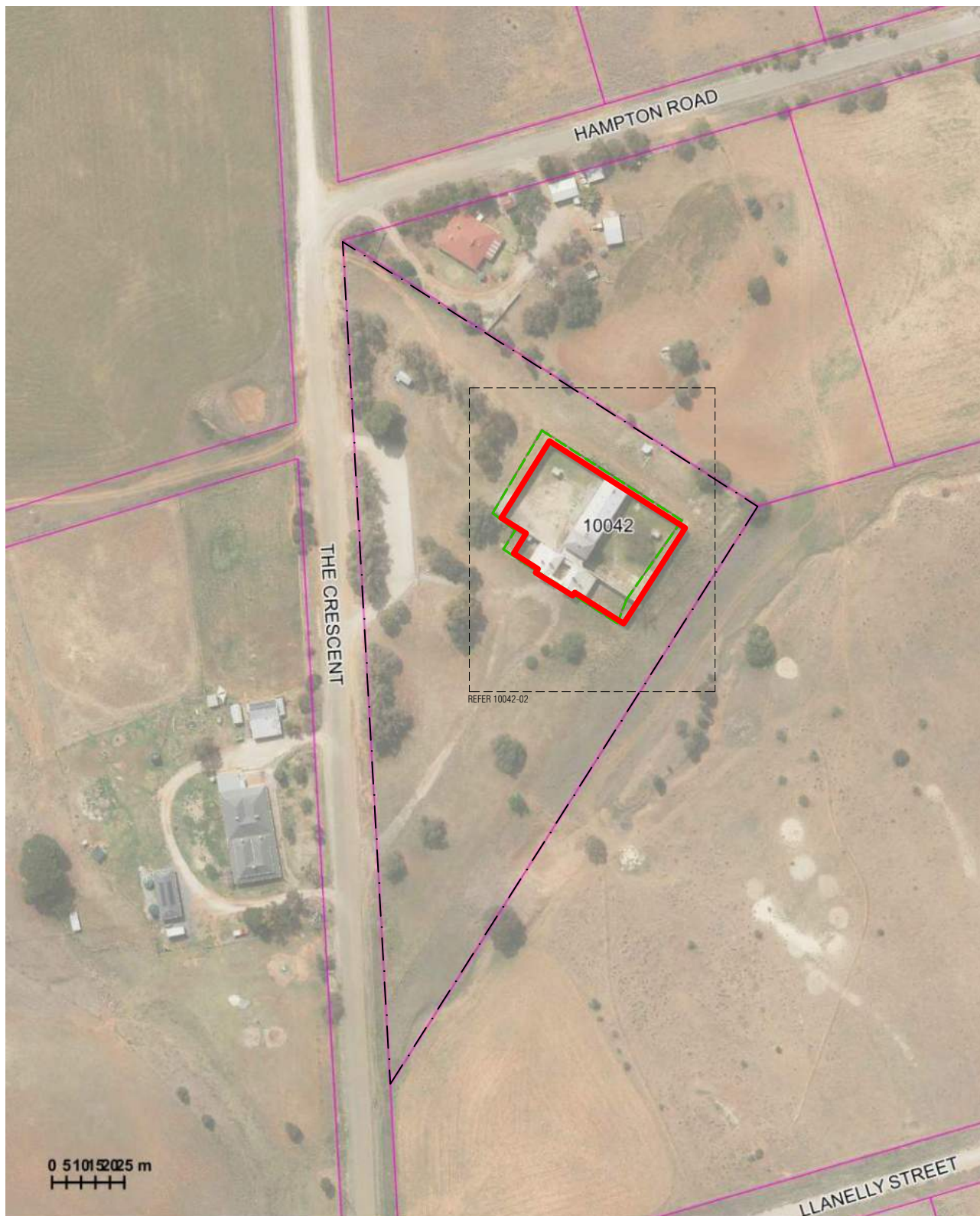
## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:2000

0 5 10 15 20 25 m

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE GAOL AND STRUCTURES WITHIN THE WALLED AREA. THE YARD HAS HIGH ARCHAEOLOGICAL POTENTIAL

HAMPTON ROAD

THE CRESCENT

LLANELLY STREET

10042

REFER 10042-02

**FORMER REDRUTH GAOL (SOMETIME GIRLS REFORMATORY)**
**18188 CMP for Australian Cornish Mining Sites**

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swanbury penglase

September, 2019

**10042-01**

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NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE GAOL AND STRUCTURES WITHIN THE WALLED AREA. THE YARD HAS HIGH ARCHAEOLOGICAL POTENTIAL

CONCRETE TO TOP OF WALL

10042

0    5    10    15    20    25 m

## LEGEND

— · — — · —  TITLE BOUNDARY

━━━━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – – – –  EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - SINGLE STOREY STONE BUILDING
b - VERANDAH
c - 2 STOREY STONE BUILDING
d - SINGLE STOREY STONE CELL BLOCK
e - STONE WALLED WC - WHITEWASHED
f - STONE WALLED WC

**swanbury penglase**

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**FORMER REDRUTH GAOL (SOMETIME GIRLS REFORMATORY)**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10042-02**

www.swanburypenglase.com

# 10045: Former Powder Magazine

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Powder Magazine |
| **Current use:** | Museum |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | 6152/669 D95074 A603 |
| **Heritage Listing Status:** | <u>State</u><br>SAHR 10045<br>Confirmed 24 July 1980<br>Heritage Database No. 14363<br><br><u>National</u><br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Powder Magazine is one of the earliest, extant, structures constructed on the Mine site and dates from 1847. It was constructed to store gunpowder for mine blasting. It was restored by the National Trust in 1976.

## Description

The Former Powder Magazine is a single storey structure comprised of a central building enclosed by a external perimeter wall. The perimeter wall was constructed from random rubble stonework with large stone quoins to the corners, and red brickwork to the gate opening which has a metal gate. The building is located centrally within the enclosed court. Constructed from stone, it has a gently pointed vaulted ceiling finished externally as pitched slopes creating a gable form. The entry has a stone arch with steel mesh gate. There is a small high-level opening the opposite end of the building. The structure has stone buttresses to the side walls, slate floor to the interior and low level stone walls enclose an area outside of the entry door.

## Significance

The Powder Magazine was an integral part of the Burra Burra Mine. It dates from the earliest period of establishment of the Mine and was an essential requirement due to the use of gun powder for deep-rock mining. This was when the Mine was its most successful and profitable. It is renowned for being one of Australia's oldest remaining mine buildings. Although it is often claimed to be Australia's oldest mine building, the Mine Square Cottages at Kapunda predate this building by a couple of years.

## Condition Notes

The following issues were observed during the inspection:
- Minor deterioration at base of perimeter yard walls, particularly to north side.
- Wear to ground/undermining of quoins to sides of gate opening in perimeter wall.
- Poor paint condition to gate.
- Brick missing at top pintle point to gate opening to perimeter wall.

## Historic Photos



"The Ruin of the Powder Magazine", undated. Source: The Burra History Group Inc.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



*View within External Walls from South-East*
2018: Source: Photograph taken by Swanbury Penglase



*View within External Walls from West*
2018: Source: Photograph taken by Swanbury Penglase
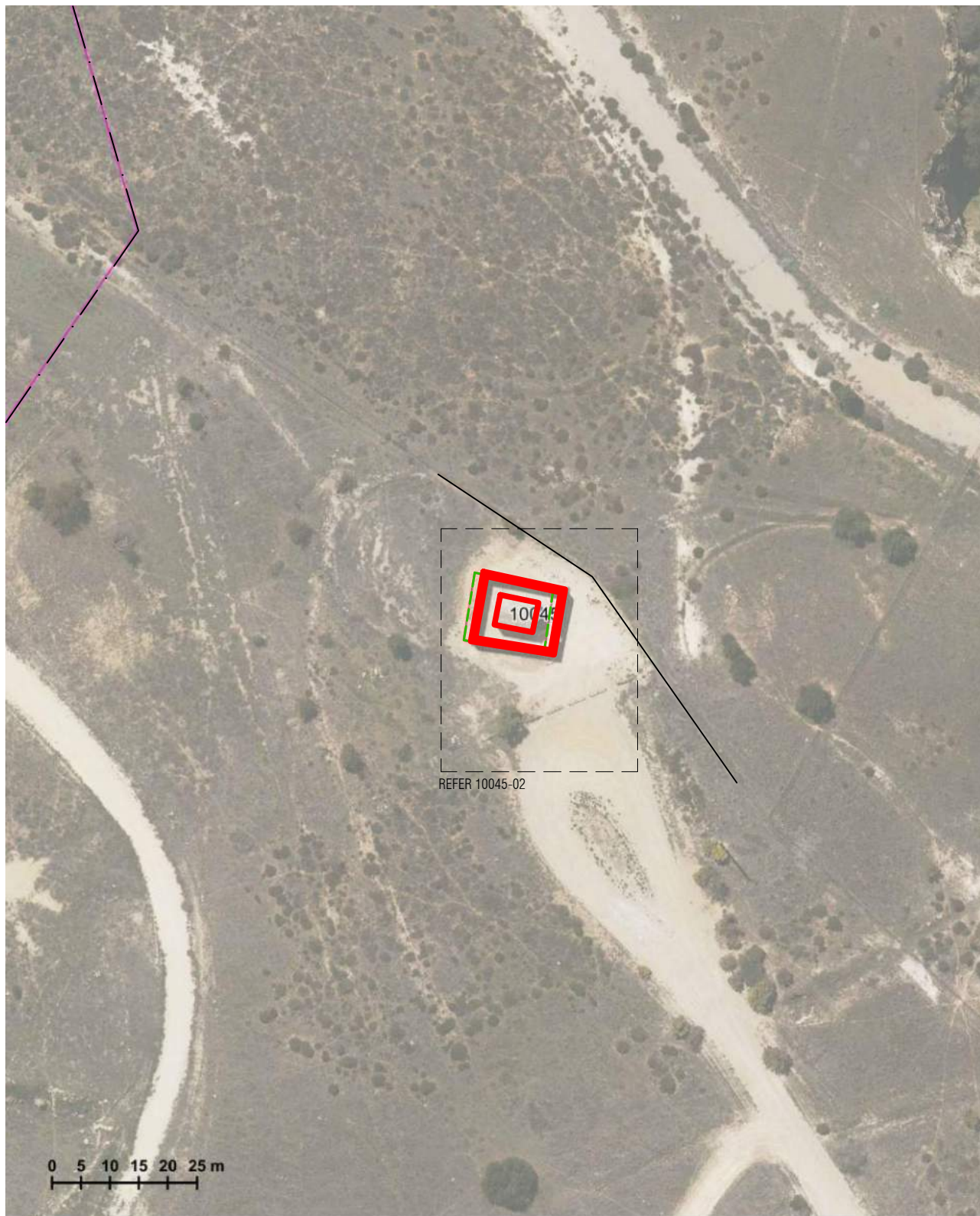
REFER 10045-02

## LEGEND

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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## FORMER POWDER MAGAZINE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10045-01**

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STONE WALL

10045

a

b

0   5   10   15   20   25 m

## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - SINGLE STOREY STONE BUILDING
b - LOW LEVEL STONE WALLS OUTSIDE OF MAGAZINE ENTRANCE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
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# 10046: Former Haulage Engine Chimney [Welsh]

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Haulage Engine Chimney [Welsh] |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10046<br>Confirmed 24 July 1980<br>Heritage database no. 14364 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Haulage Engine Chimney and the associated enginehouse lower down the slope to the north was constructed in 1876. The small horizontal steam engines hauled the ore carts up to an inclined tramway out of the open cut to the dressing house. A single Cornish boiler was located adjacent the engine to provide steam, with this connected to the chimney. The engine ceased operation in 1877 with the closure of the mines.

## Description

The Former Haulage Engine Chimney is a tall structure constructed with a square, stone base with capping supporting a square, stone chimney stack. It has a projecting stone stringcourse at the top with brick capping.

To the north, lower down the slope is the ruins of the engine and boilerhouse, these comprised of stone mounting blocks and wall bases with brick walls around the boiler. The remainder of the building was constructed of timber and galvanised iron. Various iron holding down bolts and timber plates remain associated with the mounting of the machinery. The boiler was connected to the chimney via an underground vaulted stone flue.

## Significance

The Haulage Engine Chimney and associated enginehouse ruins date from the period when the Burra Burra Mine was converted to an open-cut operation towards the end of the life of the Mine when it was in decline. The enginehouses and associated structures such as chimneys are important visual symbols of copper mines and have strong associations with the mining operations.

## Condition Notes

The following issues were observed during the inspection:
- Deterioration of pointing to full height of northwest side of chimney
- Some deterioration of pointing to southwest side of base of chimney
- Deterioration of render flaunching to top of chimney
- Collapsed top of the vaulted underground masonry flue connected to the boilerhouse to the north immediately at the base of the chimney
- Rotten timber plates to top of mounting walls near boiler
- Deterioration of brickwork at end of boiler

## Historic Photos



Former Haulage Chimney [Welsh], 1978. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*External View*



*View from North*
2018: Source: Photograph taken by Swanbury Penglase

2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase

2018: Source: Photograph taken by Swanbury Penglase

MOUNTING BOLTS
FOR ENGINE

BOILER

10046

REFER 10046-02

10445

0  5  10 15 20 25 m

## LEGEND

— · —   TITLE BOUNDARY
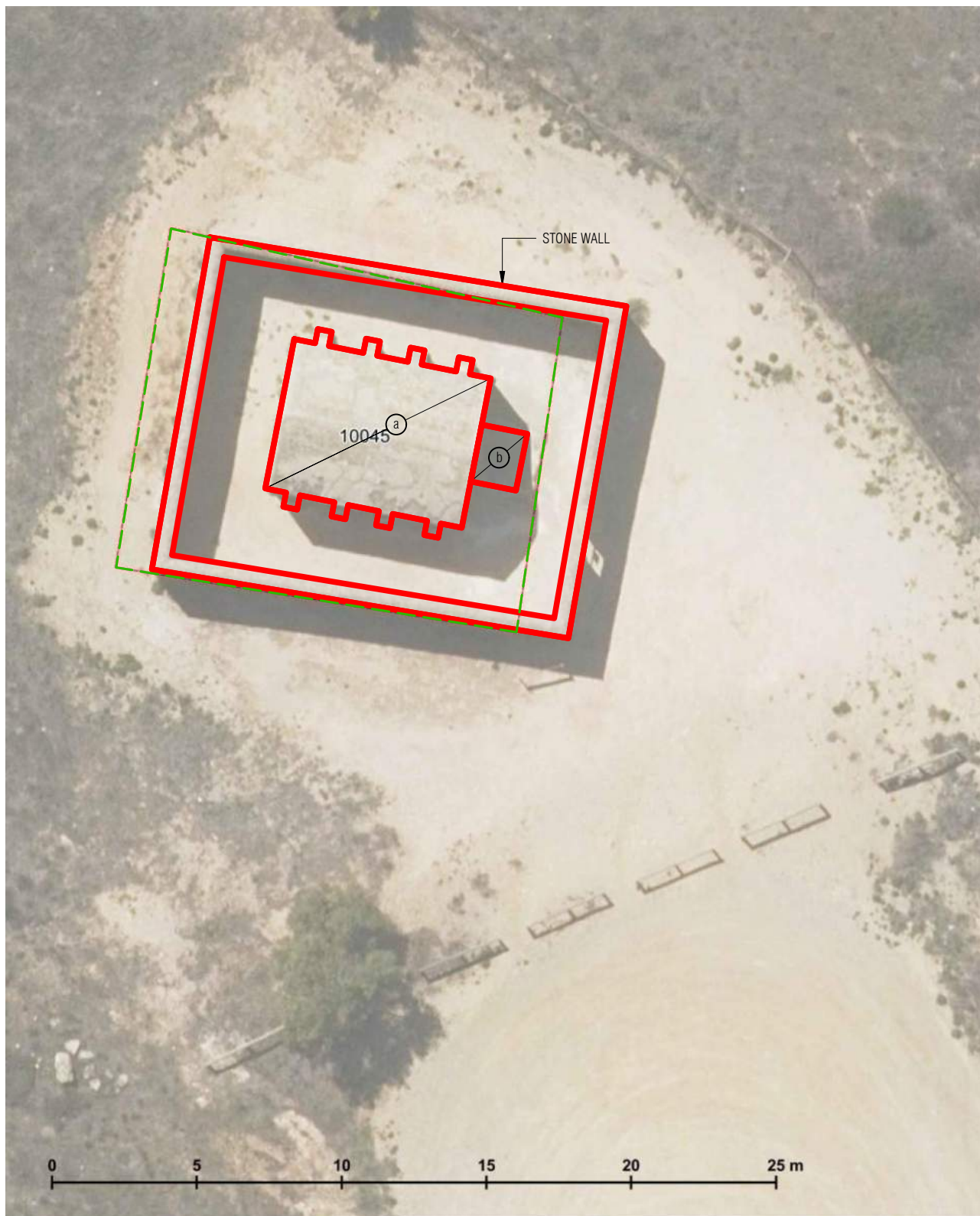
▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:1000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES
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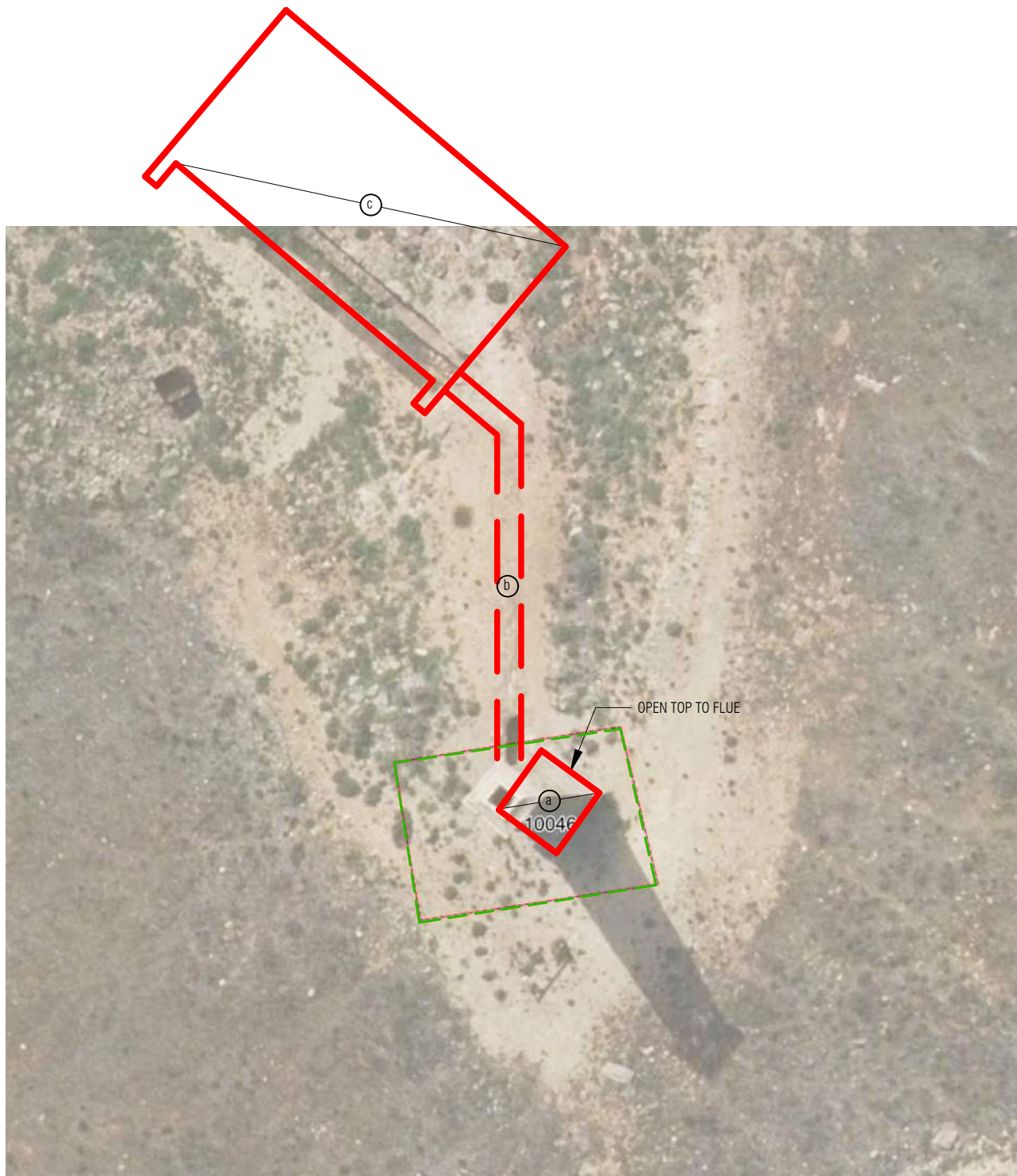
OPEN TOP TO FLUE

10046

c

b

a

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - STONE CHIMNEY
b - UNDERGROUND STONE VAULTED FLUE
c - RUINS OF ENGINE &  BOILERHOUSE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES
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# FORMER HAULAGE ENGINE CHIMNEY (WELSH)
# 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10046-02**

# 10047: Former Crusher Chimney [Cornish]

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Crusher Chimney [Cornish] |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10047<br>Confirmed 24 July 1980<br>Heritage database no. 14371 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Cornish Crusher Chimney was constructed in 1874 and was part of the ore processing complex installed as part of the conversion of the mine to an open cut operation in 1870. The ruins below the chimney down the slope to the west are of the "boiler house connected to the chimney which supplied steam to an adjacent steam engine which powered dressing machinery in the nearby dressing tower".[1] Prior to the installation of this engine, power was provided to the dressing tower from Morphett's winding engine by an endless wire rope. The engine house ceased operation in 1877 with the closure of the Mine.

## Description

The Former Crusher Chimney is a tall structure constructed with a rectangular, stone base, and a circular taperings, stone chimney stack, with a red brickwork section at the top.

The ruins of the boiler and engine house remain well below the chimney to the west. This is comprised of stone walls which act as retaining walls and formerly were the base of the building, together with stone mounting blocks for the engine including various iron holding down bolts.

## Significance

The Cornish Crusher Chimney and associated engine house ruins date from the period when the Burra Burra Mine was converted to an open-cut operation towards the end of the life of the Mine when it was in decline. The engine houses and associated structures such as chimneys are important visual symbols of Cornish influenced copper mines and have strong associations with the mining operations. It is a "notable example that demonstrates the transition from older Cornish dressing technology in the 1870s. It is one of the few surviving places of its type in Australia".[2]

## Condition Notes

The following issues were observed during the inspection:

Chimney
- Open joints to brick coping and below to east side
- Deterioration of stone face below brickwork to south east side
- Open mortar joints to stone to full height on west side
- Coping stone has fallen to ground to Northeast corner of base

Engine house
- Rotten timber projecting from southeast retaining wall of roller crusher and structure
- Deterioration to majority of height to south west wall of engine house
- Low level deterioration to retaining wall northwest of footprint of original building
- Low level of deterioration of stone to north east and south west walls of engine house with many open mortar joints
- Collapsed area to face of lower section of northeast stone retaining wall of boiler house
- Collapsed top of flue to chimney behind retaining walls to northeast and southwest sides of boiler house

## Endnotes

1    ANU Australian Cornish Mining Heritage Site, July 2014, p5.
2    ANU Australian Cornish Mining Heritage Site, July 2014, p5.

Historic Photos
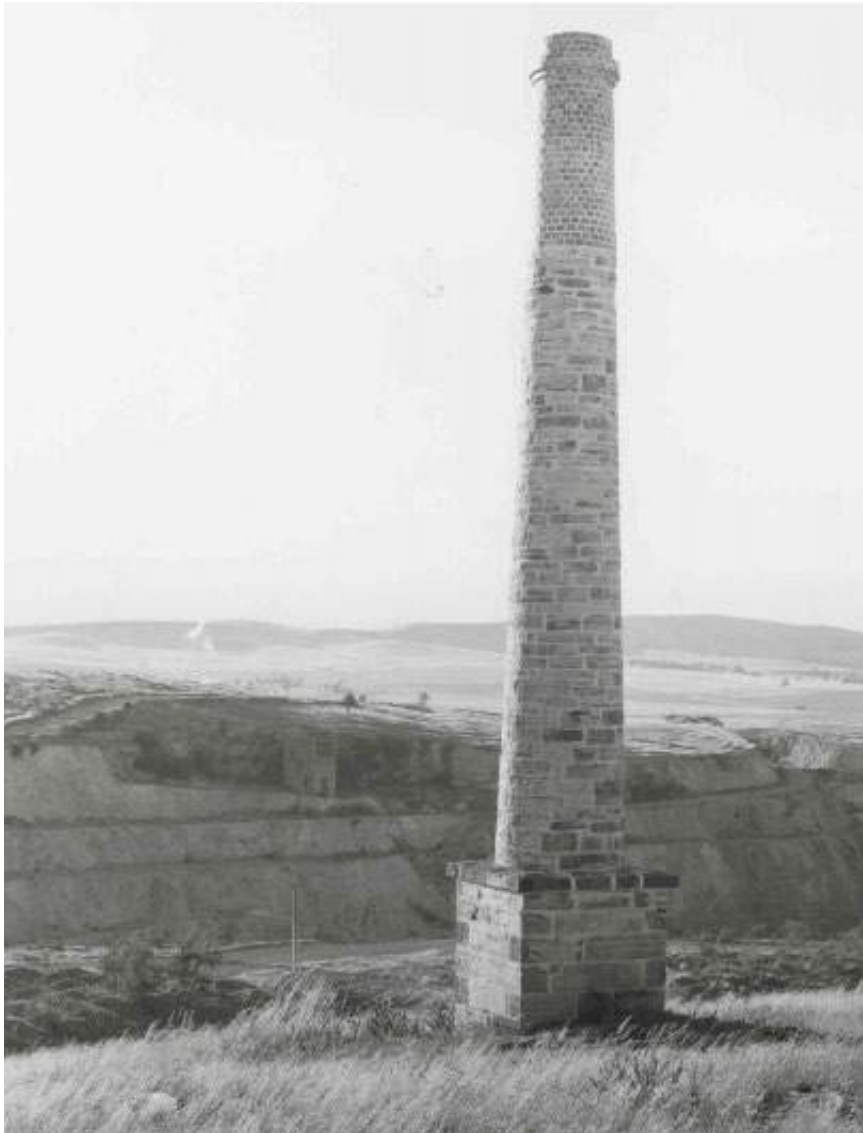


Former Crusher Chimney [Cornish], 1978. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



*View from North*
2018: Source: Photograph taken by Swanbury Penglase

10055

OPEN SECTION
OF FLUE

HOLDING DOWN
BOLTS

10047

REFER 10047-03

REFER 10047-02

0  5  10 15 20 25 m

## LEGEND

— · — TITLE BOUNDARY

———— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:1000

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STONE CHIMNEY

CORNER STONE ON GROUND

10047

0    5    10    15    20    25 m

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

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# FORMER CRUSHER CHIMNEY (CORNISH)
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LEGEND

—  ·  —        TITLE BOUNDARY

━━━━           SIGNIFICANT PORTION OF THE STRUCTURE

— — —          EXISTING SAHR SHAPE FILE

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**FORMER CRUSHER CHIMNEY (CORNISH)**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019
**10047-03**

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# 10050: Former Miner's Dugouts

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Miner's Dugouts |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Mitchell Flat, Burra |
| **CT Reference:** | CT 5797/328 F186833 A321 |
| **Note:** | South dugouts appear to extend under adjoining road reserve |
| **Heritage Listing Status:** | State<br>SAHR No. 10050<br>Confirmed 24 July 1980<br>Heritage database no. 14362<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In 1851, it was recorded that there was a "total population of 4,403 men, women and children living in the townships of the Burra Burra Mine … a total of 1,800 men, women and children are shown as living in 'the portion of the Burra Creek, adjoining Kooringa, Redruth and Aberdeen'. The compiler of the census found it necessary to explain in a footnote, 'There are no houses, the dwellings being excavated in the banks of the Burra creek'".[1] The thousands of people who lived in the Burra Burra Creek dug-outs were mainly miners and their families. The ""creek habitations" which are nothing more or less than excavations of a small size in the banks of a rivulet, at the present time supplied with water from the engines at the mine. As far as the eye can reach down the creek, these human wombat holes are to be seen – one long hole for a door, and a small square or round one for a window … Such is the force of habit, that the miner never thought of building a house but mining one, and accordingly the Burra Creek is riddled like a honeycomb".[2] The interior of the dug-out was described as "whitewashed inside, and sometimes outside, the most of them having paling verandahs, lean-tos etc. The chimneys are merely holes opening from the footpath above, with a tub on a few clods put around. … The great secret of their selecting such a place is its being rent-free".[3] The popularity of this type of housing was due to shortages in conventional housing, high rents charged by the SAMA for company housing and their failure to provide freehold land.[4] However, living in a creek bed had its perils. In 1851, there was a series of destructive floods which tore through the Burra Burra Creek and devastated the dug-outs. Fortunately, the number of fatalities was low with only one death being recorded. In fact, there were more deaths caused by the unsanitary conditions of the creek including the outbreak of diseases such as typhoid fever, smallpox and typhus. The floods of 1851 largely discouraged people from continuing to live in the creek however the practice did continue until 1859-60. In addition, SAMA began to refuse to hire those living in the creek.[5]

Two of the remaining dugouts in a gully on the east side of the creek then owned by Charles Grow who had been in one of them in 1858 and who had maintained them for sentimental reasons, became an important part of the 'Back to Burra' celebrations of 1925[6]. They subsequently were frequently inspected by visitors to the town. The National Trust took over the management of the site in 1969 and took ownership of them. They were apparently largely reconstructed in 1971 by Burra Council and the National Trust.[7]

## Description

Entailing three separate structures excavated into the creek bank, they are located on the east side of the Creek south of the central part of the town and in a gully off the main creek alignment. All are excavated into the clay banks of the gully. Two structures are located on the south side of the gully while a third is on the north side, this latter structure having a roof structure of timber logs covered with earth with two access openings through the bank. The two dugouts on the south side have the front rooms constructed of stone with window and door openings with a combination of timber and concrete lintels supporting timber logs covered over with earth. Vertical shafts remain to these dugouts indicating the location of the fireplaces, with short stone shafts above ground level. All dugouts have later steel framed grilles to limit access to the interiors. There are recently installed galvanised steel supporting columns for the timber roof structure added to the north dugout. All of the dugouts have earth floors. There is no remaining evidence of the whitewash internal finishes referenced in early descriptions.

## Significance

The Dugouts were built c.1850 in the Burra Creek and its tributary, by predominantly Cornish miners as a form of free and expedient housing as opposed to living in SAMA's company township of Kooringa. The sheer scale of this housing, with up to 1,800 miners living in dugouts in 1851, is notable and rare. They are testament to the size of the Burra Burra Mine, the number of Cornish miners who emigrated to work there and their spirit of independence. Components of the dugouts have been largely rebuilt and thus their integrity and authenticity has been impacted. The dugouts are "intrinsically linked to the settlement and industrial life of early Burra".[8]

## Condition Notes

The following issues were observed during the inspection:

- Deterioration generally of stone front sections to south dugouts, most to full height.
- Ongoing fretting of soil walls and ceilings with buildup of debris on floors.
- Termite damage of timber supports and roof structures

## Endnotes

1   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p122.
2   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p124.
3   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p126.
4   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
6   'Primitive Homes', *News,* 17 June 1928, p8
7   Burra History Group, "Miners' Dugouts Burra", p5.
8   ANU Australian Cornish Mining Heritage Site, July 2014, p12.

## Historic Photos



"Burra Creek" 1850 by W.A. Cawthorne. Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, (Hawthorndene: Investigator Press Pty. Ltd., 1986), p125.



Dugouts, 1925. Source: The Burra History Group Inc.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View of Southern Dugout*



2018: Source: Photograph taken by Swanbury Penglase

*Overall View of Northern Dugouts*
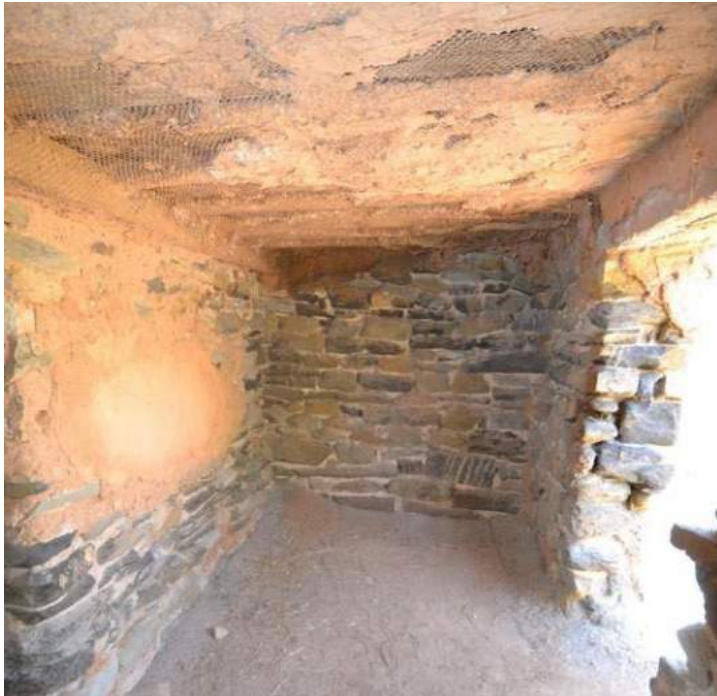
2018: Source: Photograph taken by Swanbury Penglase          *Interior View of Southern Dugout*



2018: Source: Photograph taken by Swanbury Penglase          *Interior View of Northern Dugout*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View of Southern Dugout*

10055

OPEN SECTION
OF FLUE

10047

HOLDING DOWN
BOLTS

REFER 10047-03

REFER 10047-02

0 5 10 15 20 25 m

# LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:1000

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# FORMER CRUSHER CHIMNEY (CORNISH)
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September, 2019

**10047-01**

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STONE CHIMNEY

CORNER STONE ON GROUND

10047

0    5    10    15    20    25 m

## LEGEND

— · —   TITLE BOUNDARY

━━━   SIGNIFICANT PORTION OF THE STRUCTURE

- - -   EXISTING SAHR SHAPE FILE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

SCALE: 1:200

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—— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

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## FORMER CRUSHER CHIMNEY (CORNISH)
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10047-03**

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# 10052: Former Winding House

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Winding House |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10052<br>Confirmed 24 July 1980<br>Heritage database no. 17651 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Morphett's winding engine house was constructed in 1861 to house Burra Burra Mine's third Cornish beam rotative engine, it being a 20-inch winding engine imported from Perran Foundry in Cornwall. Tenders were received from Tiver and Cole, and also Cornish stonemasons, Ambrose Harris and Thomas Paynter for the engine house but it is unclear which tender was accepted. It took the form of a 'half house' where the cylinder was internal but the crack and flywheel were external with the beam supported on an external wall. Powered from the adjacent Morphett's pumping engine boiler house to which an additional two boilers were added for this new engine. The engine operated from 1861 to 1874 and initially hauled from Hector's shaft about 90m to the south end, but after the conversion of the mine to open cut it provided power to the dressing tower to the northeast via a continuous wire rope. "Evidence survives showing how power was transferred to the Dressing Tower 160m to the northeast in the 1870s".[1] Once replaced by a smaller horizontal engine, the engine ceased operation and is believe to have been scrapped in 1916.

## Description

The former Morphett's winding house is a three storey structure which is now without a roof, its timber internal floors, doors and windows. It was constructed from coursed bluestone with red brickwork forming the voussoirs of the arched openings. The adjoining stone structure on its south side originally housed the flywheel while remains of the mounting blocks for the drive and pulley for the dressing tower remain on the north side. Various wrought iron holding down bolts remain in place, as do the bed stones for the cylinder. The timber lintels for the openings in the bob wall were replaced as part of stabilisation works carried out in 1987. Internally the structure is inaccessible being blocked off by steel mesh barriers.

## Significance

Morphett's winding house was an integral part of the Burra Burra Mine. It was a "typical Cornish winder identical to those in Cornwall during the same period".[2] It dates from the period when the Mine operated as a deep-rock mine. This was when the Mine was its most successful and profitable. It is believed to be the only extant "half house" in South Australia.[3]

## Condition Notes

The following issues were observed during the inspection:

- Open joint and cracking to wall below infilled door to north elevation
- Loose bricks to underside of crown of upper arched opening to north elevation
- Cracks over arched head of lower door extending through to underside of window opening over
- Undermining of soil below footing to northeast
- Open joints in masonry to lower east corner
- Open joints and cracking over timber lintel over door opening to southeast elevation
- Deterioration of stones forming piers to the sides of the crow holes at bottom of southeast side of southeast mounting block for flywheel
- Small open joints to top of masonry mounting blocks to flywheel

## Endnotes

1    ANU Australian Cornish Mining Heritage Site, July 2014, p4.
2    ANU Australian Cornish Mining Heritage Site, July 2014, p4.
3    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p41.

## Historic Photos
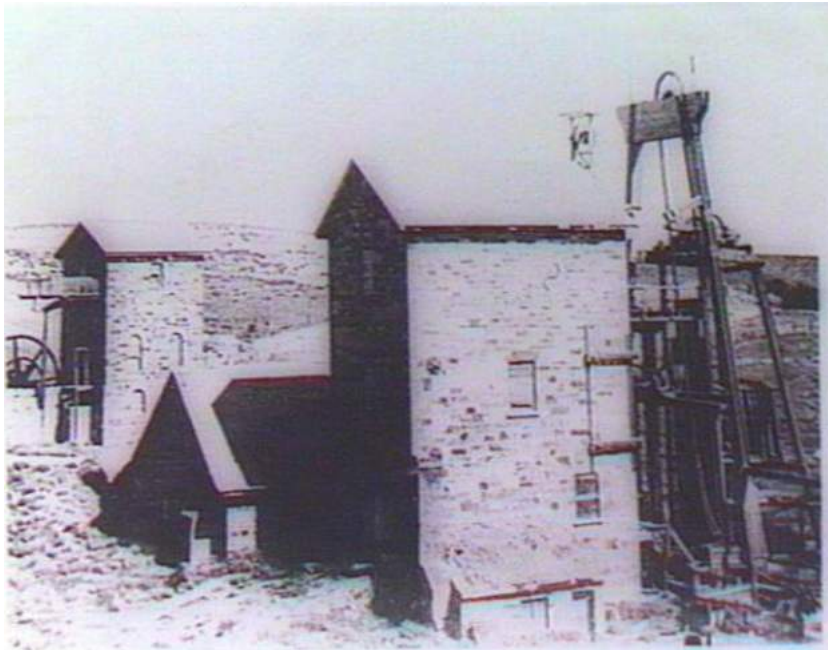


Winding House (left), 1870. Source: State Library of South Australia B 46010
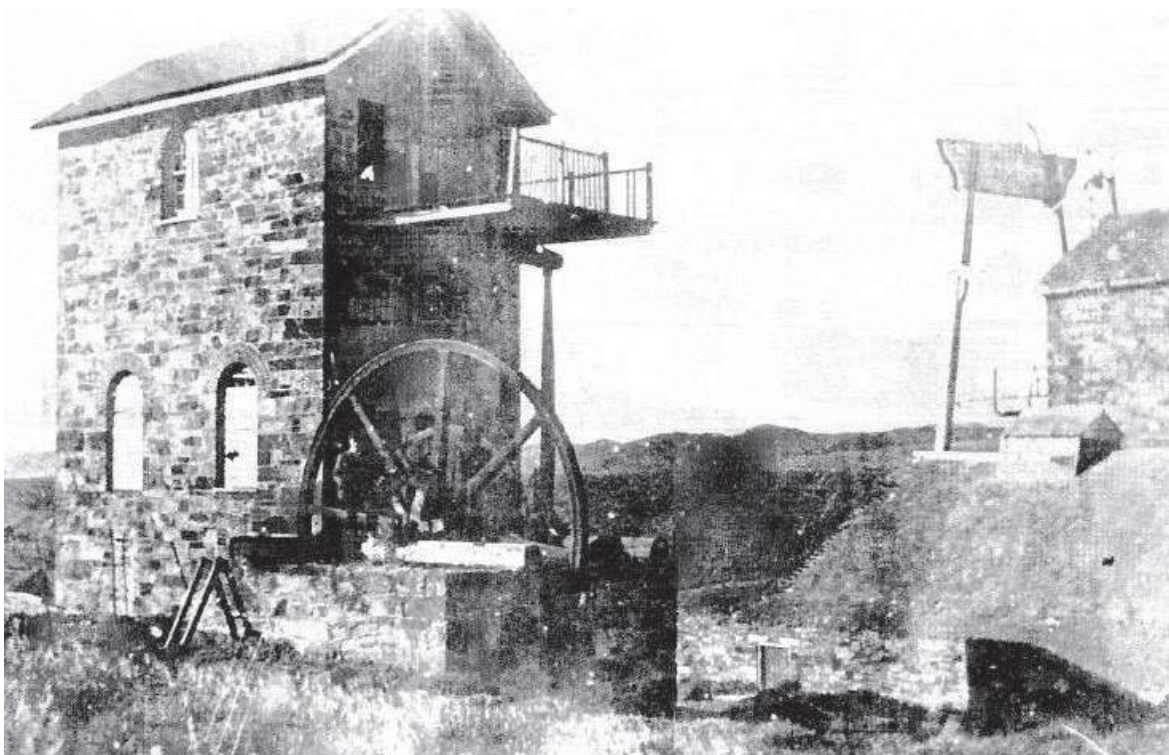


Morphett's winding house, c.1915. Source: Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012), p100.

## Current Photos



***Exterior View from North***
2018: Source: Photograph taken by Swanbury Penglase



***View from South-West***
2018: Source: Photograph taken by Swanbury Penglase

***View from South-East***
2018: Source: Photograph taken by Swanbury Penglase



***View from South-East***
2018: Source: Photograph taken by Swanbury Penglase



***Interior View***
2018: Source: Photograph taken by Swanbury Penglase

**Australian Cornish Mining Sites: Burra**
Conservation Management Plan

REFER 10052-02

10053

10052

0  5  10  15  20  25 m

LEGEND

— · —  TITLE BOUNDARY

──────  SIGNIFICANT PORTION OF THE STRUCTURE

─ ─ ─  EXISTING SAHR SHAPE FILE

SCALE: 1:1000

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**FORMER WINDING HOUSE**
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CRANKSHAFT FROM
ROTATIVE ENGINE

## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - THREE STOREY STONE ENGINEHOUSE
b - STONE MOUNTING BLOCKS FOR FLYWHEEL
c - BASE OF STONE MOUNTING BLOCKS FOR DRESSING TOWER DRIVE
d - IRON CRANK FROM ROTATIVE ENGINE

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## FORMER WINDING HOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10052-02**

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# 10053: Former Morphett's Pump House

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Morphett's Pump House |
| **Current use:** | Museum |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10053<br>Confirmed 24 July 1980<br>Heritage database no. 14369 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In October 1858, Morphett's engine house was erected by Cornish stonemasons, Ambrose Harris and Thomas Paynter. It was designed to house Burra Burra Mine's third Cornish Beam Pumping Engine known as Morphett's Engine; imported from Perran Foundry in Cornwall. Plans for the engine house had been sent from Cornwall. The 80-inch engine arrived in Port Adelaide in July 1858 and was transported to Burra Burra using the renowned Jinker currently displayed in Market Street. The journey took two months and when the engine arrived, celebrations were held in Market Square. By March 1860, the engine was operational and pumped out two million gallons of water per day. It was used until the mine closed in 1877. In 1916, the engine was sold and removed, while in 1925 the engine house and upper part of the shaft was gutted by fire. The timber components were reconstructed in 1986 as part of South Australia's sesquicentenary celebrations. The original bell was reinstated in 1988, and the slate roof installed in 1986 was replaced with galvanised steel in 2012.[1]

## Description

The Former Morphett's engine house is a three storey structure whose timber internal floor structures and roof have been reconstructed. It was constructed from coursed bluestone with stone lintels, stone arched door openings with stone voussoirs. It has a gabled, roof clad with corrugated steel. There are timber, double hung, multipaned windows and timber framed doors with a fanlight above the main doors. A more recent steel framed access stair is located to the west side with a cantilevered canopy over the door opening. The stone retaining walls forming the lower portion of the boiler house along with a remaining Cornish boiler adjoining the engine house are located to the west.

Internally, the building now houses an interpretive display. It has timber framed floors and floorboards, and timber framed stairs with a central circular void in the floor surrounded by a steel balustrade indicating the original location of the cylinder of the engine. The ground floor is part flagging with slate and the original bedstones for the cylinder remaining in place. Some of the wrought iron holding down bolts for the cylinder remain in place. The stone walls are painted internally. The top of Morphett's shaft is adjacent and is covered with steel mesh and surrounded with fencing. There is also: an adjacent large pit formed by stone retaining walls which housed the counterweight; the original drainage adit lined with timber internally is located north of the shaft; and associated cast iron pipework which was removed from the shaft displayed on the ground to the north.

## Significance

Morphett's engine house was an integral part of the Burra Burra Mine and is its most prominent and symbolic structure. It dates from the period when the Mine operated as a deep-rock mine. This was when the Mine was its most successful and profitable. Cornish style engine houses, such as Morphett's, are an important visual symbol of Cornish influenced copper mines, and have strong associations with these revolutionary mining operations. "Today, eight massive enginehouses of the original 33 remain as monuments to our mining and engineering past. They were erected between 1850 and 1876 and are perhaps the most tangible links in South Australia with the industrial revolution. The mine sites at Burra and Moonta display distinctive Cornish mining landscapes with their Cornish enginehouses, a critical requirement for linking with the Cornwall Mining World Heritage Site".[2]

## Condition Notes

The following issues were observed during the inspection:

▪ Bird roosting / nesting within the roof void via holes formed through soffit and timber linings

▪ West wall of boiler house in poor condition and as it is acting as a retaining wall it is at risk of collapse

▪ Cracking to south end of east and west walls visible internally to upper level. Most noticeable to west wall.

## Endnotes

1    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012).
2    Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p12.

## Historic Photos



Morphett's Pump House, c.1906. Source: Art Gallery of South Australia



Morphett's Pump House, c.1875. Source: SLSA B46014

# Current Photos



**View from South-West**
2018: Source: Photograph taken by Swanbury Penglase



**View from East**
2018: Source: Photograph taken by Swanbury Penglase



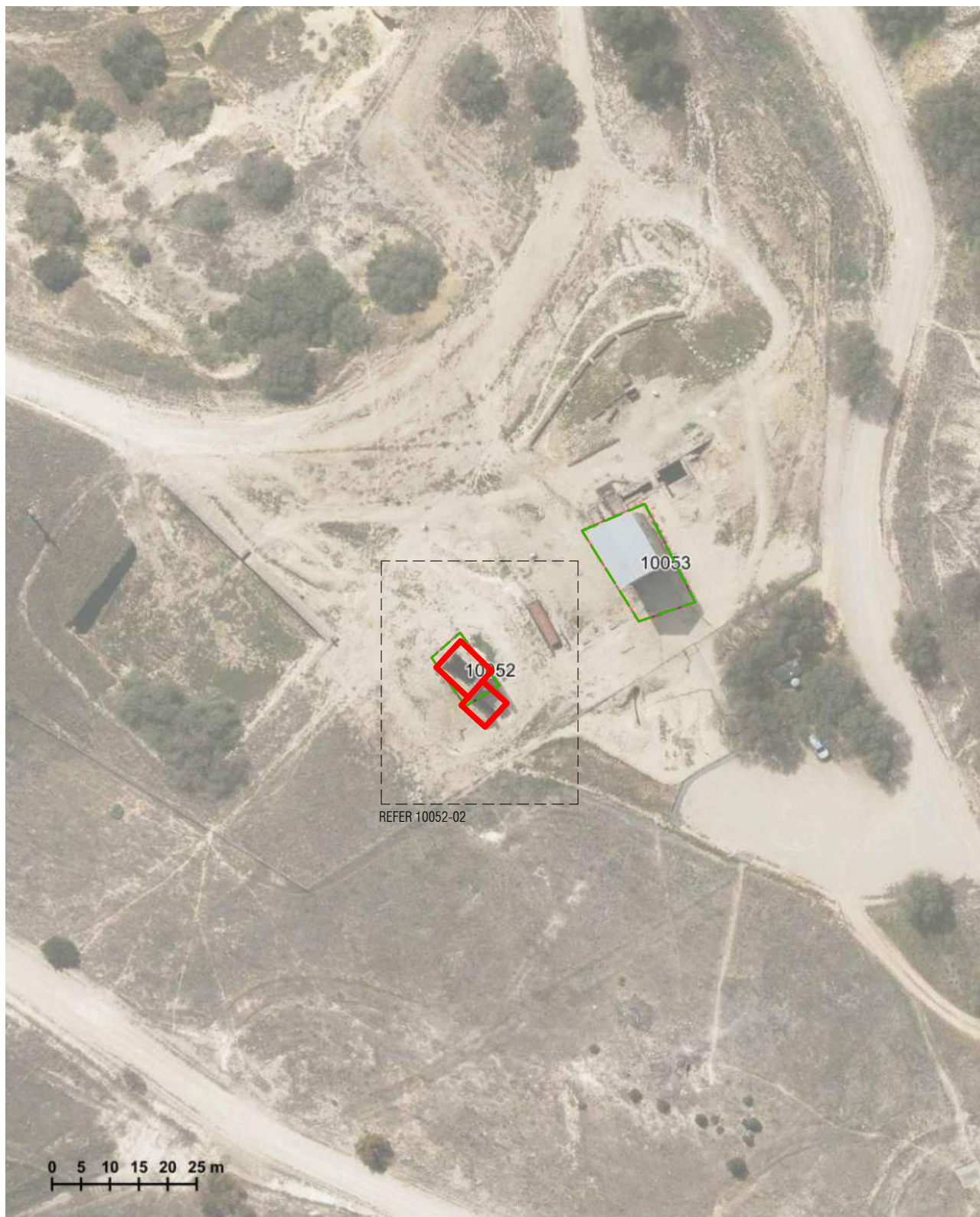2018: Source: Photograph taken by Swanbury Penglase                    **Interior View of Lower Level**

2018: Source: Photograph taken by Swanbury Penglase

*Interior View of Intermediate and Upper Levels*



2018: Source: Photograph taken by Swanbury Penglase

*View of Pump House from Bob Balcony*

2018: Source: Photograph taken by Swanbury Penglase

*Remains of Boiler House from North*



2018: Source: Photograph taken by Swanbury Penglase

*Balance Weight Pit North-East of Shaft*

***Balance Beam Slot***
2018: Source: Photograph taken by Swanbury Penglase



***Opening in side of Drainage Adit***
2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase

***Cast Iron Pitwork Pipes removed from Morphett's Shaft***

2018: Source: Photograph taken by Swanbury Penglase

*Open Section of Flue between Boiler House and Chimney*



2018: Source: Photograph taken by Swanbury Penglase

*Interior of Flue to Chimney*

**Base of Chimney**
2018: Source: Photograph taken by Swanbury Penglase

APPROXIMATE LOCATION
OF DRAINAGE

DISPLAY OF PITWORK
REMOVED FROM SHAFT

10053

10052    REFER 10053-02

APPROXIMATE ALIGNMENT OF
UNDERGROUND FLUE

BASE OF FORMER
MORPHETTS CHIMNEY

0  5  10  15  20  25 m

## LEGEND

— · —  TITLE BOUNDARY

━━━  SIGNIFICANT PORTION OF THE STRUCTURE

- - -  EXISTING SAHR SHAPE FILE

SCALE: 1:1000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES
INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE
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**swanbury penglase**

# FORMER MORPHETT'S PUMP HOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10053-01**

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REMAINING BOILER

0    5    10    15    20    25 m

## LEGEND

— · — — TITLE BOUNDARY

━━━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - THREE STOREY STONE BUILDING
b - MORPHETTS SHAFT
c - RUINED WALLS
d - RUINED WALLS
e - RUINED STONE WALLS OF BOILERHOUSE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED
ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

**swanbury
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# FORMER MORPHETT'S PUMP HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10053-02**

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# 10054: Former Graves Pump House

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Graves Pump House |
| **Current use:** | Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10054<br>Confirmed 24 July 1980<br>Heritage database no. 14365 |

State
SAHR No. 10054
Confirmed 24 July 1980
Heritage database no. 14365

National
Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017



2018: Source: Photograph taken by Swanbury Penglase

## History

Completed in October 1868, Graves engine house was intended to house Burra Burra Mine's fourth Cornish Beam pumping engine. In 1867, an 80-inch Cornish Beam pumping engine had been ordered from the Perran Foundry in Cornwall. However, the Burra Burra Mine was converted to an open-cut mine shortly after and the order was cancelled. Although it was proposed to reinstall the existing Schneiders 80 inch engine which had to be removed to make way for the new open cut this also was abandoned in 1869.[1]

## Description

The Former Graves engine house was originally a three storey structure. It is constructed from random rubble stone with squared stone quoins to the external corners and openings and stone lintels together with stone voussoirs forming semi-circular arches to the door openings. Internally the structure is inaccessible being blocked off by steel mesh barriers.

## Significance

Although Graves Enginehouse was never operational, the structure is still instructive of the revolutionary mining technology which enabled deep-rock mining. Cornish style Enginehouses, such as Graves, are an important visual symbol of Cornish influenced copper mines, and have strong associations with these mining operations.

## Condition Notes

The following issues were observed during the inspection:

- Timber plate to top of balance east bob wall is rotten along with remaining joists to base of cockpit against east wall internally
- Section of missing facework to west wall south of main entry at low level
- Cracks through upper opening lintels to north and west elevations
- Woody weeds growing to window sills
- Deterioration of pointing to north elevation – this wall has not been repointed
- Collapse of bank on east side

## Endnotes

1    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, (Adelaide: Government of South Australia, 2012).

## Historic Photos



"Graves Engine-house", c.1890. Source: The Burra History Group Inc.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*View within Context*
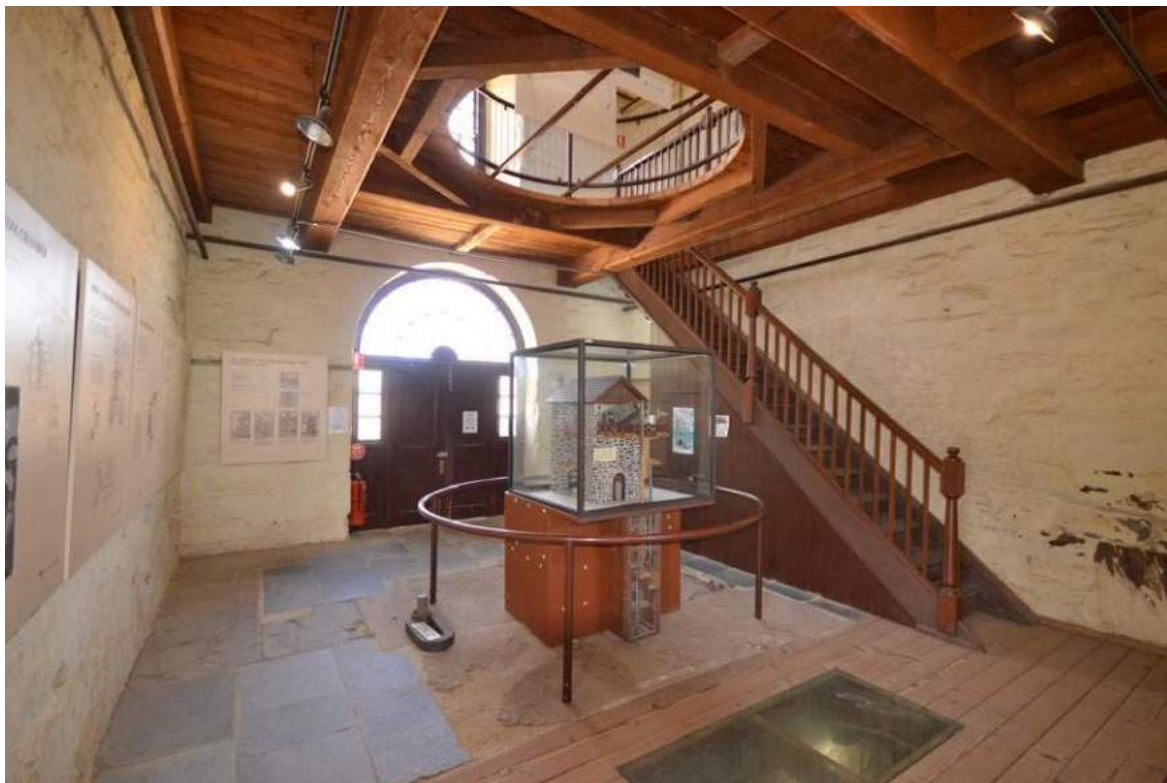


*View from North-West*
2018: Source: Photograph taken by Swanbury Penglase



*Interior View*
2018: Source: Photograph taken by Swanbury Penglase

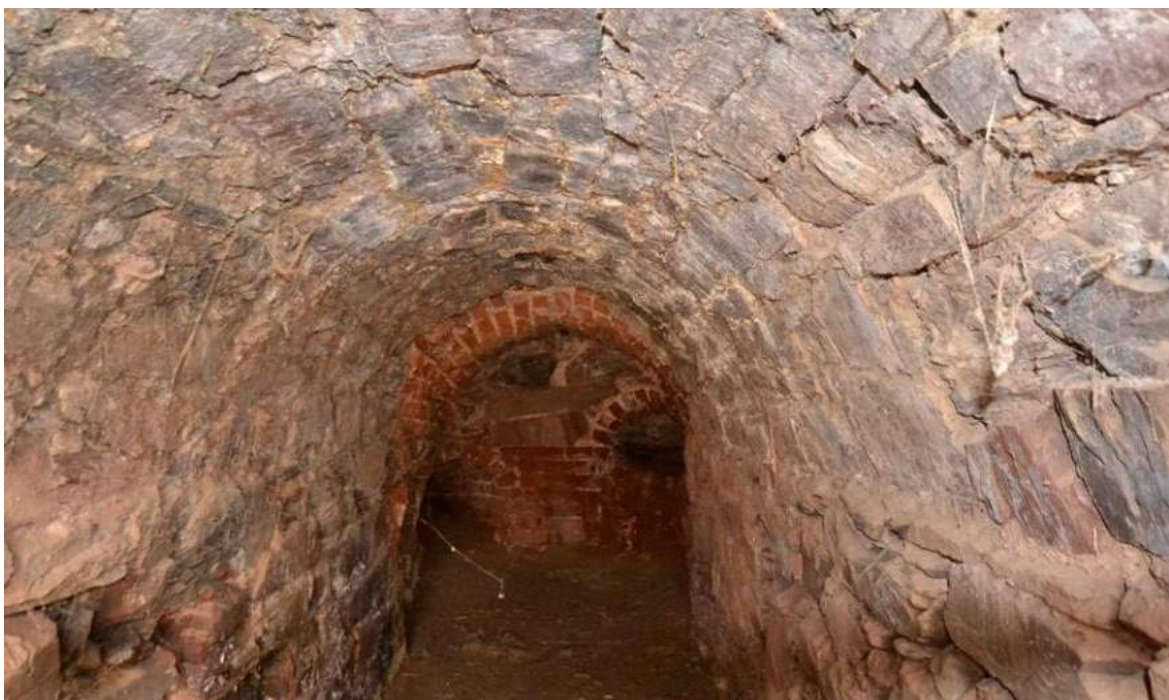2018: Source: Photograph taken by Swanbury Penglase                    *Interior View of Cockpit*

REFER 10054-02

## LEGEND

— · —     TITLE BOUNDARY

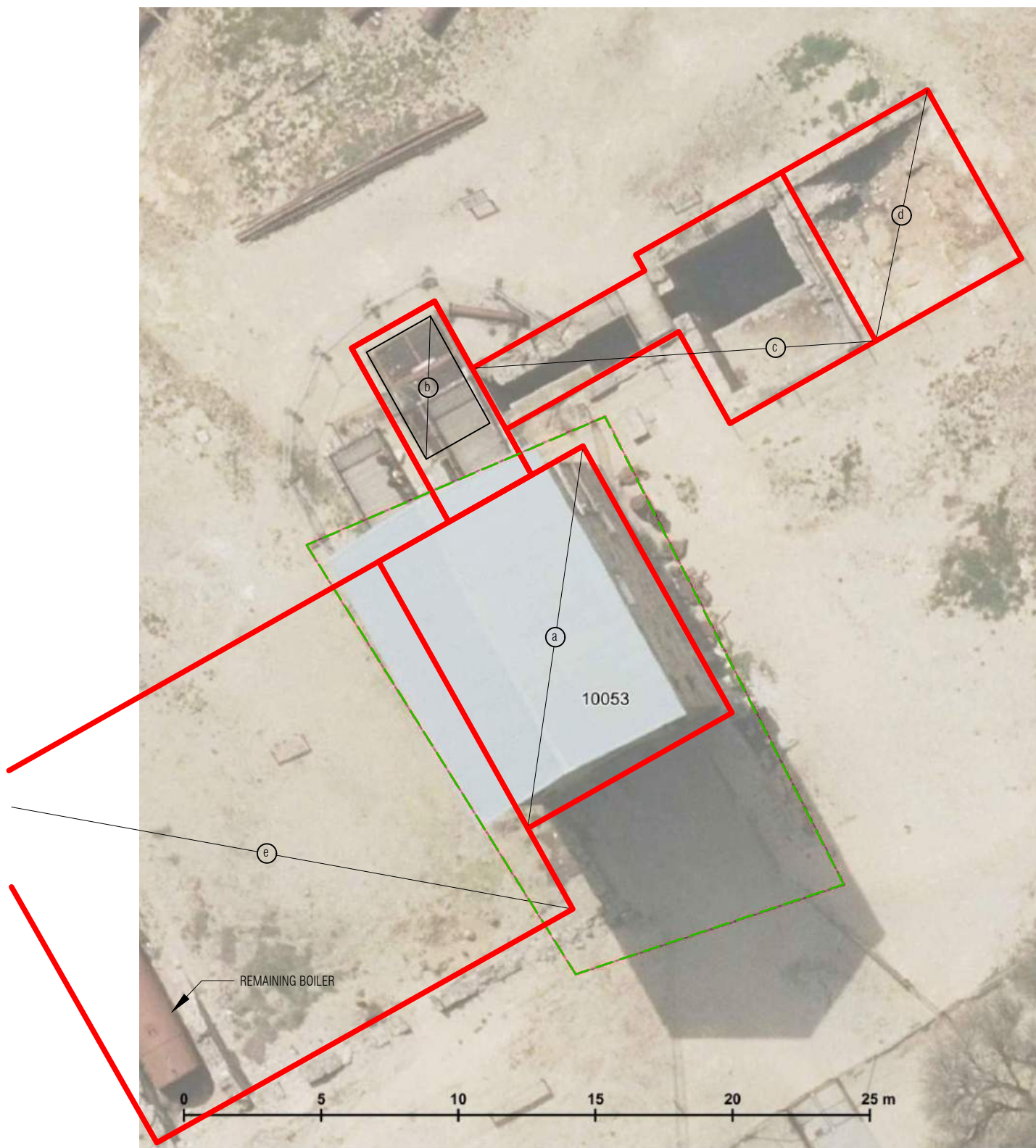━━━     SIGNIFICANT PORTION OF THE STRUCTURE

– – –     EXISTING SAHR SHAPE FILE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

SCALE: 1:1000

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**FORMER GRAVES PUMP HOUSE**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10054-01**

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## LEGEND

———— TITLE BOUNDARY

**————** SIGNIFICANT PORTION OF THE STRUCTURE

**- - - -** EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - THREE STOREY STONE STRUCTURE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

**swanbury penglase**

## FORMER GRAVES PUMP HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10054-02**

# 10055: Former Ore Sorting Floor

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Ore Sorting Floor |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10055<br>Confirmed 24 July 1980<br>Heritage database no. 14372 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Separating mineral ores from waste rock is known as ore dressing. This process was initially done by hand, breaking apart the rock and then hand picking. It was carried out on "dressing floors" located at the surface of the mine. "After some initial sorting underground, lumps of ore from shafts was hand-picked at the surface into high grade (prills), low grade (drage or halvans) or waste (attle). The prills were reduced by hand with bucking hammers to walnut size and sent for smelting. The attle was sent to waste dumps or back into the mine as fill in worked out areas. Drage was reduced to sand size and sent for concentration or by jigging which involved gravity separation in water. The Cornish jigger originally consisted of a sieve hung from the end of a lever and immersed in a trough of water. The sieve was filled with crushed ore and continually shaken by hand in the trough using the lever. This action caused the lighter waste particles to rise to the top which were periodically scraped off by hand. Up to the 1860s, about 150 men were employed operating individual jiggers on the Burra Mine ore floors".[1] This particular Ore Sorting Floor dates from 1870, after the Burra Burra Mine became open-cut. Most of the ore floors at the Mine have either been destroyed by the historic and modern open cuts, or have been buried by the modern open cut overburden. There is some debate whether this particular Ore Sorting Floor was used to sort Ore or as others have suggested it was "not used for sorting but for laying out piles of individual tribute groups dressed ore prior to sampling".[2] Sampling Day was held every two months, and each pare (group of tributers) placed their ore in a pile on the ore floor. The SAMA sampler then bagged a shovel of ore as a sample which was weighed with portable scales, and was sent for assay. The assay value determined how much the tributer was paid.[3]

## Description

The Ore Sorting Floor is an expansive area cut into the slope running northeast – southwest paved with stone cobbles. A stone retaining wall is located on its east side to retain the higher ground to the east and this returns to the south end of the floor. The strip between the cobbled floor and the east retaining walls is unpaved with stone. A low level stone retaining wall is located to its west side to support the raised level of the floor. An underground drain is located below the north end of the floor to drain the slope to the east. There is pipework associated with the historic mine displayed on the adjacent ground.

## Significance

The Ore Sorting Floor dates from the period when the Burra Burra Mine became open-cut. It was a time when the Mine was in decline. However, it is "one of the few surviving ore floors in Australia".[4]

## Condition Notes

The following issues were observed during the inspection:

- Open joints to west retaining wall with localised stabilisation required in places
- Open joints to west end of retaining wall to south side of floor
- Lower level deterioration of stone surface and pointing to central portion of east retaining wall
- Stone paving missing to southwest corner of floor

## Endnotes

1   Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p7.
2   ANU Australian Cornish Mining Heritage Site, July 2014, p3.
3   Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, pp8-9.
4   ANU Australian Cornish Mining Heritage Site, July 2014, p3.

Historic Photos



Ore Sorting Floor, 1978. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase          *Overall View from North*



2018: Source: Photograph taken by Swanbury Penglase          *View from South-West*

2018: Source: Photograph taken by Swanbury Penglase

*Drainage Opening in Stone Floor*

DRAIN WITH
TIMBER

10055

10445

0  5  10  15  20  25 m

## LEGEND

— · —  TITLE BOUNDARY

▬▬▬  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:1000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES
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**FORMER ORE SORTING FLOOR**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10055-01**

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# 10056: Former Mine Manager's Dwelling and Office

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Mine Manager's Dwelling and Office |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10056<br>Confirmed 24 July 1980<br>Heritage database no. 14366<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Mine Manager's Dwelling and Office was the administrative heart of the mine. Constructed in 1849, the long building was located on the west side of the mine site and included the offices at the north end with the residence of mine manager to the south end. Captain Henry Roach, from Redruth, Cornwall, was appointed Mine Captain in January 1847 and subsequently was appointed Superintendent of the Mine. "Captain Roach's House" is denoted to the southern portion of the building on the earliest plan of the Burra Burra Mine dated 1852. The structures to the north were identified as "Offices" and the "Assay Office and House". The Captain's house contained four rooms, while the offices comprised a boardroom, the Captain's consulting and changeroom, pay office, accountant's office, assay office and draughtsman's room. The north end was occupied by the residence of the Assay Master.[1] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that there were fourteen houses on the Mine site associated with Mine operations. The buildings were constructed in "Georgian domestic architectural styles that represented the elevated status of the mine captains".[2]

## Description

The Former Mine Manager's Dwelling and Office is a single storey structure with a series of basement rooms at the north end, with the whole structure now a ruin. The structure is now located on the very edge of the cutting for the upper bench of the modern open cut, with this having removed the verandah and terrace on the east side of the building. Constructed from stone with stone quoins to the corners and red brick voussoirs forming the arches to the openings. There is no roof and no timber structure or fittings remain. There are some sections of render which remain on the walls. Much of the remaining internal plaster is now inscribed with graffiti etched into the surface. The ruins include a number of outbuildings to the west.

## Significance

The Mine Manager's Dwelling and Office dates from the earliest period of the Mine when it was first established and operated as a deep-rock, underground mine. It was this period when the Mine was its most successful and profitable. The siting of the Mine Manager's Dwelling on the mine site in the immediate vicinity of the mine workings is indicative of the level of involvement and oversight expected of the manager in the mine's operations.

## Condition Notes

The following issues were observed during the inspection:

- Noticeable lean to the remaining standing walls, particularly east-west wall to north central portion of structure
- Delamination of faces of remaining standing walls in several locations to north and south end of structure
- Collapsed core of north-south internal spine wall to south central portion of structure
- Deterioration of lower stone due to rising damp to walls of outbuilding at southwest corner of structure, with these at risk of collapse
- Dropping voussoirs to arch of door opening in east-west wall at north end of structure
- Vegetation, including woody weeds, growing within and amongst the ruins

## Endnotes

1    'The Burra Burra Mines & Smelting Works', *Adelaide Observer*, 24 March 1855, p3
2    ANU Australian Cornish Mining Heritage Site, July 2014, p3.

## Historic Photos



Former Mine Manager's Residence and Office, c.1870. Source: State Library of South Australia B4151

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase            *Exterior View to North End*



2018: Source: Photograph taken by Swanbury Penglase            *View from South-East*

2018: Source: Photograph taken by Swanbury Penglase      *View from south along Spine Wall*



2018: Source: Photograph taken by Swanbury Penglase      *View from West*

2018: Source: Photograph taken by Swanbury Penglase                    *View from West*



2018: Source: Photograph taken by Swanbury Penglase                    *Deterioration of Walls*

2018: Source: Photograph taken by Swanbury Penglase

*Deterioration of Walls*



*Detail View*
2018: Source: Photograph taken by Swanbury Penglase
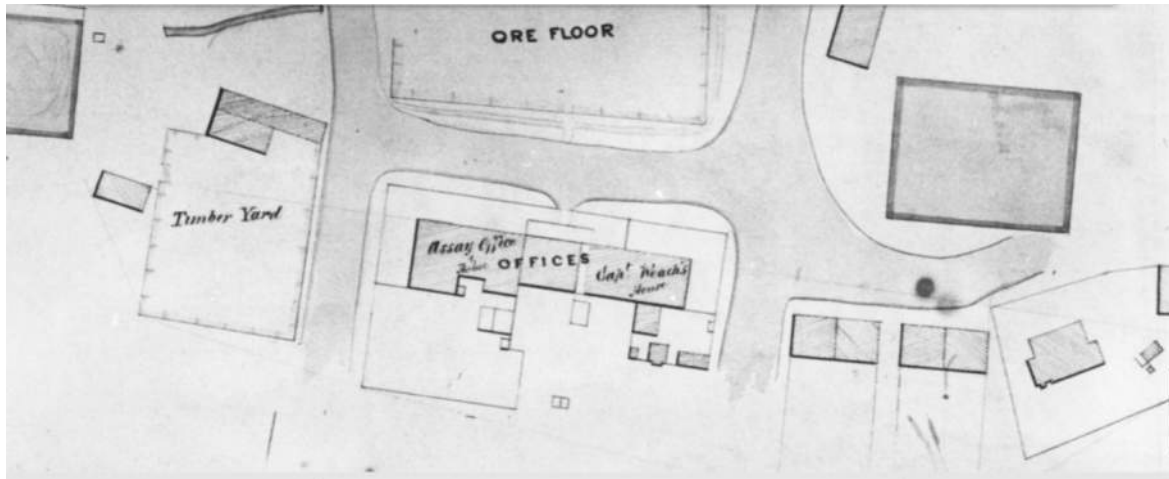
## Other Material



Burra Burra Mine Site Plan, c.1852. Source: SLSA C178

10056

0  5  10 15 20 25 m

## LEGEND

— · —     TITLE BOUNDARY

▬▬▬     SIGNIFICANT PORTION OF THE STRUCTURE

- - -     EXISTING SAHR SHAPE FILE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

SCALE: 1:1000

**swanbury penglase**

**FORMER MINE MANAGER'S DWELLING & OFFICE**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10056-01**

www.swanburypenglase.com

# 10159: Dwellings (Paxton Square Cottages)

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwellings (Paxton Square Cottages) |
| **Current use:** | Holiday Accommodation |
| **Address/Location of Item:** | Kingston Street, Burra |
| **CT Reference:** | CT 5825/784 D1672 A532 |
| **Heritage Listing Status:** | <u>State</u><br>SAHR No. 10159<br>Confirmed 24 July 1980<br>Heritage database no. 14389 |
| | <u>National</u><br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Paxton Square cottages were built for William Paxton, Hindley Street chemist and SAMA shareholder and Director. They were constructed on SAMA land in the company town of Kooringa and were built by "Cornish masons for Cornish Miners".[1] Once completed, the cottages were rented to the miners and their families working at the Burra Mine. The Paxton Square cottages were a significant development in the town. The "complex of 33 cottages, in three terraces around Paxton Square, is one of Australia's finest examples of company housing. The attached two-, three- and four-roomed cottages were constructed by Cornish masons for the South Australian Mining Association, to encourage the mining families to leave their dugouts along Burra Creek. In 1849, the first row of 14 cottages, facing Burra Creek, were constructed by builder William Henderson, with all 33 completed by 1851."[2] By 1850, SAMA had "built hundreds of two and sometimes three-roomed cottages in Kooringa, as well as the cottages of Paxton Square, for leasing to men employed in the Burra Mine. Rental of the cottages was 3 shillings … a week out of an average weekly pay of £1.5 shillings … Many miners, however, left Kooringa to live in the townships just outside the company section".[3]

The verandahs to the street frontages were added in 1940, while timber framed bathrooms were added to the rear in the 1980's when they were converted to tourist accommodation.

## Description

The Paxton Square Cottages is comprised of three separate rows of attached single storey dwellings. Each of these rows are comprised of eleven cottages in a number of different room configurations, with each of the rows built on the street boundaries to the north, west and south sides of the site. They are constructed from solid random rubble stone walls with masonry chimneys. They have a gabled roof originally clad with split timber shales but now over clad with corrugated steel roof sheeting with the roof broken into individual forms where they step down the slope to the north and south terraces. The rear rooms have skillion roofs. The doors are timber framed with timber multipaned casement windows. The later rear additions are timber framed and are clad with weatherboard. The interiors have concrete floors finished in slate tiles and carpets, a combination of flushed and battened ceilings and while internal walls are either of painted stone or flushed linings to additions.

## Significance

The Paxton Square Cottages were "among the first company housing in Australia" in one of Australia's first mining towns.[4] It was the largest group of cottages constructed by SAMA in Kooringa. The grouping and repetition of the cottages is notable, as is the planned, enclosed space formed by the three terraces. These characteristics set these dwellings apart from other miners' cottages built in the town and other mining settlements in Australia. The "cottages are a notable example of basic Georgian designs that were imported into early mining towns across Australia in the mid-19th century".[5]

## Condition Notes

The following issues were observed during the inspection:

- Deterioration of paint finishes to lower portions of stone walls.
- Minor deterioration of paint finishes to barges and fascias.
- Minor rot to some weatherboards of rear additions
- Loose bargeboard to Paxton Terrace main roof

## Endnotes

1    Australian Heritage Database, Paxton Square Cottages.
2    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
3    "Paxton Square, Burra, SA", Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10159.
4    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5    ANU Australian Cornish Mining Heritage Site, July 2014, p14.

## Historic Photos



Paxton Square Cottages c.1933. Source: State Library of South Australia (SLSA) B 8630

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Paxton Terrace)*



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Bridge Terrace)*

2018: Source: Photograph taken by Swanbury Penglase

*Exterior View (Kingston Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (Paxton Terrace)*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*



*Interior View*
2018: Source: Photograph taken by Swanbury Penglase

2018: Source: Photograph taken by Swanbury Penglase

*Example Cottage (Interior View)*



2018: Source: Photograph taken by Swanbury Penglase

*Example Cottage (Rear View)*

LEGEND

—  ·  —   TITLE BOUNDARY

━━━   SIGNIFICANT PORTION OF THE STRUCTURE

- - -   EXISTING SAHR SHAPE FILE

SCALE: 1:1500

0 5 10 15 20 25 m

**swanbury penglase**

# DWELLINGS (PAXTON SQUARE COTTAGES), KINGSTON STREET
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10159-01**

10005

PAXTON TERRACE

10005

10159

10005

N

## LEGEND

— · — TITLE BOUNDARY

**———** SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

# DWELLINGS (PAXTON SQUARE COTTAGES), KINGSTON STREET
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10159-02**

TITLE BOUNDARY

SIGNIFICANT PORTION OF THE STRUCTURE

EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**DWELLINGS (PAXTON SQUARE COTTAGES), KINGSTON STREET**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10159-03**

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KINGSTON STREET

'TED BAULDERSTONE ROW 1-10 (11 IS MALOWEN LOWARTH')

10159

N

LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**DWELLINGS (PAXTON SQUARE COTTAGES), KINGSTON STREET**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10159-04**

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# 10160: Former Burra Salvation Army Citadel

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Burra Salvation Army Citadel |
| **Current Use:** | Private Dwelling |
| **Address/Location of Item:** | 11 Kingston Street, Burra |
| **CT Reference:** | CT 5088/949 F29914 A102 |
| **Heritage Listing Status:** | State<br>SAHR No. 10160<br>Confirmed 8 November 1984<br>Heritage database no. 14386 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Christian Revival Association (later the Christian Mission, then the Salvation Army) was founded in 1865 in London by William Booth. In 1880, the first Salvation Army Corps in Australia was founded in Adelaide. On 19 February 1884, the "War Cry" of the Salvation army was heard for the first time in Burra.[1] Large crowds gathered at the square nightly to attend their open-air meetings. On 22 February 1884, it was reported that the Salvation Army had secured land in Burra on which they intended to build a barracks.[2] On Wednesday 11 February 1885, the foundation stone for the new barracks was laid by J. Dunstan, Mayor of Burra.[3] A large barracks, known as the Burra Salvation Army Citadel, was constructed by local builders Sara and Dunstan, and opened on Wednesday 15 April 1885.[4]

## Description

Rectangular hall building constructed from Hampton quarry stone with stone quoins and red brick dressings to openings. Timber double sash windows. Salvation Army Barracks sign panel, timber framed windows and doors. The austere stone building is a significant expression of the Salvation Army's activities in country areas during the nineteenth century.

Currently the hall is used as a private residence.

## Significance

Although derived from Methodism, which had a long association with the Cornish community at Burra, the Salvation Army did not have a presence in the town when the Mine was operational.

## Condition Notes

The building is generally in a good state of repair and is well maintained. There are some areas of weathering to external timbers, particularly to fascias where paint cover has not been maintained. Roof has visible red rust and will require replacement within the next 10 years.

## Endnotes

1    *Burra Record*, 19 February 1884, p2.
2    *Burra Record*, 22 February 1884, p2.
3    *Burra Record*, 13 February 1885, p2.
4    "Opening of new barracks in Kooringa Wednesday April 15", *Burra Record*, 10 April 1885, p2.

Historic Photos
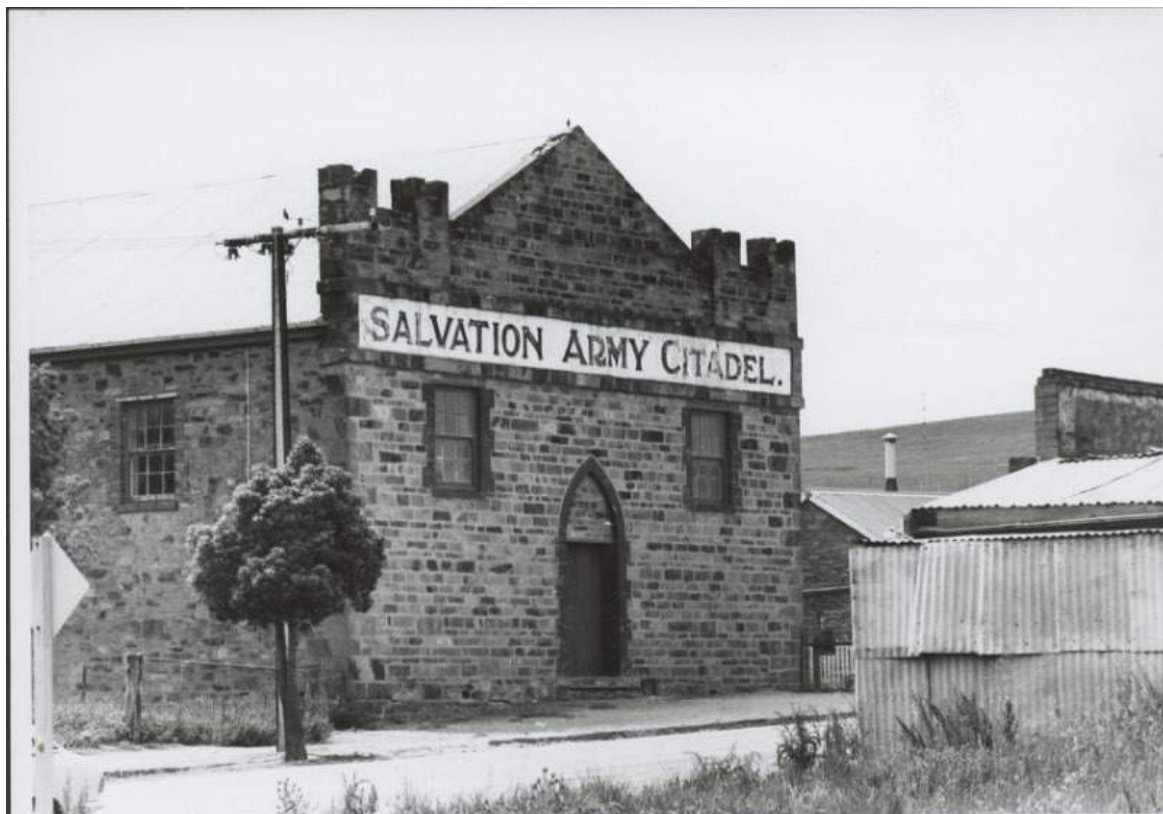


Salvation Army Citadel, 1975. Source: SLSA B 31609

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase                    *Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

2018: Source: Photograph taken by Swanbury Penglase

KINGSTON STREET

SMELTS ROAD

10160

0    10    15    20    25 m

## LEGEND

— · —    TITLE BOUNDARY

———    SIGNIFICANT PORTION OF THE STRUCTURE

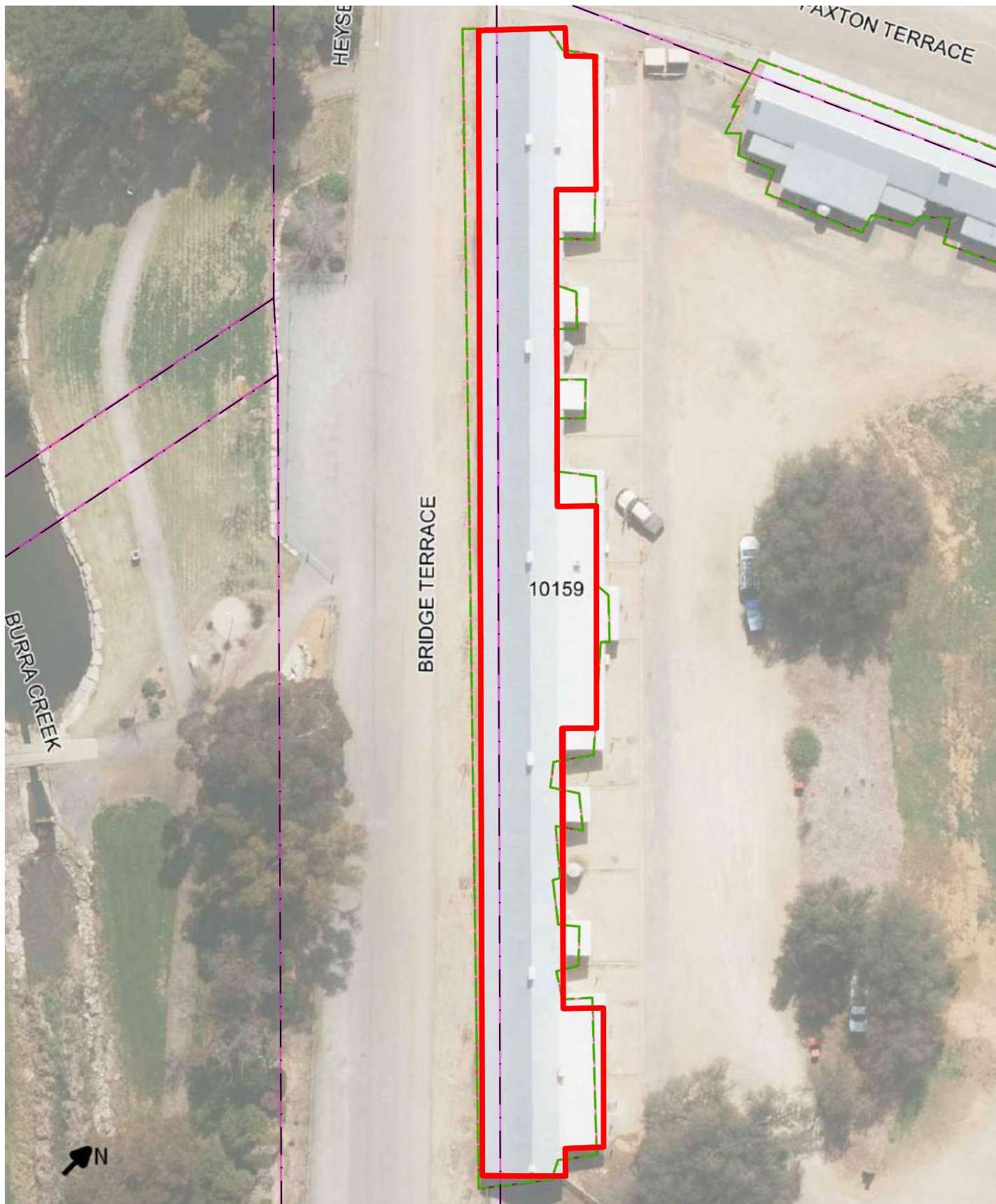– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

**FORMER BURRA SALVATION ARMY CITADEL**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10160-01**

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# 10204: Former Smelts Superintendent's Residence and Wall

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Smelts Superintendent's Residence & Wall |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 9 St Just Street |
| **CT Reference:** | CT 5325/966 D3554 A25 |
| **Heritage Listing Status:** | State<br>SAHR No. 10204<br>Confirmed 8 November 1984<br>Heritage database no. 14323 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The building located at 9 St Just Street, Burra, is reportedly the Former Smelts Superintendent's Residence & Wall. It is unclear where this assertion originated. The following information relates to this building.

In May 1848, it was reported:

> The imminent departure from Swansea of the barque The Richardsons of 361 tons, charted especially by the Patent Copper Company of Swansea to transport 'materials, men and staff' sufficient to establish a smelting-works in South Australia. 'Including women and children, the party will number not fewer than 70 souls. A surgeon has been engaged to accompany them'.[1]

On 3 October 1848, Welshman, Thomas Henry Williams arrived in South Australia on board *The Richardsons.* The Smelter (Burra Smelts Historic Site SAHR 10989) was established on the SAMA's land, on the eastern side of Burra Burra Creek, which was leased to the Patent Copper Company. On 11 December 1848, the foundation stone was laid for the Smelting Works.

On 29 August 1849, in the *South Australian Register*, Thomas Henry Williams was identified as the Superintendent (not Manager) of the Patent Copper Company.[2] On 20 June 1850, Thomas Williams residence was described as "opposite the Copper-works" near Welsh Creek.[3] On 12 July 1851, it was reported by a correspondent who was visiting Burra, that "Mr. Williams, the Superintendent, was absent [from the Smelting Works], not to return till evening; and as these works are not shown without an order, we left our credentials in the office, and appointed to call on the morrow. Mr. Williams's residence had a very light and villa-like appearance as contrasted with the dark works; and, viewed in front from a distance, bore no bad resemblance, in its arched upper storey, to a pigeon-house on a large scale".[4] In another newspaper report, on the same day, Williams is also clearly identified as the Superintendent of the Patent Copper Company works.[5] However, the description of the arched upper storey of the residence is inconsistent with the extant residence (SAHR 10204). On 14 September 1854, it was reported that Thomas Henry Williams resigned from the now English and Australian Copper Company.[6] Indeed, the site of Auburn was originally granted to Thomas Williams who then subdivided it.[7]

However, there are contradictory newspaper reports. On 21 March 1855, "Williams" is described as the Manager (not Superintendent), who "has a commodious residence, with tastefully-arranged garden, adjoining the Company's offices. There are several houses for the Company's agents".[8] It is unclear whether this refers to Thomas Henry Williams as he would have resigned by this date. But this may suggest that Williams lived in the "Smelts Manager's Residence & Offices" (SAHR part of 10989). The proposition that Thomas Williams was a manager who lives in the manager's residence is also supported by other authors, such as Auhl, who have stated that "[t]he Superintendent's house [sic], [was] originally built in 1849 for Thomas Williams, and the offices and stores adjoining, now converted into private residences, are still occupied and externally maintain much of their original appearance".[9] Although, this reference is clearly for the Manager's Residence.

The 1860 plan of the Smelts shows a "cottage" in the approximate location of the Superintendent's Residence in the north-west corner of the site. However, it is unlikely that the Residence would be described as a cottage. There was a lease agreement for this land effective from 30 November 1848 (registered in 1854). The agreement was between Thomas Henry Williams and George Ewbank (on behalf of the Patent Copper Company), and a "smelter", David Williams. In 1857, "David Williams sold to John Dunstan the lease of 'land and premises'. The property was [later] sold to William West by Dunstan's executors in 1914".[10] Dunstan may have constructed the Residence after 1857. In 1886, the Superintendent's Residence (SAHR 10204) was reportedly still owned by John Dunstan which concurs with the above information.[11] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that John Dunstone [sic] occupied a stone house with four rooms. It was leased from the English and Australian Copper Company and the owner of the land was the SAMA.[12] It is possible that this refers to the same house.

It can be concluded that Thomas Henry Williams was likely to have been the Smelts Superintendent, but it is not clear where he lived. The Residence (SAHR 10204) was later owned by John Dunstan but it is unclear when it was built and who constructed it. The historical evidence is contradictory. It is therefore recommended that further research should be conducted on this building.

## Description

Former Smelts Superintendent's Residence & Wall is now isolated from the other smelter components due to subsequent residential subdivision of the northern part of the Smelts site. It is a single storey stone building of grander pretensions than the other Smelts structures. It has a steeply pitched double gable roof, decorative timber barge boards with brick chimneys. It has a concave front verandah with timber posts with capitals and decorative freeze. It has a rear skillion lean-to which is in part constructed from weatherboard. It has timber framed doors and windows. It and its associated stone boundary walls are built upon the site boundary on the south side of St Just Street.

## Significance

The Smelts Superintendent's Residence and Wall is likely to be significant because of its probable association with the Smelts and in turn the Burra Burra Mine. However, further research should be undertaken to confirm this. In addition, though, its location, in Redruth rather than on the Smelts site and its distance from the site, indicate its lower importance to the overall smelts' operation.

## Endnotes

1    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.
2    *South Australian Register*, 29 August 1849, p4.
3    "Saturday, 15 June", *South Australian Gazette and Mining Journal*, 20 June 1850, p4.
4    "No. XXII, Kooringa", *Adelaide Observer*, 12 July 1851, p6.
5    "Patent Copper Company", *South Australian Register*, 12 July 1851, p4.
6    "Advertising", *South Australian Register*, 14 September 1854, p1.
7    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p185.
8    "The Burra Burra Mines and Smelting Works", *South Australian Register*, 21 March 1855, p2.
9    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p176.
10   Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p124.
11   Burra History Group. Photograph from the Martin Dunstan Collection described as "John Dunstan's residence at Redruth, Burra, in 1886".
12   Entry No 830. Burra SA website, www.burrasa.info/pages/kooringaward.html accessed 25 July 2019.

# Historic Photos



"John Dunstan's residence at Redruth, Burra, in 1886." Source: Martin Dunstan Collection, Courtesy of the Burra History Group.



Land marked "A" may reference the Residence.
Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p124.



"Cottage" shown in NW corner of the site may reference the Residence. Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p142.



"Cottage" shown in NW corner of the site may reference the Residence, c.1860. Source: Bannear, D, and Annear, R., "The Burra Smelting Works: A survey of its history and archaeology", (District Council of Burra Burra, 1990), p144.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase                    *Side View*



2018: Source: Photograph taken by Swanbury Penglase                    *Rear View*

2018: Source: Photograph taken by Swanbury Penglase

*Boundary Wall*

STONE BOUNDARY WALL

STONE RESIDENCE WITH VERANDAHS

STONE BOUNDARY WALL

REFER 10204-02

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:500

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# FORMER SMELTS SUPERINTENDENT'S RESIDENCE AND WALL
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10204-01**

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POSSIBLE LATER TIMBER INFILL OF VERANDAH

EARLY VERANDAH

STONE RESIDENCE

BRICK CHIMNEYS

0　　　　　　　　　10　　　　　　　　　20 m

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

# FORMER SMELTS SUPERINTENDENT'S RESIDENCE AND WALL
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10204-02**

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# 10359: Hampton Township Precinct

## Item identification

| | | |
|---|---|---|
| **Current name of item:** | Hampton Township Precinct | |
| **Current use:** | Ruin | |
| **Address/Location of Item:** | Burra | |
| **CT Reference:** | CT 5449/261 F17437 A88 93 96 97, | CT 5449/208 F17437 A92, |
| | CT 5449/209 F17437 A94, | CT 5449/207 F17437 A95, |
| | CT 5449/206 F17437 A107, | CT 5449/205 F17437 A108, |
| | CT 5449/204 F17437 A109, | CT 5449/203 F17437 A110, |
| | CT 5449/38 F17437 A113, | CT 5454/654 F17437 A114, |
| | CT 5454/656 F17437 A115, | CT 5449/250 F17437 A116, |
| | CT 5449/201 F17437 A112, | CT 5449/202 F17437 A111, |
| | CT 5449/210 F17437 A80, | CT 5449/248 F17437 A82, |
| | CT 5449/246 F17437 A83, | CT 5449/258 F17437 A84 85 87, |
| | CT 5454/660 F17437 A89, | CT 5454/662 F17437 A117, |
| | CT 5449/267 F17437 A75, | CT 5449/265 F17437 A77 78, |
| | CT 5449/262 F17437 A76, | CT 5454/658 F17437 A118, |
| | CT 5696/438 F212164 A100, | CT 5696/437 F212165 A101, |
| | CT 5843/199 F17437 A71 72 73 74, | CT 5869/140 F17437 A81, |
| | CT 5874/330 F17437 A79, | CT 5874/429 F17437 A86 |
| **Heritage Listing Status:** | <u>State</u> | |
| | SAHR No. 10359 | |
| | Confirmed 1 September 1983 | |
| | Heritage database no. 17652 | |
| | | |
| | <u>National</u> | |
| | Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 | |



2018: Source: Photograph taken by Swanbury Penglase

## History

In 1857, the township of Hampton was surveyed and laid out by Thomas William Powell; a "gentleman" of Kooringa. Named after a local assayer who worked at the Smelting Works; Edward Hampton a Township Plan (No. 293) was deposited at the General Registry Office in 1857 with this having approximately 56 allotments[1]. In 1858, Powell began selling allotments in Hampton. In the "Bailliere's S.A. Gazetteer and Road Guide of 1866", Hampton was described as a "small mining village lying 1½ miles N.E. of Kooringa and inhabited by copper miners and a few small farmers. There are about 30 miners' dwellings in the village, a Bible Christian chapel and an excellent stone quarry".[2] During the 1860s and 1870s the settlement was "bustling" with activity. The first assessment book, 1 July 1872 to 30 June 1873, records that Hampton had 22 buildings, mainly stone houses consisting of 2-4 rooms. This "perhaps indicates that Hampton reached its peak as a mining settlement in the 1860s … [and] as the production of the Burra Mine itself declined during the 1870s, … Hampton … slowly declined".[3] In 1875, Hampton had 24 houses in comparison to Redruth and Aberdeen which had 63 houses and 39 houses respectively.[4] However, the average value of these houses was much lower than those in Redruth and Aberdeen suggesting that the "majority of dwellings in Hampton were of 2-3 rooms, in other words, simple miners cottages".[5] Following the closure of the mine, in 1877, the population decreased. By 1892, some of the houses were recorded as uninhabitable or were ruins. The town was completed abandoned by the mid-1960s.

## Description

The Hampton Precinct is a collection of residential structures and associated outbuildings in varying degrees of ruination, but the majority form groups of standing walls combined with piles of rubble. A few walls remain at their original height, but most have collapsed or are in the process of collapse. Most ruins are stone with some red brickwork but there are also the remains of collapsed corrugated iron and timber framed structures, and a corrugated iron rainwater tank. Ruins include: Lewis House, Watkins House, Cullen House, Wallace House, Muller House, Bertram House, Birt House, Griffiths House, Kemp House, Quarry & Rogers House (sign reads Wall House), a Well, Lynn House, East House (with timber window frame and fireplace), Jacka House (the most complete house with walls and the only one with a timber framed corrugated iron clad roof structure), Brooks House, Head House, and Bunney House. The site of the Bible Christian Chapel is identified but no evidence of this structure remains above ground. There are also a number of remaining introduced plantings.

## Significance

As a settlement, Hampton, is considered a "reasonably unique South Australian example of a completely abandoned town, where the original surveyed plan is still intact."[6] Hampton is significant for its association with the development of the Burra Burra townships during the late 1850s and 1860s, in response to the establishment and success of the Mine. It also illustrates the impact of the decline of the mine as it was occupied by mostly miners and their families. It represents the ways of life experienced by miners. "The remains of their two, three and four roomed cottages, quarried from local stone found within the confines of their own village settlement, and generally located on ½ or ¼ acre blocks reflect the austerity and simplicity of their lifestyle".[7] The site is "an integrated one of the physical remains of human habitation, that is, cottages, outbuildings and boundary walls of allotments, but also the remaining olive and pepper trees planted by the townships original settlers … [it also shows the] layout of roads".[8] It also comprises of "the remains of quarries that provided stone for the dwellings. One quarry has traces of a house built into the wall, and there is visible evidence of past workings".[9] Some examples of Hampton's dwellings which remain include: Bertram House and Jacka House.

## Condition Notes

The following issues were observed during the inspection:
- Leaning of various standing stone sections
- Delamination of faces of standing walls
- Deterioration of pointing leaving open joints
- Weathering of remaining unpainted timber surfaces

## Endnotes

1.     Aeuckens, Annely, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
2.     Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p121.
3.     Aeuckens, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
4.     Aeuckens, 1875 Ratepayers Petition. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
5.     Aeuckens, 1875 Ratepayers Petition. Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
6.     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
7.     Aeuckens, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
8.     Aeuckens, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10359.
9.     Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View (from south)*



2018: Source: Photograph taken by Swanbury Penglase

*Griffiths House*

2018: Source: Photograph taken by Swanbury Penglase                                    *Lynn House*



2018: Source: Photograph taken by Swanbury Penglase                                    *East House*

2018: Source: Photograph taken by Swanbury Penglase                    *Kemp House*



2018: Source: Photograph taken by Swanbury Penglase                    *Jacka House*

***Jacka House Interior***
2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase                    ***Quarry***

## Other Material
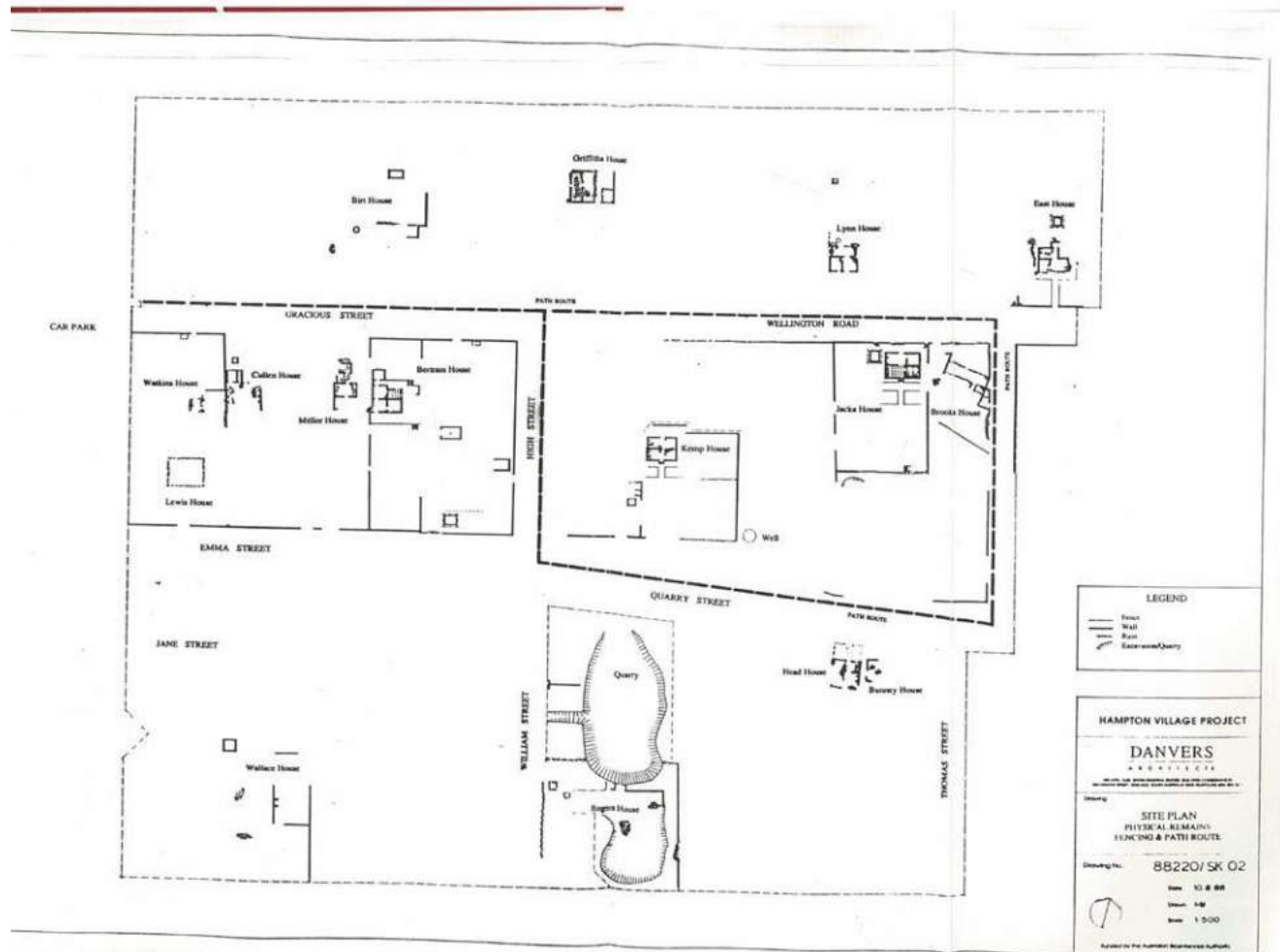


Hampton Village Conservation Study, Danvers Architects (1988)

NORTH TERRACE

REFER 10359-02
REFER 10359-03
REFER 10359-04
REFER 10359-05
REFER 10359-06
REFER 10359-07
REFER 10359-08
REFER 10359-09
REFER 10359-10
REFER 10359-11
REFER 10359-12
REFER 10359-13
REFER 10359-14
REFER 10359-15

HAMPTON COURT

HAMPTON ROAD

## LEGEND

— · — · —  TITLE BOUNDARY

━━━━━  SIGNIFICANT PORTION OF THE STRUCTURE

— — —  EXISTING SAHR SHAPE FILE

SCALE: 1:2000

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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# HAMPTON TOWNSHIP PRECINCT
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10359-01**

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WINDMILL TOWER

COLLAPSED TIMBER FRAMED
STRUCTURE CLAD WITH
CORRUGATED STEEL

DEPRESSION 300 DEEP FILLED
WITH STONE - RENDERED
INTERNAL FACE OF WALLS. TANK?

PLATFORM

500-600MM HIGH
RETAINING WALL

BRICK

400MM HIGH WALL
BASE

TANK BASE? 2500
HIGH

VERTICAL CRACK TO
SIDE OF BASE

500MM HIGH WALL
BASE

## LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES
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# HAMPTON TOWNSHIP PRECINCT - BIRT HOUSE
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**10359-02**

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PEPPER TREE

300MM HIGH WALL BASE

LOW STONE PILE

BATTERED DRYSTONE
RETAINING WALL 100MM HIGH

1400MM HIGH WALL WITH BOTH
FACES DELAMINATING AT SOUTH END
AND AT RISK OF COLLAPSE

STONE THRESHOLD

ARCHBAR FOR FIREPLACE

600MM HIGH WALL
WITH OUTWARD
LEAN AT SOUTH END

500MM HIGH WALL WITH
INTERNAL FACE COLLAPSED AND
OUTWARD BULGE AT WEST END

2500MM HIGH WALL WITH
COLLAPSE OF INTERNAL FACE

COLLAPSE OF INTERNAL AND
EXTERNAL FACES

1800MM HIGH WALL WITH INTERNAL
FACE BEGINNING TO COLLAPSE

## LEGEND

— · — TITLE BOUNDARY

——— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES
INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE
SURFACE ONLY.

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# HAMPTON TOWNSHIP PRECINCT - GRIFFITHS HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-03**

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1500MM HIGH SIGN WITH SIGNIFICANT MORTAR LOSS GENERALLY.

1500MM HIGH PORTION OF WALL WITH SIGNIFICANT STONE DETERIORATION AT BASE PLACING IT AT IMMINENT RISK OF COLLAPSE

POSSIBLE ADDITION OF LOWER QUALITY STONE

2700MM HIGH WALL WITH SIGNIFICANT MORTAR EROSION

600MM HIGH WALL

1200MM HIGH WALL WITH COLLAPSE OF INTERNAL FACE

1700MM HIGH WALL WITH EAST FACE MISSING AT LOWER LEVEL

1200MM HIGH WALL

2200MM HIGH WALL WITH LARGE VERTICAL CRACK, COLLAPSE OF INSIDE FACE AT HIGHER LEVEL AND MISSING QUOIN LEADING TO SECTION BEING AT RISK OF COLLAPSE

BOUNDARY WALL STONE PILE

## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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## HAMPTON TOWNSHIP PRECINCT - LYNN HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-04**

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DEPRESSION 1200MM DEEP
FILLED WITH STONE & RUBBISH.
CEMENT RENDER TO INTERNAL
FACE - TANK

INWARD BOW TO TOP OF
INTERNAL FACE LIKELY TO BE
THE REMAINS OF AN
UNDERGROUND TANK

600MM HIGH WALL NOT
TIED IN TO WALL TO SOUTH

2700MM HIGH WALL WITH
WINDOW OPENING AND TIMBER
WINDOW FRAME.
DETERIORATION OF STONE AT
LOW LEVEL.

2700MM HIGH WALL WITH
COLLAPSE TO BACK OF FLUE TO
1500MM, BOWING OF TIMBER
LINTEL OVER FIREPLACE
OPENING AND OUTWARD LEAN
TO TOP OF WEST WALL

OUTWARD LEAN AT
TOP (TO WEST)

1700MM HIGH WALL WITH
COLLAPSING WEST FACE AT
SOUTHERN END

STONE THRESHOLD

STONE INFILL OF DOOR
OPENING. ADDITION, NOT
TIED IN

COLLAPSING END OF 2100MM
HIGH WALL

1100MM HIGH WALL

VERTICAL STONE 900 HIGH

500MM HIGH WALL

300MM HIGH WALL FACE

900MM HIGH DRYSTONE
BOUNDARY WALL

STONE GARDEN EDGING

400MM HIGH WALL

200MM HIGH WALL
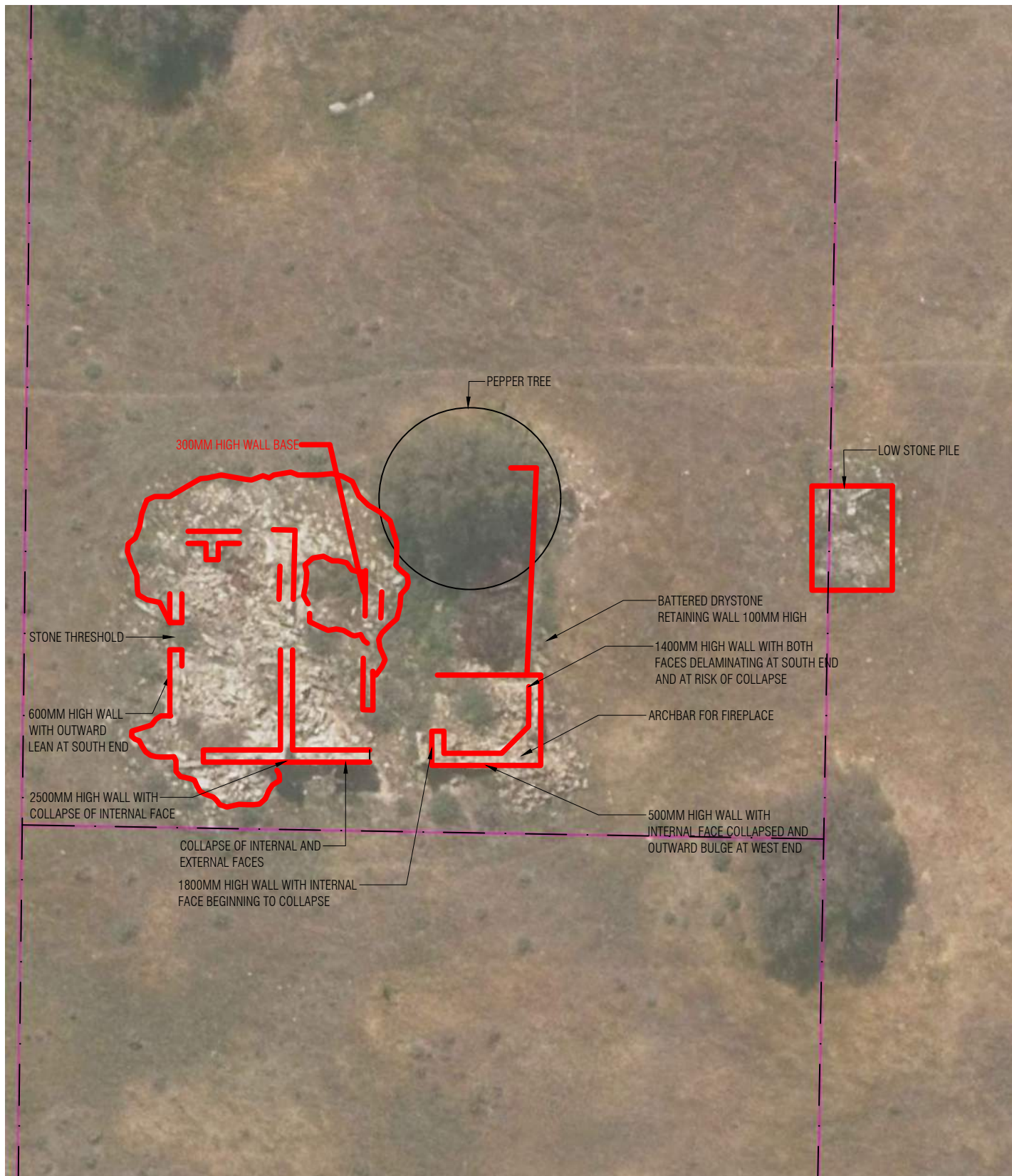
400MM HIGH WALL

200MM HIGH WALL

## LEGEND

— · — · —  TITLE BOUNDARY

——  SIGNIFICANT PORTION OF THE STRUCTURE

— — —  EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES
INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE
SURFACE ONLY.

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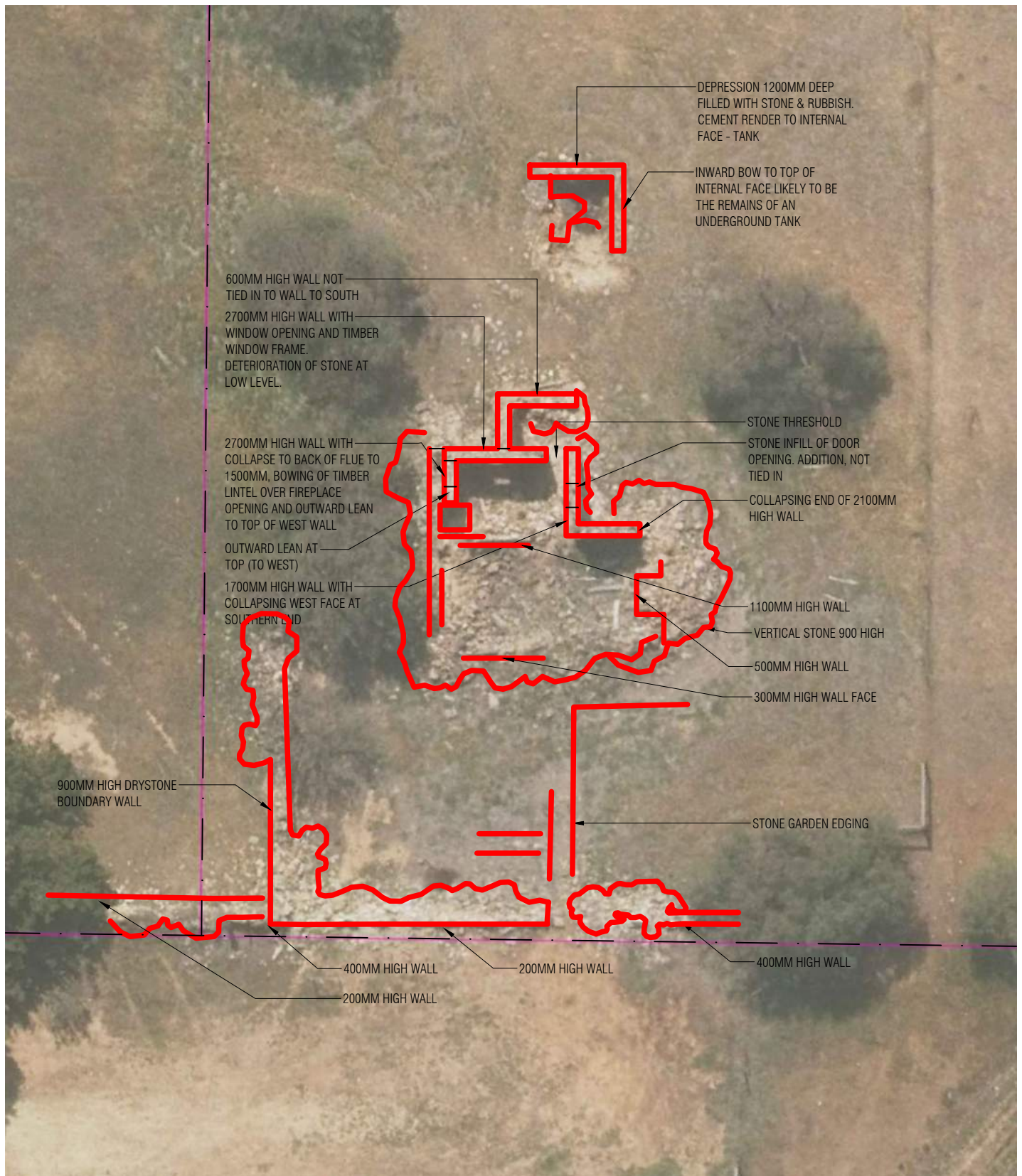
# HAMPTON TOWNSHIP PRECINCT - EAST HOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10359-05**

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CEMENT LINED
WATER TANKS

FP

RETAINING WALL

## LEGEND

— · —  TITLE BOUNDARY

———  SIGNIFICANT PORTION OF THE STRUCTURE

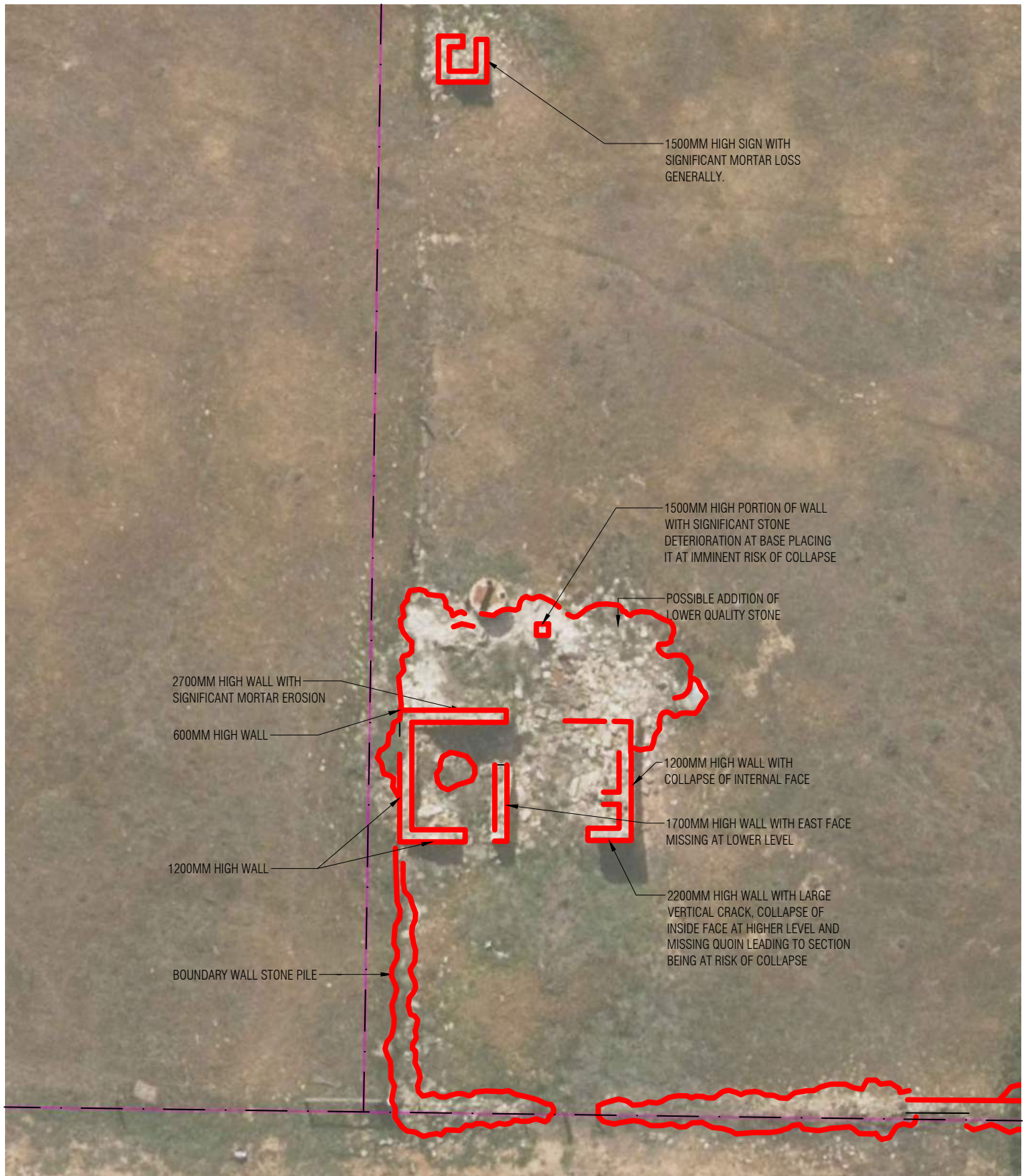— — —  EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

**swanbury penglase**

## HAMPTON TOWNSHIP PRECINCT - WATKINS, CULLEN AND LEWIS HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-06**

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RETAINED STONE PILE

FP

STAND

TANK

STEPS

## LEGEND

— · — · —    TITLE BOUNDARY

▬▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

— — — —    EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

**swanbury penglase**

# HAMPTON TOWNSHIP PRECINCT - MÜLLER & BERTRAM HOUSES
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-07**

COLD STORE

SLATES

SLATE LINED DRAINAGE CHANNEL

LINED TANK

## LEGEND

—  ·  — TITLE BOUNDARY

▬▬▬ SIGNIFICANT PORTION OF THE STRUCTURE

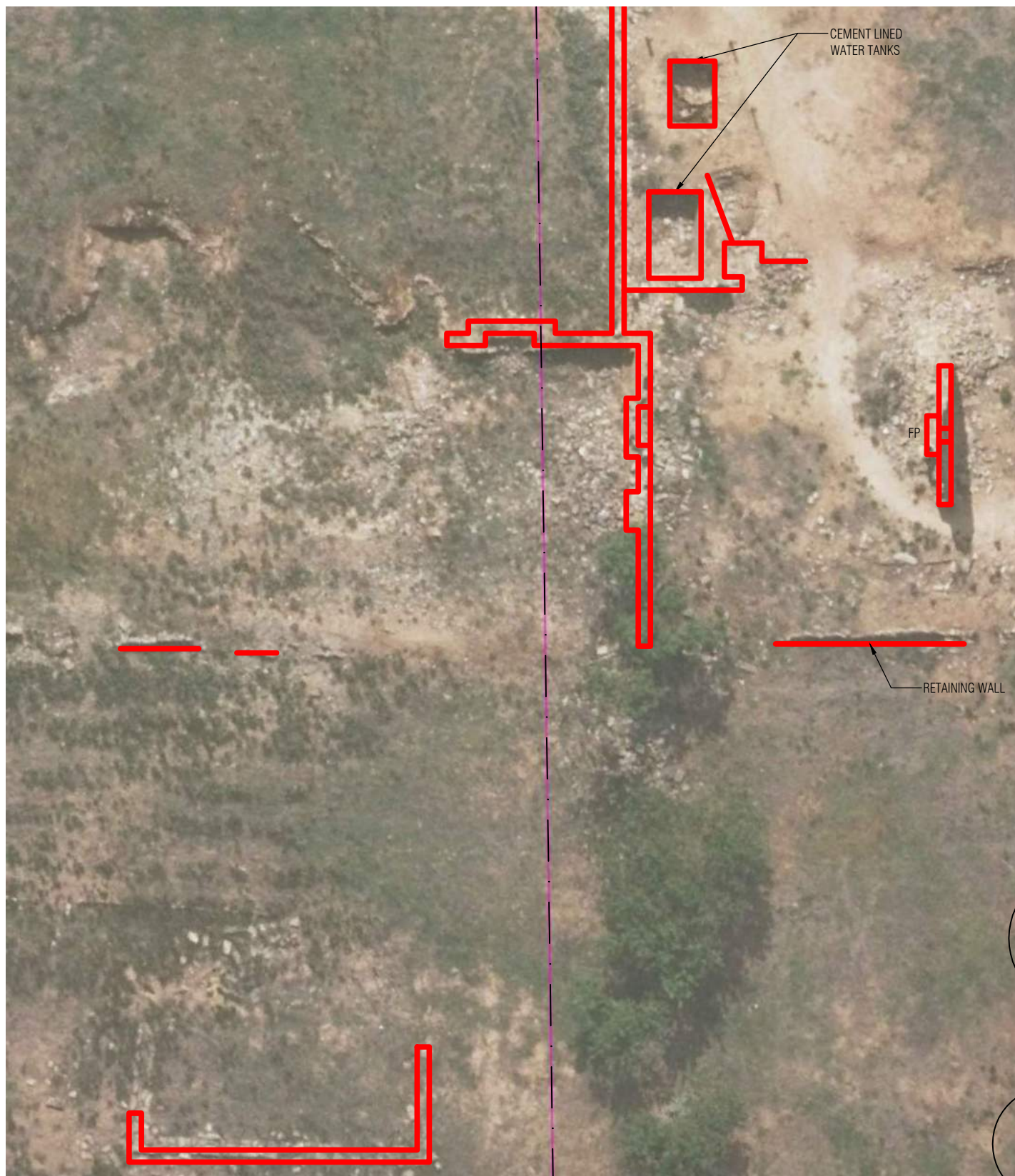– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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# HAMPTON TOWNSHIP PRECINCT - BERTRAM HOUSE OUTBUILDINGS
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-08**

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CUTTING

RETAINING

POSSIBLE WC

EARTH BUN[...]

NK

## LEGEND

— ‧ —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.
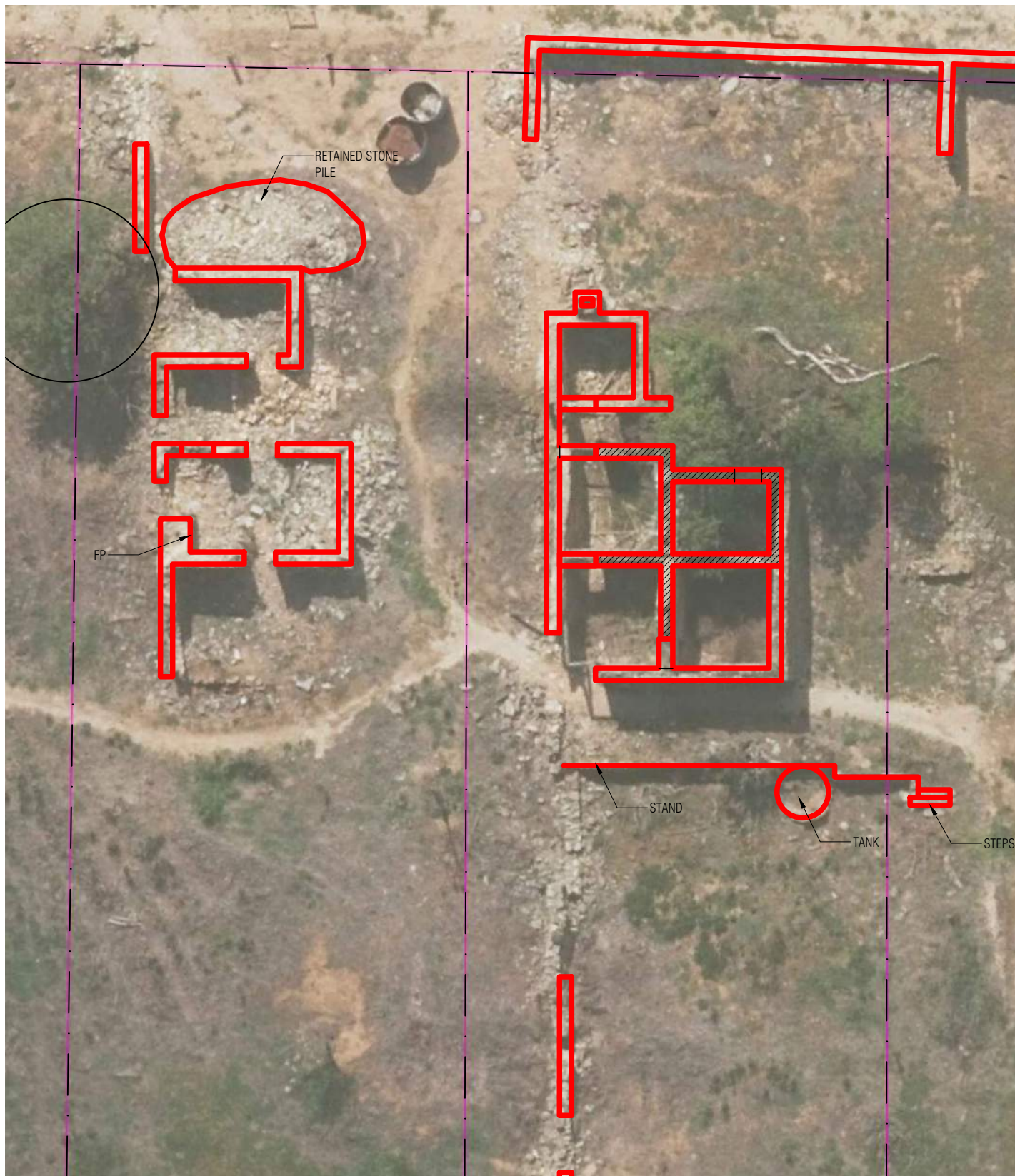
**swanbury penglase**

## HAMPTON TOWNSHIP PRECINCT - KEMP HOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10359-09**

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SLATE FLAGS
RETAINING
SLATE FLAGS
TANK
RETAINING
SLATE STEPS
PINE
OLIVES

## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

**swanbury penglase**

## HAMPTON TOWNSHIP PRECINCT - JACKA & BROOKS HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-10**

## LEGEND

— · —     TITLE BOUNDARY

———     SIGNIFICANT PORTION OF THE STRUCTURE

— — —     EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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## HAMPTON TOWNSHIP PRECINCT
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-11**

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INFILLED TANK TO GROUND
LEVEL - CEMENT RENDER TO
INSIDE FACE

400MM HIGH WALL

UNDERMINED SECTION OF
WALL

600MM HIGH
WALL

600MM HIGH WALL WITH
OUTWARD LEAN

STONE PILE
1000MM HIGH

CIRCULAR FEATURE

600MM HIGH
WALL

1000MM HIGH WALL
WITH WESTWARD BULGE

STONE PILE 700MM HIGH

200MM HIGH
WALL

STONE PILE 1500MM HIGH

500MM HIGH
WALL

LEGEND

— - — TITLE BOUNDARY

▬▬▬ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES
INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE
SURFACE ONLY.

**swanbury penglase**

# HAMPTON TOWNSHIP PRECINCT - WALLACE HOUSE
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10359-12**

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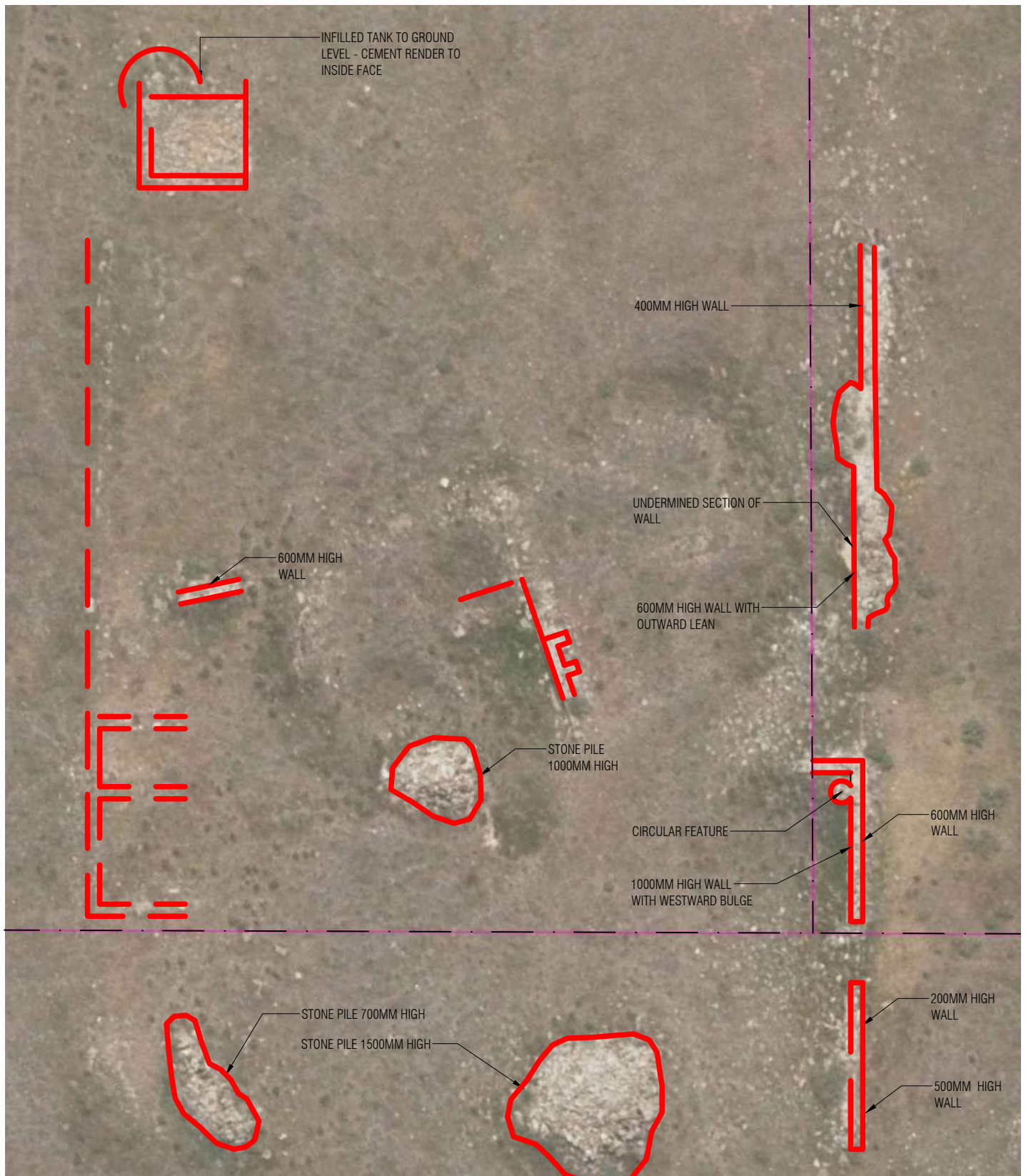CUTTING

## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

— — —    EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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## HAMPTON TOWNSHIP PRECINCT - QUARRY
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10359-13**

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STONES

RUBBISH TIP

LEGEND

— · — TITLE BOUNDARY

——— SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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**HAMPTON TOWNSHIP PRECINCT - ROGER'S HOUSE**
**18188 CMP for Australian Cornish Mining Sites**

© SWANBURY PENGLASE ARCHITECTS

September, 2019

**10359-14**

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500MM HIGH WALL

1200MM HIGH WALL

CIRCLE OF STONES

CIRCLE OF STONES

200MM HIGH WALL

CIRCLE OF STONES

## LEGEND

— · — · — TITLE BOUNDARY

━━━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – – EXISTING SAHR SHAPE FILE

SCALE: 1:200

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE HAMPTON AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL MATERIALS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

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# HAMPTON TOWNSHIP PRECINCT - HEAD & BUNNEY HOUSES
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10359-15**

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# 10403: Burra Town Hall (incorporating the original Miners' and Mechanics' Institute)

## Item identification

| | |
|---|---|
| **Current name of item:** | Burra Town Hall (incorporating the original Miners' and Mechanics' Institute) |
| **Current use:** | Museum / Gallery |
| **Address/Location of Item:** | Market Street, Burra |
| **CT Reference:** | CT 5992/594 F211514 A728 |
| **Heritage Listing Status:** | State<br>SAHR No. 10403<br>Confirmed 8 November 1984<br>Heritage database no. 14315 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Institutes had been formed in the colony from the late 1850's to provide further education and a local public library. The Burra Burra Miners and Mechanics Institute was built in 1857 on Allotment 83, owned by the SAMA. Comprised of a single room it opened in August 1857. In 1858, W.H. Birbeck was appointed the Institute's first librarian. In 1874, SAMA officially transferred the land to "Alexander McCulloch of Princess Royal, Gentleman; Isaac Killicoat of Abberton Park near Kooringa, a Gentleman; Thomas Bath, a storekeeper; Philip Lane, a saddler; August Bartholomaeus of Redruth, a storekeeper". On 4 January 1875, a declaration of Trust was made by them with the objective of "the promotion of useful knowledge and rational mental recreation amongst its members".[1] In 1874, Adelaide architect, and member for Burra in the House of Assembly, Rowland Rees (1840-1904) redesigned the Institute building. It was constructed by local builder, John Pearce, "on the same site, [and] consisted of a main building with two wings".[2] It was opened on 14 October 1875. It had a "well stored library, an instructive museum, educational classes, popular lectures and agencies in every direction whereby the mind might be cultivated and the feelings refined".[3] By 1876, it had 135 subscribers and 1,300 volumes in the library. Various lodges were also associated with the Burra Institute Building. Some of these included the "Freemasons who established themselves shortly after the mine opened (1845), the Oddfellows (est. 1849), the Foresters (est. 1859) and the Rechabites (est. 1865)."[4] The "lodges met at the Burra Hotel in its assembly room until it ceased to trade as a hotel on 25 August 1876. A lodge room was subsequently built in January 1877 at the Institute."[5] The lodge room was added on the south side of the hall, and in 1881 further additions and alterations were undertaken. In 1945, the Burra Institute Trusteeship was transferred to the Burra Corporation and the building was used for Council meetings.

## Description

The Burra Town Hall is a substantial single storey structure which is built into the slope of the site which falls from the west to Market Street to the east. It is constructed of stone with rendered detail and dressings to the main east elevation and brick quoins to openings to the lesser elevations with a high central hall flanked by lower rooms set in the front of the hall to the north and south sides. The central hall has a parapet, cornice, and a pediment which bears the building's name while the flanking rooms also have smaller parapets and cornice with corbels. The front façade facing Market Street sits on an elevated stone plinth and is symmetrical in design. There are several masonry chimneys. A tall and wide, slate external stair off Market Street leads to the central porch and timber panelled doors. The windows are double hung timber, while those flanking the central doors have arched heads.

There are a number of later additions which presumably fall outside of the significant period.

## Significance

The Burra Burra Miners and Mechanics Institute represents the growth in Burra's civic identity, as well as the further educational aspect of the life of the Miners. The building housed several civic activities and community functions integral to the township. These related not only to the Institute but also to many lodges active in the township. The Institute played an important role in the community providing education to all socio-economic groups. The building dates from 1875, when the Burra Burra Mine was in decline but before its closure in 1877.

## Condition Notes

The following issues were observed during the inspection:

- Voids in early pointing to upper portions of south wall of south wing
- Paint condition to timberwork generally poor.
- Paint deterioration to chimneys.
- Pointing deterioration to lower walls of east and south elevations of single storey sections due to rising damp.
- Bulge evident to centre of east elevation of south wing with fine cracks to coping.
- Cracks to top of side walls of entry steps, loose riser and cracked tread with gaps between slate flags to porch
- Deterioration of brick joints to west brick addition.
- Peeling paint to south rooms due to roof leaks.
- Blistering plaster to reveal of external door to north wall to hall.
- Salts on retaining walls in old kitchen at west end of building due to penetrating damp

## Endnotes

1   Iris Iwanicki, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10403.
2   The Burra History Group Inc, 2007, "The Burra Institute & Town Hall".
3   The Burra History Group Inc, 2007, "The Burra Institute & Town Hall".
4   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5   Burra History Group

## Historic Photos



Town Hall, c.1874. Source: The Burra History Group Inc.



Town Hall, c.1905. Source: The Burra History Group Inc.

1937. Source: SLSA B 23609

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Market Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (South-West)*

2018: Source: Photograph taken by Swanbury Penglase                    *View from North*



2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*

2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*


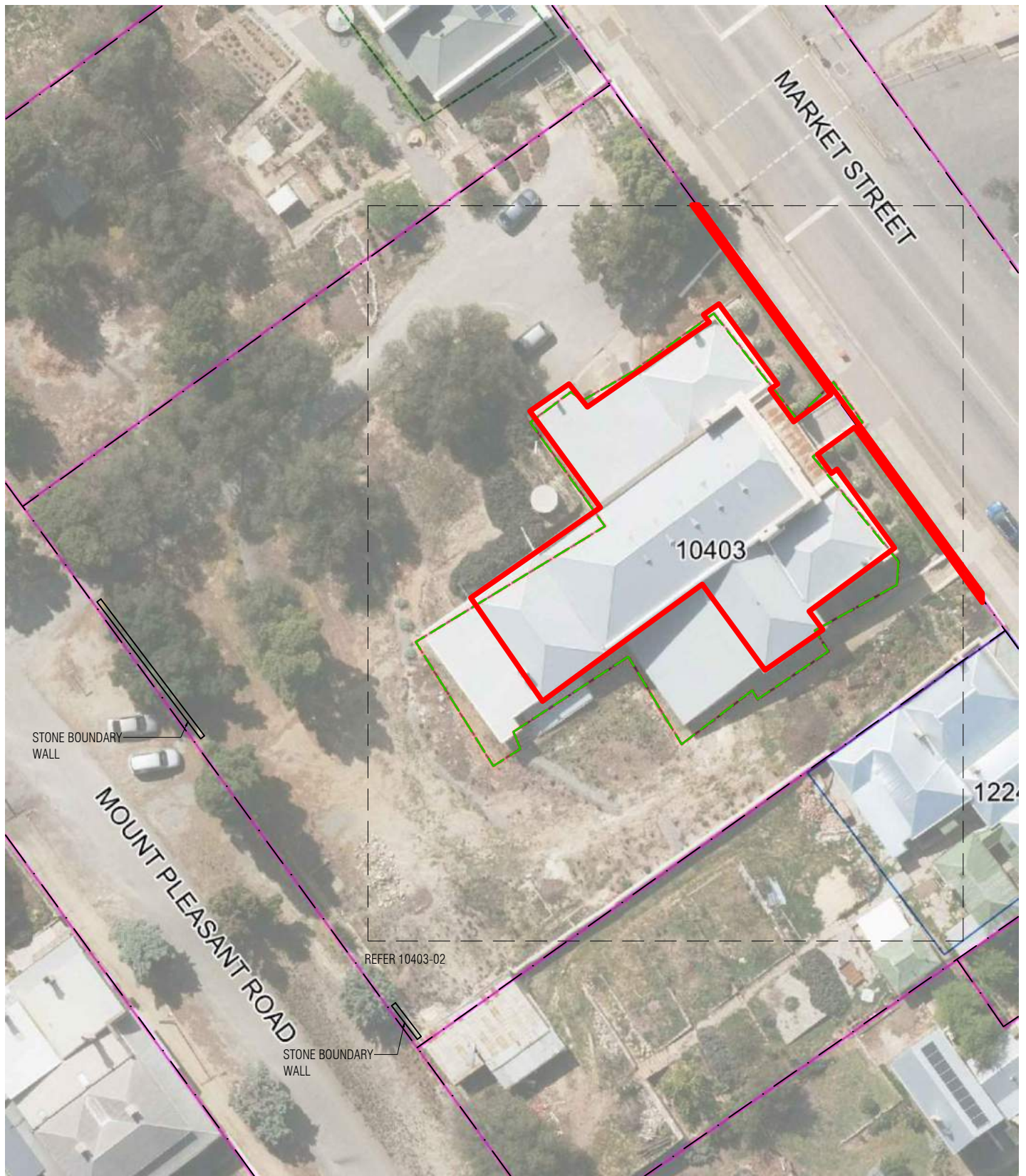
2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*

2018: Source: Photograph taken by Swanbury Penglase

*Interior View*

MARKET STREET

STONE BOUNDARY WALL

10403

1224

MOUNT PLEASANT ROAD

STONE BOUNDARY WALL

REFER 10403-02

## LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

- - -    EXISTING SAHR SHAPE FILE

SCALE: 1:500

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# BURRA TOWN HALL (INC. ORIGINAL MINERS' & MECHANICS' INSTITUTE)
## 18188 CMP for Australian Cornish Mining Sites

Sept, 2019

**10403-01**

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LOW STONE
BOUNDARY WALL

FOUNDATION STONES

MARKET STREET

CONCRETE
STEPS

STEPPED LOW
HEIGHT STONE
RETAINING WALL

TIMBER FRAMED
AWNING WITH EARLY
TIMBER BALUSTRADE.
TIMBER BENCHES.

SLATE TREADS &
RISERS

SLATE STEP

CONCRETE STEPS

STONE TANK
STAND

RECENT CORRUGATED
STEEL ADDITION

10403

h

g

f

e

b

c

d

a

## LEGEND

— · — · —  TITLE BOUNDARY

━━━━━  SIGNIFICANT PORTION OF THE STRUCTURE

— — —  EXISTING SAHR SHAPE FILE

SCALE: 1:250

## STRUCTURES KEY

a - C.1950'S BRICK ADDITION
b - SINGLE/TWO STOREY STONE ADDITION
c - CONCRETE BLOCK ADDITION
d - SINGLE STOREY STONE BUILDING WITH EAVES
e - SINGLE STOREY STONE BUILDING WITH PARAPETS
f - TALL SINGLE STOREY STONE HALL
g - SINGLE STOREY STONE ADDITION - SKILLION ROOF (DATE UNCERTAIN)
h - SINGLE STOREY STONE BUILDING - WITH PARAPETS & AND HIPPED ROOF

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# BURRA TOWN HALL (INC. ORIGINAL MINERS' & MECHANICS' INSTITUTE)
# 18188 CMP for Australian Cornish Mining Sites

Sept, 2019

**10403-02**

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# 10404: Burra Hotel (previously Miners Arms Hotel)

## Item identification

| | |
|---|---|
| **Current name of item:** | Burra Hotel (previously Miners Arms Hotel) |
| **Current use:** | Hotel |
| **Address/Location of Item:** | 5 Market Square, Burra |
| **CT Reference:** | CT 5150/444 D12060 A3 |
| **Heritage Listing Status:** | State<br>SAHR No. 10404<br>Confirmed 8 November 1984<br>Heritage database no. 14395<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Miners Arms Hotel was constructed in 1847 as a single storey building. It was first licensed in the same year and was the town's second hotel.[1] It is believed to have been built for William Paxton; a Director of the SAMA and its first licensee was H. Chandler. In 1859, improvements were made to the Hotel.[2] Its central location in Market Square, Kooringa led it to be a "focus of after-work celebrations by the miners. Free ginger beer was supplied for miners who competed in regular wrestling matches in the hotel's stable yards, and a whole bullock was often roasted. Many of these contests continued throughout the night and were known to last up to three days during Christmas holiday breaks".[3] "Until 1904 the hotel provided sales at adjacent stock yards and until at least the 1880s traditional Cornish games including wrestling were held … at Christmas".[4] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records a nineteen room Hotel on the site.[5] On 27 December 1878, the Hotel was badly damaged by fire.[6] However, "trading continued and by September 1879 a new building was completed incorporating some of the surviving structure".[7] It was rebuilt by builders Sara & Dunstan to the design of Adelaide architect Michael McMullen (1830 – 87). It comprised a new single storey section in front of the old building while incorporating the undamaged sections of the earlier structure including the cellars, billiard room, dining and assembly rooms and a few smaller bedrooms.[8] Part of this retained structure had been built as new assembly rooms in 1873.[9] It was renamed the Burra Hotel in 1880 and a verandah was added and in c.1904-05, gas lighting and skylights were added.[10] In 1912, a second storey with bedrooms was added to the front section built in 1879, and a two storey verandah followed in 1920.

## Description

The Burra Hotel is largely a single storey building with several large cellars, with the two storey section being added after the significant period. The original single storey structure is constructed from stone with brickwork quoins to openings but the ground floor front façade has been rendered and painted. The later upper storey structure of timber framed construction has stucco pressed metal and a combination of shiplap board finishes. The roof is hipped with corrugated roof sheeting with the verandah to the west elevation being bullnosed. There are at least seven brickwork chimneys. The doors are timber framed while the windows are timber double hung, with the majority multipaned. The Hotel includes two separate cellars connected by a tunnel. There are a number of later additions to the rear of the building.

## Significance

The Miners Arms Hotel played an important role in the social life and customs of Burra's population. The Cornish social traditions and customs were played out at the Burra Hotel. It was one of the main hotels in the township along with the original Burra Burra Hotel and the Pig and Whistle Hotel neither of which have survived. Although parts of the earlier building survived the fire and were apparently integrated into the current building it is currently unclear how much of the building fabric is from the significant period, the remaining fabric primarily dates from 1880, after the Burra Burra Mine closed in 1877.

## Condition Notes

The following issues were observed during the inspection:
▪ Pointing deterioration of stone wall over lower cement render to northeast wall
▪ Deterioration to individual bricks to the chimneys of the single storey section of the building
▪ Paint deterioration to timberwork.

## Endnotes

1    Burra Heritage Plaque.
2    Burra Heritage Plaque
3    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
4    Burra Heritage Plaque.
5    Burra SA website, www.burrasa.info/pages/kooringaward.html, accessed 15 June 2019.
6    "A Merry Christmas and a Happy New Year", *Burra Record*, 27 December 1878, p2.
7    Burra Heritage Plaque.
8    'Topics' *Burra Record*, 25 April 1879, p2
9    'Burra, January 16', *South Australian Chronicle and Weekly Mail*, 18 January 1873, p7
10   Burra Heritage Plaque.

## Historic Photos



Former Miners Arms Hotel, c.1911. Source: The Burra History Group Inc.



Former Miners Arms Hotel, c.1910s. Source: The Burra History Group Inc.

"Lord's Burra Hotel", c.1930. Source: Museums Victoria, MM 3105

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Market Square)*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (East)*



2018: Source: Photograph taken by Swanbury Penglase

*View from South*

2018: Source: Photograph taken by Swanbury Penglase                    *View of Balcony*



2018: Source: Photograph taken by Swanbury Penglase                    *Interior View of Cellars Below*

BURRA CREEK

10404

REFER 10404-02

MARKET SQUARE

10409

MARKET SQUARE

10405

KINGSTON STREET

0 5 10 15 20 25 m

LEGEND

— · — TITLE BOUNDARY

━━━━ SIGNIFICANT PORTION OF THE STRUCTURE

┅┅┅ EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**BURRA HOTEL (PREVIOUSLY MINERS ARMS HOTEL)**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10404-01**

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STONE TANK STAND

OLD BULLNOSE
VERANDAH

a

g

b

c

d

10404

e

f

BRICK QUOINS WITH
DOUBLE HUNG
WINDOWS WITH BARS

## LEGEND

— · — · —   TITLE BOUNDARY

**———**   SIGNIFICANT PORTION OF THE STRUCTURE

**- - - -**   EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - SINGLE STOREY STONE BUILDING - LIKELY EARLIER STRUCTURE
b - FLAT VERANDAH EXTENSION
c - CEMENT RENDER AND FIBRE CEMENT ADDITION
d - SINGLE STOREY STONE BUILDING - LIKELY EARLIER STRUCTURE
e - TWO STOREY BUILDING
f - TWO STOREY VERANDAH - ADDED c.1920
g - FIBRE CEMENT PLANK CLAD ADDITION TO FIRST FLOOR

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## BURRA HOTEL (PREVIOUSLY MINERS ARMS HOTEL)
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10404-02**

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# 10419: Dwelling (former Smelter's Home Hotel)

## Item identification

| | |
|---|---|
| **Current name of item:** | Office (former Smelter's Home Hotel) |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 26 Market Street, Burra |
| **CT Reference:** | CT 5439/598 F21411 A63 |
| **Heritage Listing Status:** | State<br>SAHR No. 10419<br>Confirmed 8 November 1984<br>Heritage database no. 14314 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

In 1849, the Smelters Home Hotel was built in the same year as the Smelting works commenced operations. Some sources record that it was designed "by"[1] William Paxton. It provided a place of recreation for workers and was first licensed to J. Robins in 1849. The Hotel provided a location for social gatherings for miners, smelters and carters.[2] In 1851, there were around 1,000 people working at the Burra Burra Mine, and around 378 people employed at the Smelting Works.

## Description

The Smelters Home Hotel is a large single storey structure. It is constructed from stone. It has a series of hipped roofs clad with corrugated roof sheeting which sit behind a main parapet. The stone parapet has a string course and coping. It has a raised pediment which denotes the main entrance door which is located on a chamfered corner. The parapet has a number of later penetrations for stormwater. The building has a concave corrugated roof sheeting verandah which runs along the two facades which face the street. There are a number of red brickwork and rendered chimneys. Some sections of the building are clad with corrugated sheeting. There are timber framed, panelled doors and timber framed, double hung and multipaned casement windows. There is an associated stone outbuilding and stone walls.

## Significance

The Smelters Home Hotel has a strong association with the Burra Burra Mine and the Smelter, and its workers. Its establishment coincided with the opening of the smelter. It provided a place for the town's large mining and smelting population to socialise. It dates from the earliest period when the Mine was first established and was its most successful and profitable.

## Condition Notes

The following issues were observed during the inspection:

- Rising damp & salt attack at low level
- Cement re-pointing
- Parapet corner rotating out – cracks apparent
- Paint to timberwork
- Roof water tight but rusting
- Retaining wall collapsed
- Peppercorn tree
- Lack of resources for upkeep

## Endnotes

1   ANU Australian Cornish Mining Heritage Site, July 2014, p17.
2   Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10419.

## Historic Photos



Former Smelter's Home Hotel, c. 1900. Source: The Burra History Group Inc.



Smelter's Home Hotel, 1996. Source: National Library of Australia

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Market Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*

2018: Source: Photograph taken by Swanbury Penglase

*View of Verandah*



2018: Source: Photograph taken by Swanbury Penglase

*View from West*

2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase                    *Rear Views (South-East)*
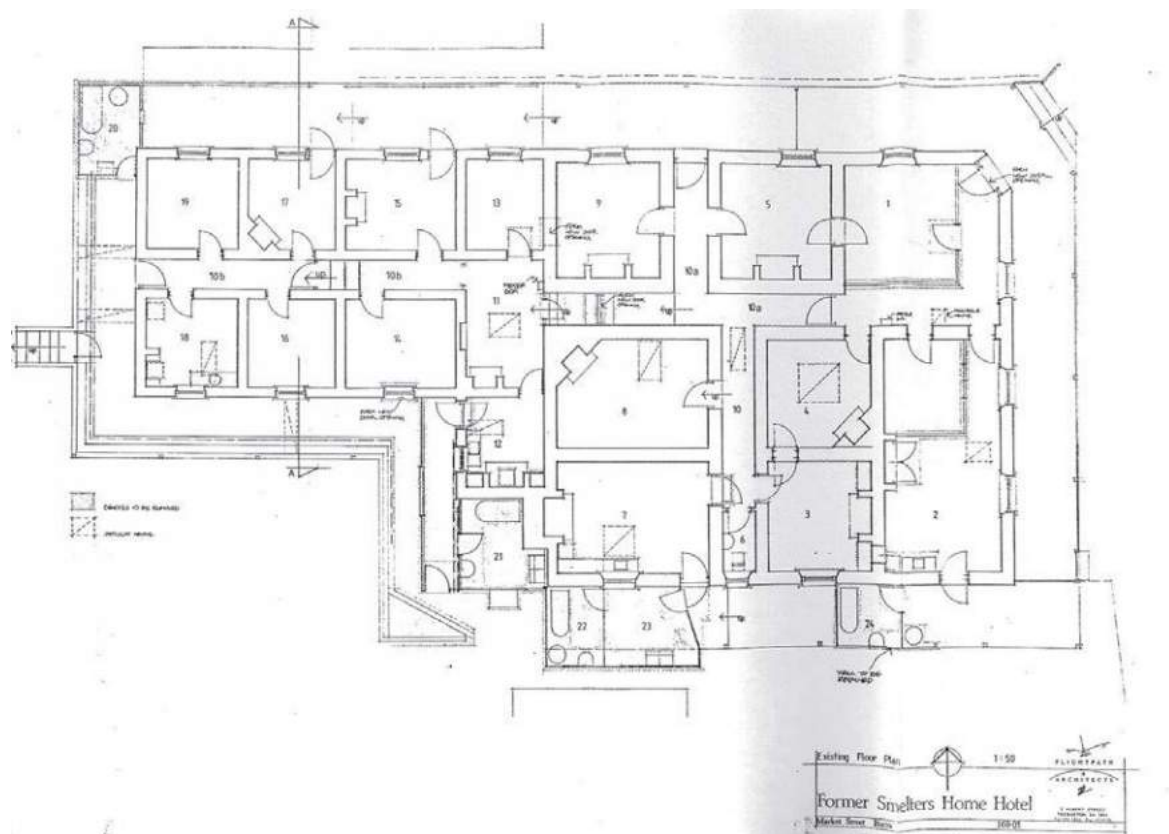
2018: Source: Photograph taken by Swanbury Penglase
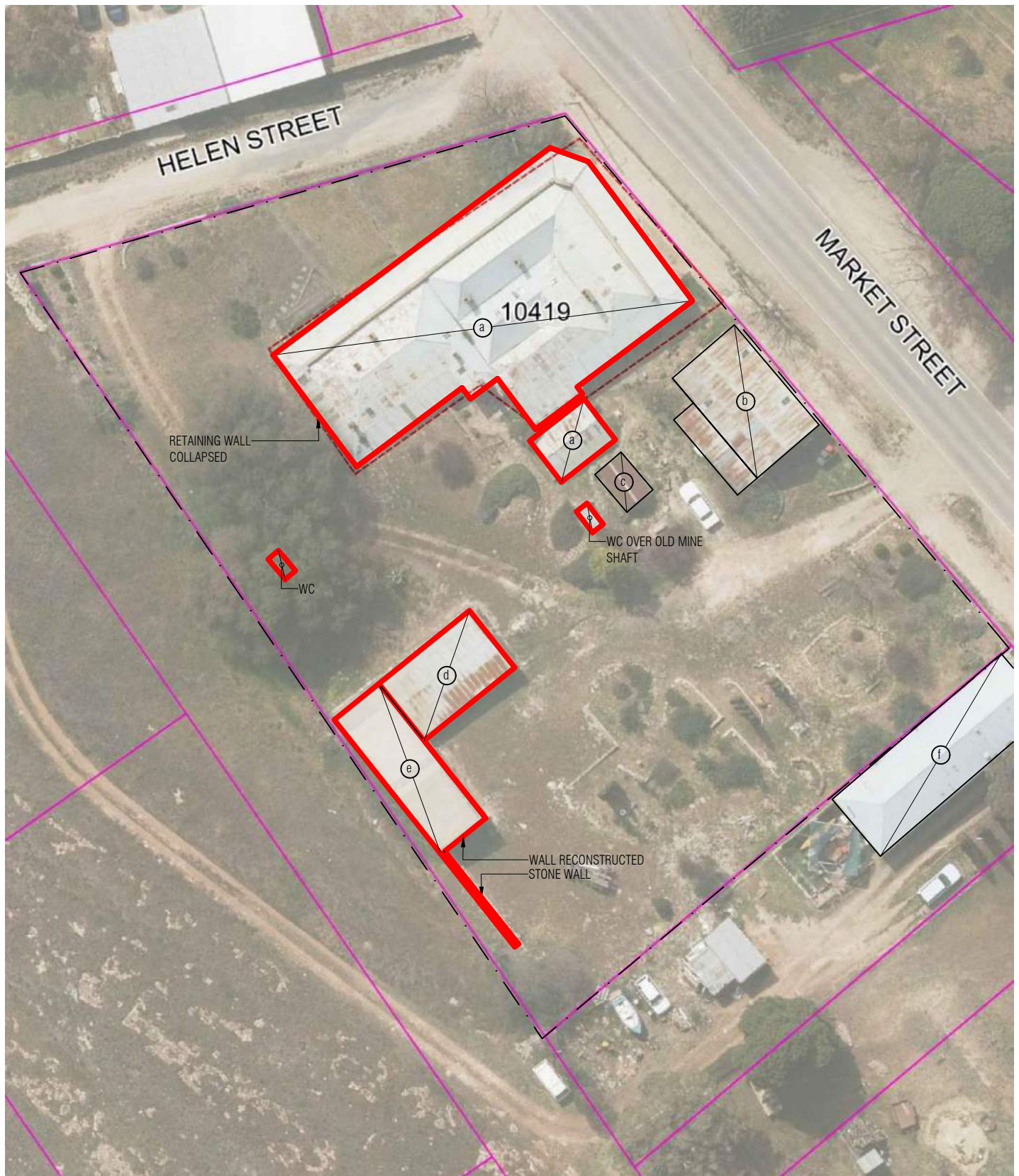
*View of Outbuilding from North*

# Other Material



Part of The Township of Graham map, showing Former Smelter's Home Hotel, c.1860-70. Source: SLSA Map C 316.



Plan of projected conservation, Source: Former Smelter's Home Hotel: Burra Loan/Grant Application for Proposed Conservation Works, Flightpath Architects, 1993.

HELEN STREET

MARKET STREET

10419

RETAINING WALL
COLLAPSED

WC OVER OLD MINE
SHAFT

WC

WALL RECONSTRUCTED
STONE WALL

## LEGEND

— · —    TITLE BOUNDARY

▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - c.1849 HOTEL AND WATER TANK
b - c.1930'S GARAGE
c - OPEN SHED - DIRT FLOOR
d - BARN & STABLES
e - BARN & STABLES
f - SCOUT HALL

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## DWELLING (FORMER SMELTER'S HOME HOTEL), 26 MARKET STREET
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10419-01**

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# 10432: Burra Cemetery



## Item identification

| | |
|---|---|
| **Current name of item:** | Burra Cemetery |
| **Current use:** | Cemetery |
| **Address/Location of Item:** | Spring Street, Burra |
| **CT Reference:** | CT 5402/455 F199944 Q95, CT 5708/713 F212494 A111 112 |
| **Heritage Listing Status:** | State<br>SAHR No. 10432<br>Confirmed 8 November 1984<br>Heritage database no. 14322 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Burra's first cemetery was established in 1845 shortly after the Mine opened. The SAMA would not allow the cemetery to be in Kooringa, nor would it allow "graveyards in the church allotments, being mindful of the possibility that the ore deposits might spread into these areas".[1] Thus, it was located just outside of Kooringa on the western side of Burra Burra Creek. However, the gully which ran through the site was prone to flooding and "[r]eports of human remains uncovered by floods prompted the SA Mining Association to relocate the cemetery to its present position".[2] The 1845 cemetery reportedly contains only one headstone and plaque.[3]

In 1850, the Burra Cemetery was established in its current location, on the eastern side of Burra Creek with the site donated by SAMA. In 1854, a stone wall was erected by public subscription around the site to protect the graves from marauding animals. The cemetery "provides a valuable record of the diversity of Burra's early mining population".[4] Indeed, the "headstones within the cemetery chronicle the lives and misfortunes of the mining community (up to 1877) and the pastoral and agricultural families who have since used Burra as a commercial, social and religious centre".[5] The earliest grave is dated 1851. Significant individuals buried at the cemetery include: Isaac Killicoat, January 1886 (Smelting Works); Thomas Perry, May 1879 (Head jailer of Redruth Gaol 1853-78); Richard Reed, April 1930 (Ore picker at the mine, whim driver and a tributer miner, then pioneer pastoralist); and Robert James Martin McBride, October 1921 (Miner, bullock driver, fencer, sheep farmer).[6] The cemetery also records accidental deaths at the Mine, and represents ethnic groups such as Cornish miners, Welsh and German smelters, Irish carters and Spanish muleteers. There are a range of headstones including: 1860s – headstones by Thompson Priest of Mintaro using Mintaro slate; 1870s marble headstones by Fraser of Adelaide; 1880s marble headstones by monumental masons E.H. Herring of Waymouth St, Adelaide; and some granite headstones imported from Scotland including the Killicoat monument. The earliest section of the cemetery dating from 1850-1892 has undergone many changes. In the late 1960s, the central area of the site was cleared, and the western section was partially cleared of headstones by the Council. Perhaps one quarter of this section remains unaltered.[7] Thus, much of the current cemetery dates from the later period and the post-1960s.

## Description

Burra Cemetery is comprised of a rectangular grid of graves divided by pathways surrounded by a stone boundary wall with wrought iron gates. It has been extended to the south with the graves and wall to this section being of more recent construction.

## Significance

Although the Burra Cemetery represents the Burra mining population from c.1851 to 1877 and is a record of the diversity of this population, the clearing of headstones undertaken in the 1960s has impacted the integrity of the place.

## Condition Notes

The following issues were observed during the inspection:

North boundary wall
- Stone deterioration up to 1000mm high to northwest corner
- Stone and pointing deterioration lower portion of wall generally
- Significant stone deterioration to 500mm above ground level with void behind section of wall used as a urinal
- Cracking particularly to east portion
- Missing sections of coping

East boundary wall

- Bulging noted to sections, particularly to north end
- Lean or displacement to south portion
- Deterioration of stone and pointing including to full height of some sections. Voids in pointing to south end.
- Collapsed internal face of wall near south end
- Sections of deteriorated or missing coping

West boundary wall

- Stone and pointing deterioration to lower sections of sections not recently rebuilt, varying from 500mm above ground level to full height
- Collapsed internal face to full height of wall to several sections near south end
- Small areas of missing coping

## Endnotes

1    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
2    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
3    McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991.
4    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
6    McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991
7    Based on McDougall & Vines, McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*
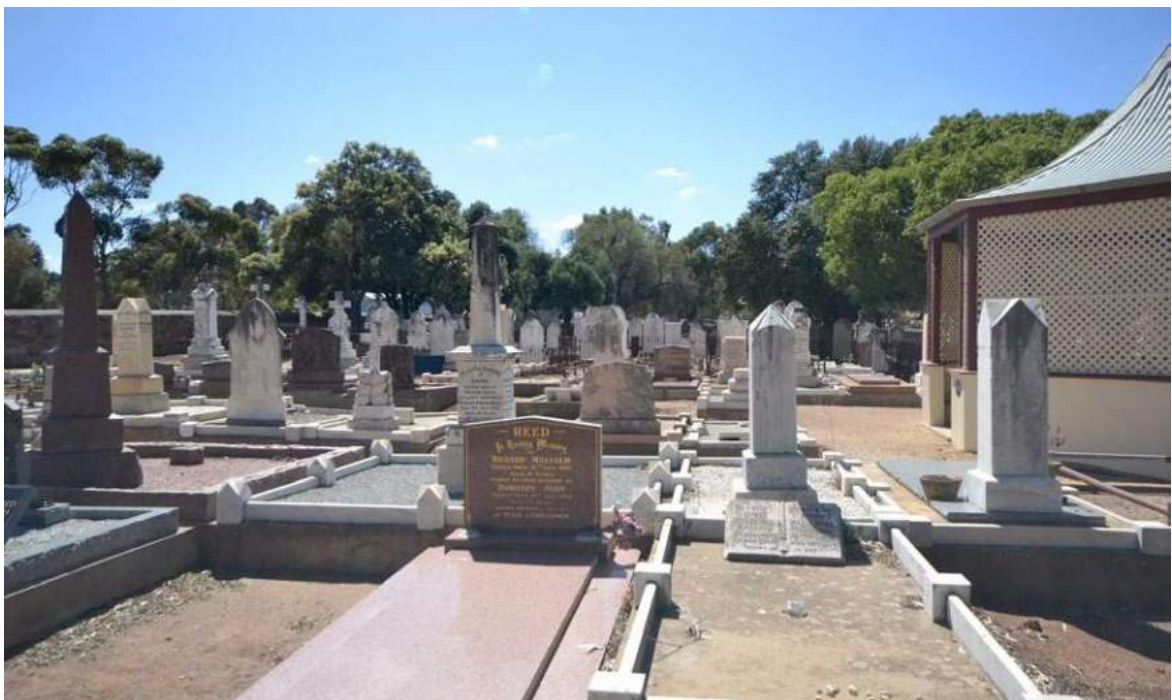


2018: Source: Photograph taken by Swanbury Penglase

*View of Boundary Wall from North-East*

***Killicoat Monument***
2018: Source: Photograph taken by Swanbury Penglase



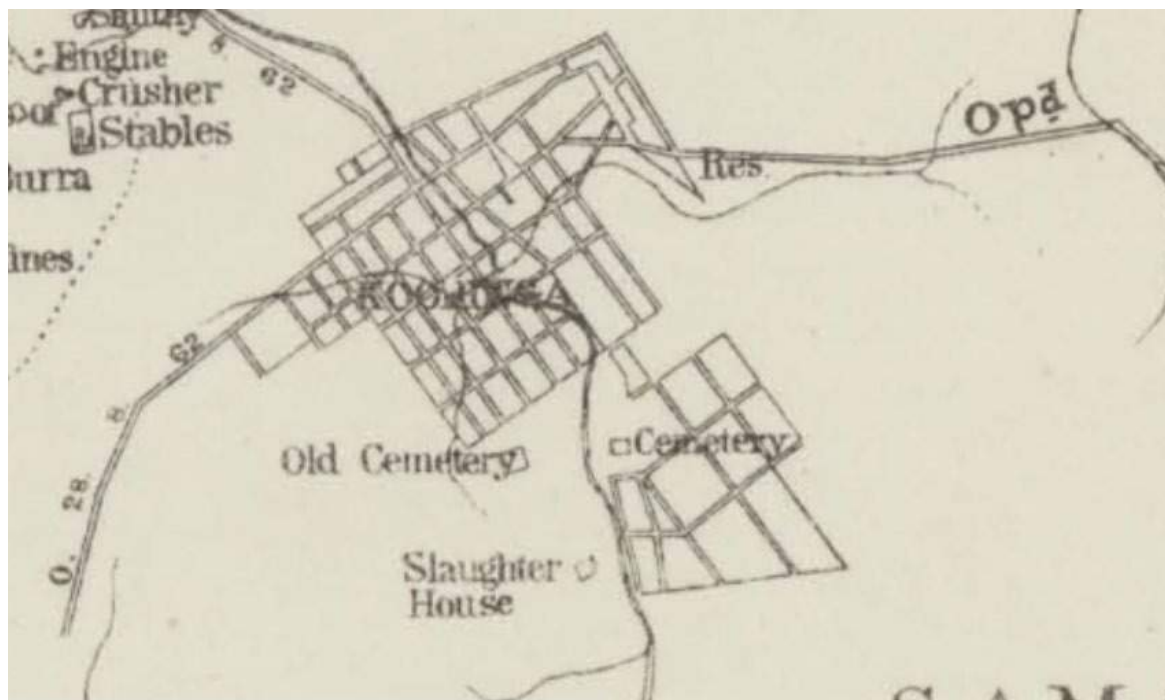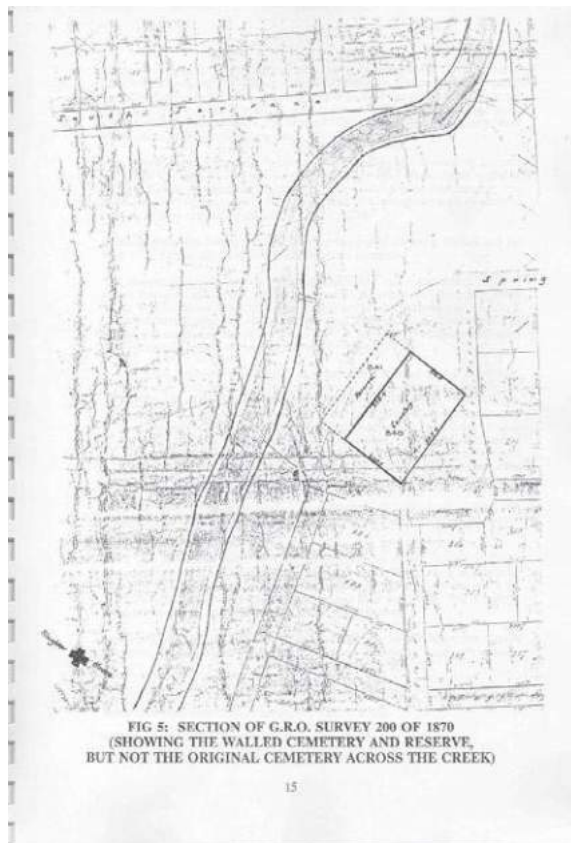2018: Source: Photograph taken by Swanbury Penglase                                          ***Reed Headstone***
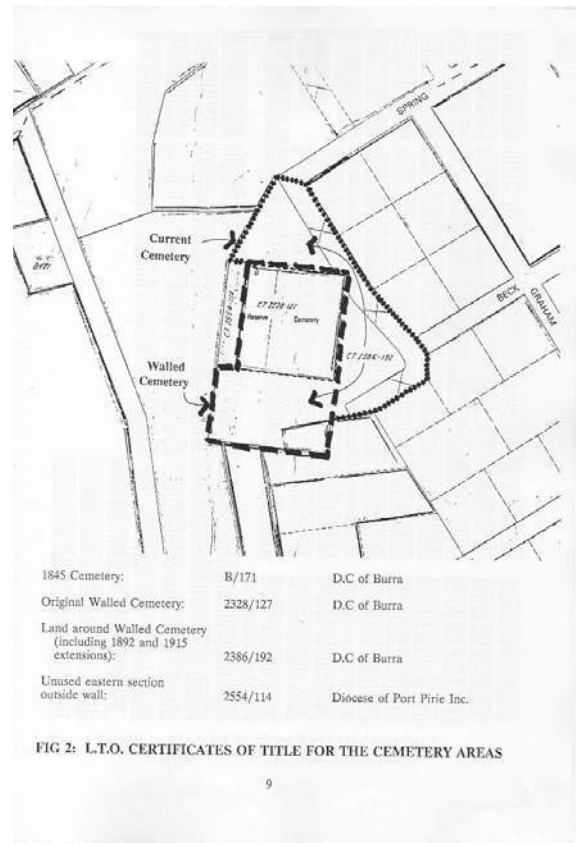
## Other Material



1849 Map of Kooringa showing original cemetery (left) and current cemetery (right). Source: SLSA C42



1876 Map of Kooringa. Source: SLSA Cartographic Material

Source: McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991, p15.



Source: McDougall & Vines, "Conservation Plan for Burra Cemeteries", April 1991, p15.
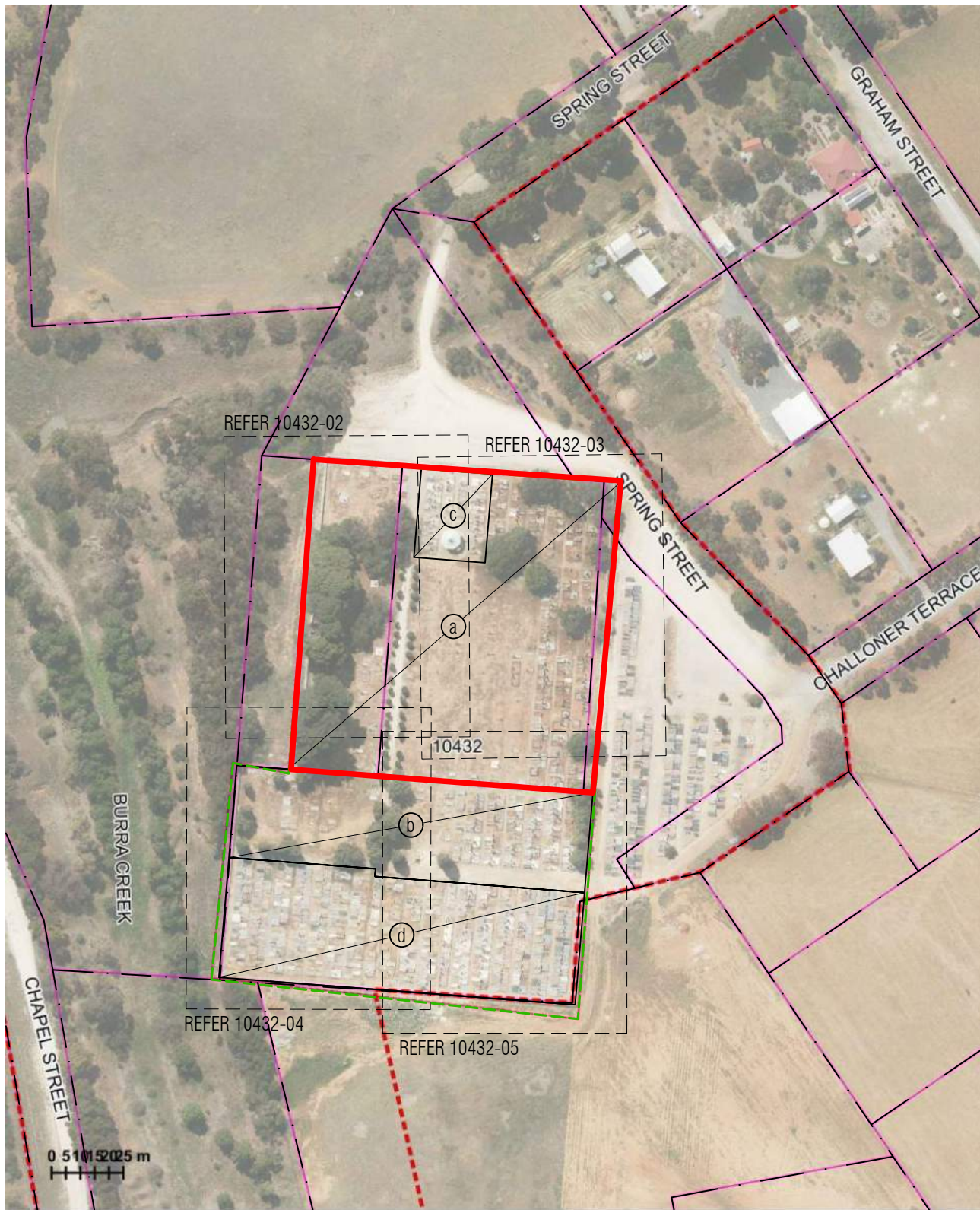
## LEGEND

— · —  TITLE BOUNDARY

▬▬▬  SIGNIFICANT PORTION OF THE STRUCTURE

- - -  EXISTING SAHR SHAPE FILE

SCALE: 1:2000

## STRUCTURES KEY

a - 1850-1892
b - 1892 - 1915
c - 1919 - c.1950
d - c1919 - 1980

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**BURRA CEMETERY**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10432-01**

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STEPS TO TOP

WROUGHT IRON GATES

CEMENT AGAINST
WALL USED AS URINAL

REBUILT
SECTION

REBUILT
SECTION

10432

REBUILT
SECTION

0  5  10  15  20  25 m

## LEGEND

— · —  TITLE BOUNDARY

━━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:500

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## BURRA CEMETERY
## 18188 CMP for Australian Cornish Mining Sites

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WROUGHT IRON GATE

BRICK QUOINS

BUTTRESS

BUTTRESS

ISAAC KILLICOAT d.1886 AGED 9
MASON: HAUSON & EVANS
WAYMOUTH ST PLOT 137-138

SPRING STREET

BUTTRESS

NELLY REED 1878
PLOT 488

BULGE/TREE
ROOT?

BUTTRESS

10432

WILLIAM WOOLACOTT

THOMAS PERRY
d.11/05/1979  AGED 64

BUTTRESS

0    5    10    15    20    25 m

# LEGEND

— · —    TITLE BOUNDARY

▬▬▬    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:500
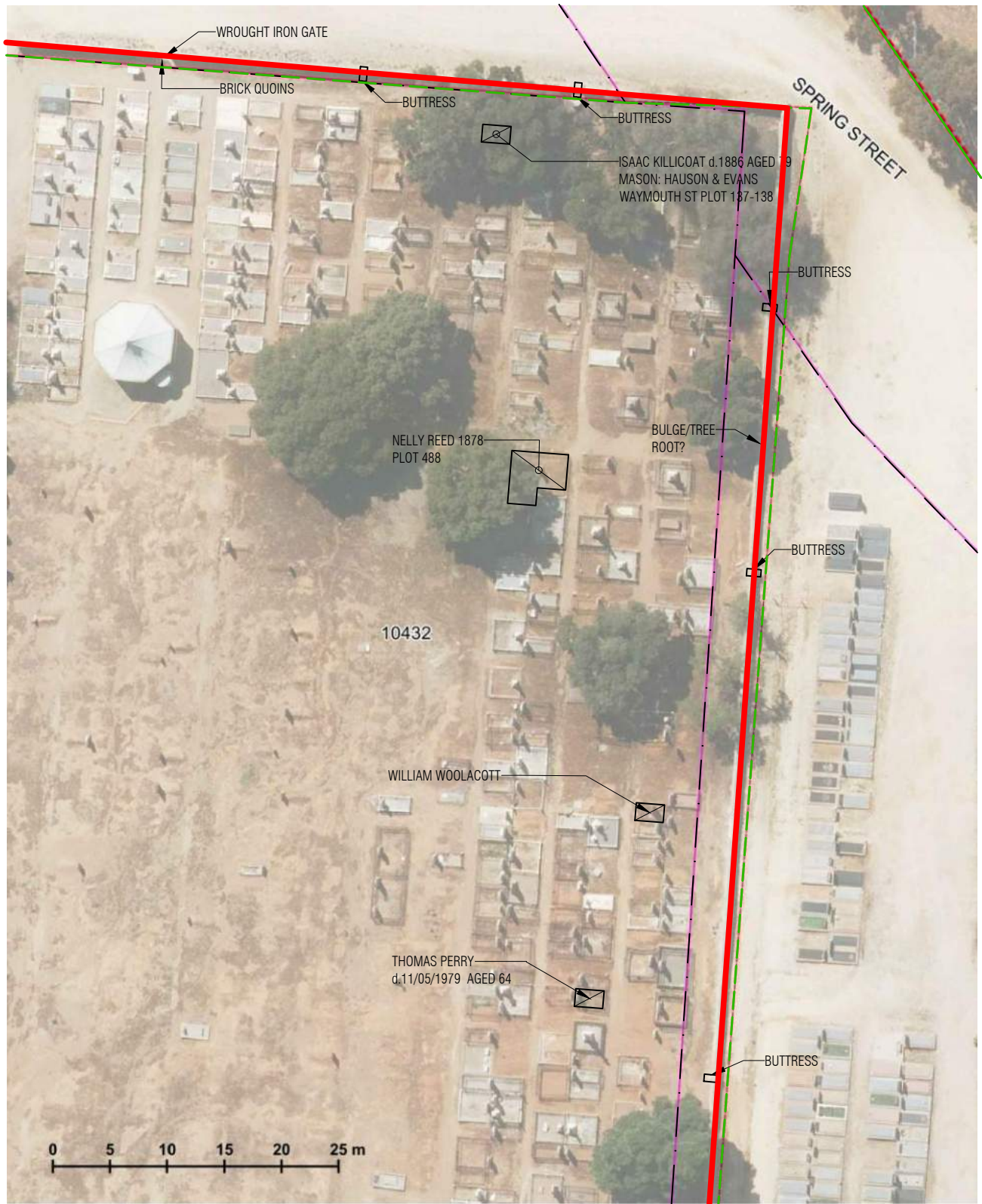
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**BURRA CEMETERY**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10432-03**

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REBUILT

## LEGEND

— · — TITLE BOUNDARY

⸺ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:500

0    5    10    15    20    25 m

10432

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**BURRA CEMETERY**
**18188 CMP for Australian Cornish Mining Sites**

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**10432-04**

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BULGE
INWARDS

MCBRIDGE

10432

| 0 | 5 | 10 | 15 | 20 | 25 m |

LEGEND

— · — — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**BURRA CEMETERY**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10432-05**

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# 10434: Timber Dwelling of the 1840's

## Item identification

| | |
|---|---|
| **Current name of item:** | Timber Dwelling of the 1840s |
| **Current use:** | Vacant Ruin |
| **Address/Location of Item:** | 39 Commercial Street, Burra |
| **CT Reference:** | CT 5195/539 D1672 A104 |
| **Heritage Listing Status:** | State<br>SAHR No. 10434<br>Confirmed 27 September 1990<br>Heritage database no. 14376 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

It is believed that the original two room, timber dwelling was built by SAMA around 1849.[1] The other two masonry rooms at the rear were added at a later date. The dwelling was built on Allotment 104 and rented by SAMA to P. Woodberry in September 1849 for £3 per year. The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records that although the majority of houses in the township were stone, there were also 11 paling houses, as well as "Wattle and dab" houses, "Board" houses, "Pug" houses and brick houses.[2] Thus, timber dwellings were still evident in the town even into the 1870s. In 1914, when the cottage was offered for sale by SAMA, it was described as a weatherboard and stone cottage of four rooms.[3] Thus the extension to the side of the lean-to was added after 1914. The cottage is believed to be an early example of the use of imported, sawn softwoods in South Australia applied to cladding and framing, which is not prefabricated.

## Description

The timber dwelling is a single storey structure; the front section of which is based on a symmetrical double fronted cottage. It was constructed from a timber frame and clad with timber boards. The roof is a hipped form and is clad with corrugated iron with no eaves. A stone chimney sits at the back of the front two rooms. The windows are timber framed casement, and multipaned. The door is timber with a decorative timber fanlight above. There is evidence of timber roof shingles internally, calico ceiling and timber matchboard linings, however most internal linings have been lost. The rear section of the dwelling is a lean-to and is constructed from mud, rubble and concrete. It has a skillion roof clad with corrugated iron. The earlier section of this lean-to has a timber framed door and a pair of symmetrical timber framed windows. The latter section of the lean-to has one timber framed door.

## Significance

The cottage is an early example of a timber dwelling, built by SAMA in 1849, and dates from the earliest period of the Burra Burra Mine when it was first established. It is also reportedly an early example of timber dwelling construction based on English tradition.[4]

## Condition Notes

The building is generally in poor condition and is at risk. It is currently unoccupied.

The following issues were observed during the inspection:
- Timber is generally in very poor condition – termite attack, rot, weathering and little paint cover.
- It appears a concrete floor has been poured inside over the original timber floor.
- The roof is serviceable but badly rusted
- Windowpanes broken
- Calico ceilings fallen
- No internal wall linings.
- Remnant lathe and plaster lining to east wall
- Non original gutters

## Endnotes

1  Bell, Peter, "Continuity in Australian Timber Domestic Building: An Early Cottage at Burra", *Australian Journal of Historical Archaeology*, 1990, pp3-12.
2  Burra SA website, www.burrasa.info/pages/kooringaward.html
3  SLSA Map C40, 1914.
4  ANU Australian Cornish Mining Heritage Site, July 2014, p16.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase
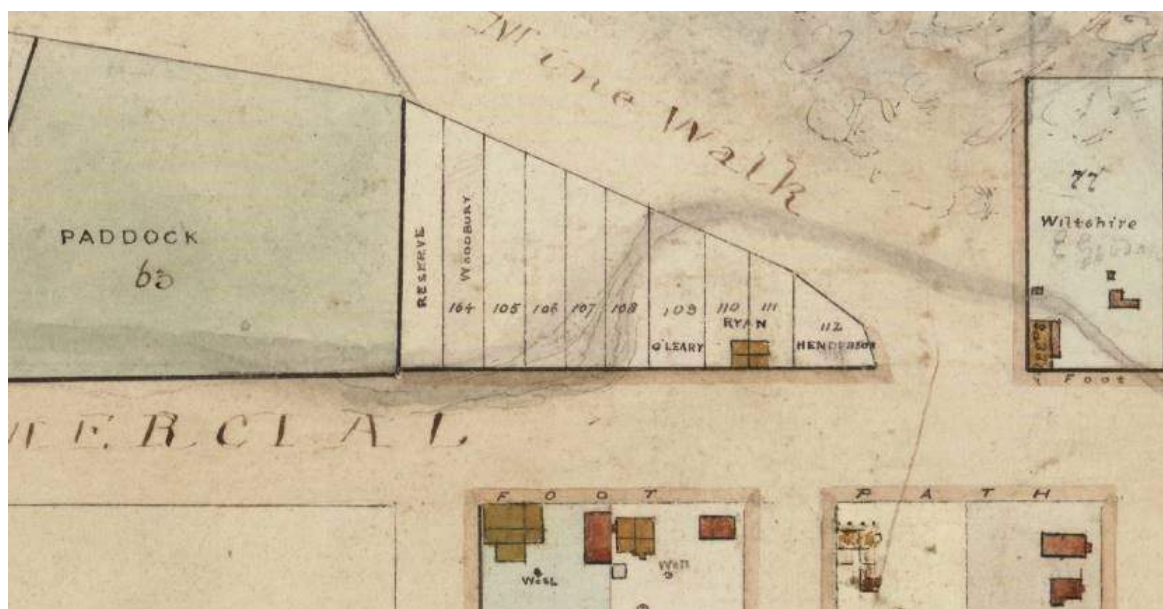
*View from North*

2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*

## Other Material



Dwelling [1840s timber] Allotment 104, shown on Kooringa Map, 1849. Source: State Library of South Australia Map C 42.

REFER 10434-02

10434

## LEGEND

— · — TITLE BOUNDARY

**———** SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:200

**swanbury
penglase**

**TIMBER DWELLING OF THE 1840'S**
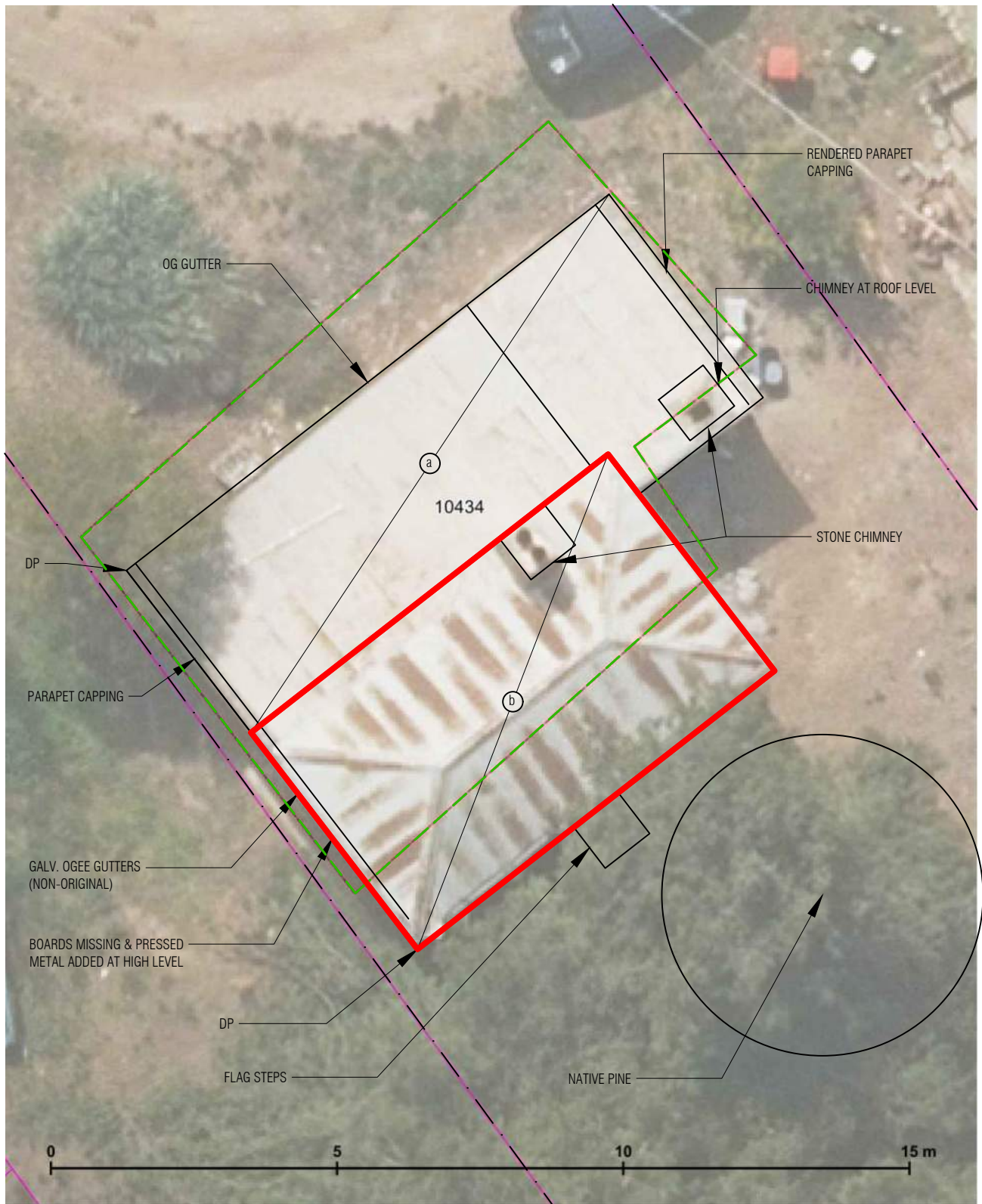**18188 CMP for Australian Cornish Mining Sites**

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Labels on aerial plan:
- RENDERED PARAPET CAPPING
- OG GUTTER
- CHIMNEY AT ROOF LEVEL
- DP
- 10434
- STONE CHIMNEY
- PARAPET CAPPING
- GALV. OGEE GUTTERS (NON-ORIGINAL)
- BOARDS MISSING & PRESSED METAL ADDED AT HIGH LEVEL
- DP
- FLAG STEPS
- NATIVE PINE
- a
- b

Scale bar: 0 — 5 — 10 — 15 m

## LEGEND

— · — TITLE BOUNDARY

■■■ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:100

## STRUCTURES KEY

a - RUBBLE STONE LEAN TO - CGI ROOF, MINI ORB CEILING
b - TIMBER FRAMED SYMMETRICAL COTTAGE

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# TIMBER DWELLING OF THE 1840'S
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10434-02**

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## Item identification

| | |
|---|---|
| **Current name of item:** | Stone Wall located on south side of Commercial Street and Ware Street |
| **Current Use:** | N/A |
| **Address/Location of Item:** | Commercial Street, Burra |
| **CT Reference:** | CT 5953/956 D68405 A2, CT 5953/957 D68405 A3 |
| **Heritage Listing Status:** | State<br>SAHR No. 10435<br>Confirmed 8 November 1984<br>Heritage database no. 14378<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The current Heritage SA information states "The wall on Commercial Street's east side is an L-shaped one, on the corner of Ware Street. It stands near the remains of Burra's first Roman Catholic chapel and school (late 1840s)."[1] The wall in question is longer than this description, extending along Commercial Street and returning along Kangaroo Street following the alignment of the gully which has cut off the corner of the allotment. The section at the corner of Ware Street is lower than the other portions and is backed by a hedge, this being the front garden of the house occupying this site which faces Ware Street. It has not been possible to establish exactly when this wall was constructed.

## Description

Several stone boundary walls capped in select areas with castellated stones on edge.

## Significance

Further research should be undertaken on this place.

## Condition Notes

The wall is generally in fair condition. There is rising damp and salt attack generally at low level and cracking to select areas.

## Endnotes

1    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/stateheritage-areas/Burra, accessed 1 October 2018.
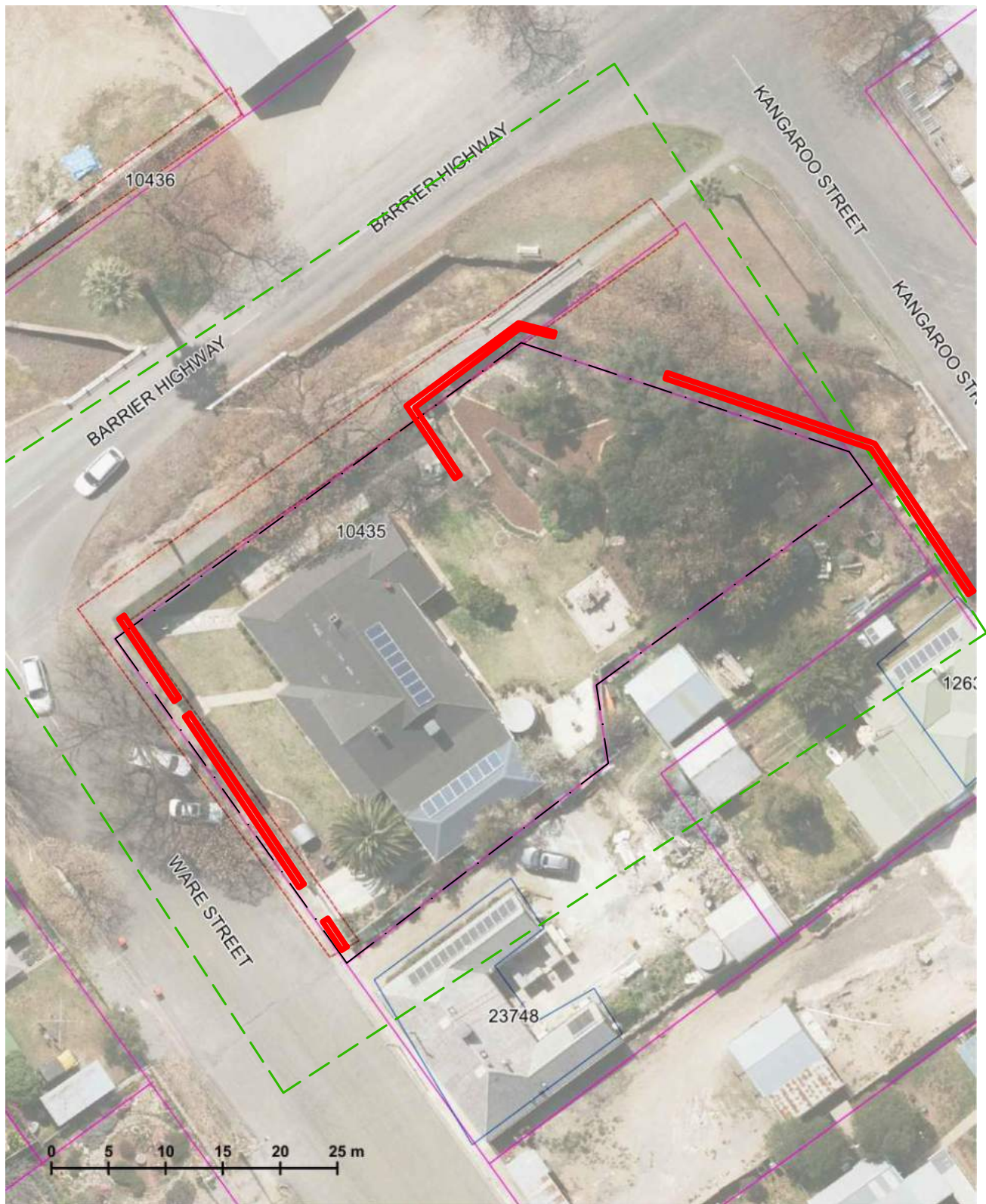
## Current Photos



2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase

## LEGEND

— · — TITLE BOUNDARY

—— SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**STONE WALL**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10435-01**

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# 10436: Stone Wall located on North Side of Commercial Street

## Item identification

| | |
|---|---|
| **Current name of item:** | Stone Wall located on north side of Commercial Street |
| **Current Use** | N/A |
| **Address/Location of Item:** | Commercial Street, Burra |
| **CT Reference:** | CT 5758/313 F199942 A92 |
| **Heritage Listing Status:** | State<br>SAHR No. 10436<br>Confirmed 8 November 1984<br>Heritage database no. 14385<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The current Heritage SA information states, "The wall on the west side of Commercial Street stands near 'The Paddock', where the bullock teams were pastured, opposite the original Burra Hotel and by the main southern entrance to the town".[1] This information is incorrect, the wall is located opposite the wall on Commercial and Ware Streets (10435). It is not located near 'The Paddock'. It has not been possible to establish exactly when this wall was constructed.

## Description

A L-shaped stone boundary wall capped with castellated stones on edge.

## Significance

Further research should be undertaken on this place.

## Condition Notes

The wall is generally in good condition. There is rising damp and salt attack generally at low level to 600mm above ground level.

## Endnotes

1    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/stateheritage-areas/Burra, accessed 1 October 2018.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase



2018: Source: Photograph taken by Swanbury Penglase

## LEGEND

—  ·  —  TITLE BOUNDARY

━━━  SIGNIFICANT PORTION OF THE STRUCTURE

– – –  EXISTING SAHR SHAPE FILE

SCALE: 1:500

**swanbury penglase**

## STONE WALL, NORTH SIDE COMMERCIAL STREET
## 18188 CMP for Australian Cornish Mining Sites

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September, 2019

**10436-01**

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# 10445: Former Engine / Crusher House

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Engine/Crusher House |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 6152/669 D95074 A603 |
| **Heritage Listing Status:** | State<br>SAHR No. 10445<br>Confirmed 24 July 1980<br>Heritage database no. 14368 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Crusher House and Dressing Tower was constructed in 1870 to replace the earlier crusher house due to the reconfiguration of the mine site for the conversion to an open cut operation. "Cornish crushing rolls … consisted of two cast iron rolls about 60cm in diameter running against each other. Ore was fed between the rolls, crushed and passed through a sieve below but any undersized was lifted by a raff wheel and tipped back for re-crushing. Two storey Cornish crusherhouses were a distinctive feature of 19th century copper mining landscapes along with beam enginehouses. More than 20 were erected throughout South Australia including five at Moonta and Burra".[1] This was supplemented by various concentrating procedures in the area between buildings. The Dressing Tower and Crusher House was originally powered from Morphett's winding engine house, but this was replaced by a smaller steam engine powered by an adjoining boiler house in 1874.

## Description

The Former Engine/Crusher House consists of a series of ruins including the roll crusher, ore dressing tower, boiler house and engine house. The Ore dressing tower is constructed from stone with the southwest wall built against an embankment which is otherwise supported by a tall drystone retaining wall. There is no roof. There is some remaining timber beams which remain within the tower representing the various original floor levels, but there is no northeast wall, it is presumed that this was originally timber framed. Through the southwest wall of the tower is also a timbered tunnel that passes through the embankment for feeding water into a cistern to be used in the dressing procedure.

Further to the northeast is the lower stone walls which act as retaining walls of the crusher house and adjoining are the similar stone walls of the engine and boiler house, which include the stone engine mounting blocks with remaining wrought iron holding down bolts etc. The other ruins consist primarily of stonework walls and foundations. Remnants of jigging machinery are displayed on the adjacent ground.

## Significance

The Dressing Tower and Crusher are part of the Cornish Dressing Technologies used at the Mine. The Engine/Crusher House dates from the period when the Burra Burra Mine had been converted to an open-cut towards the end of its life when it was in decline.

## Condition Notes

The following issues were observed during the inspection:

- Timber beams spanning between the high walls of the former Dressing Tower are in poor condition with significant rot with risk of collapse of walls if beams fail
- Cracked stone lintel over void in south wing of retaining wall with likely collapse of section of wall over
- Outward bulge in lower stone retaining wall north of Dressing Tower with large vertical crack
- Minor deterioration of pointing to inside of Dressing Tower, particularly to north wall
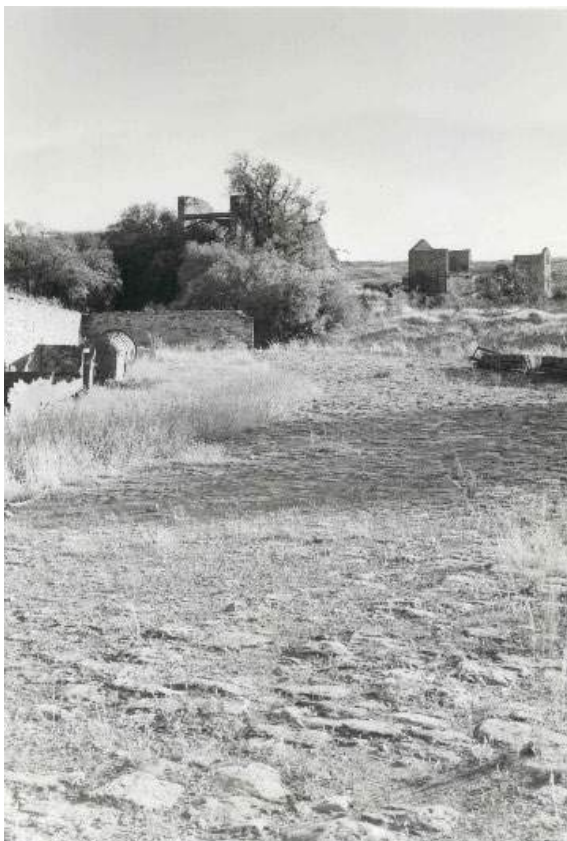
## Endnotes

1    Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p7.

## Historic Photos
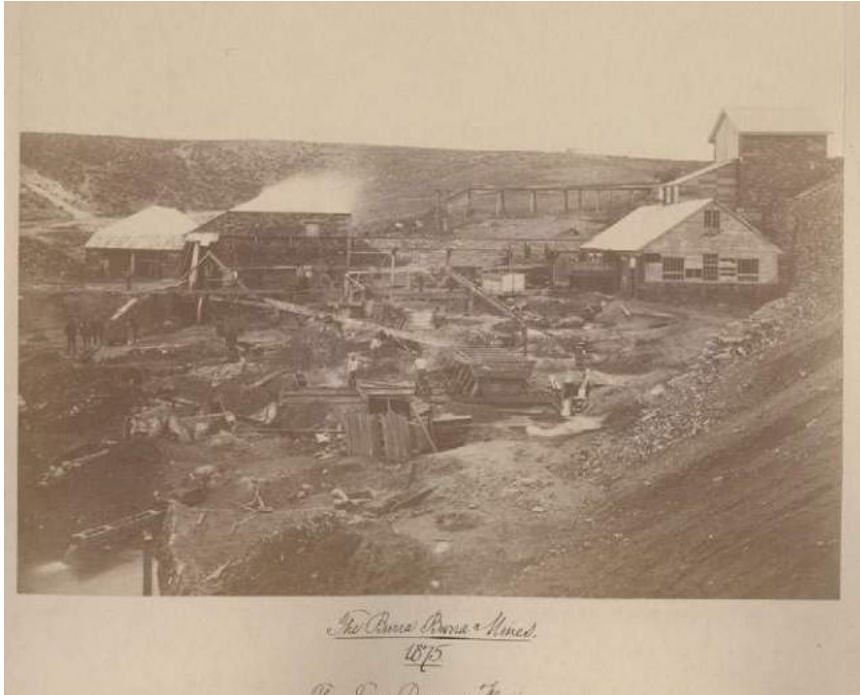


'The Burra Burra Mines, 1875, The Tower Dressing Floors'. Source: State Library of SA B 46011



Former Engine/Crusher House, 1978. Source: Heritage SA research packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View (from South-West)*



2018: Source: Photograph taken by Swanbury Penglase

*Dressing Tower Interior*

2018: Source: Photograph taken by Swanbury Penglase

*Engine House and Roll Crusher*



2018: Source: Photograph taken by Swanbury Penglase

*Boiler House*

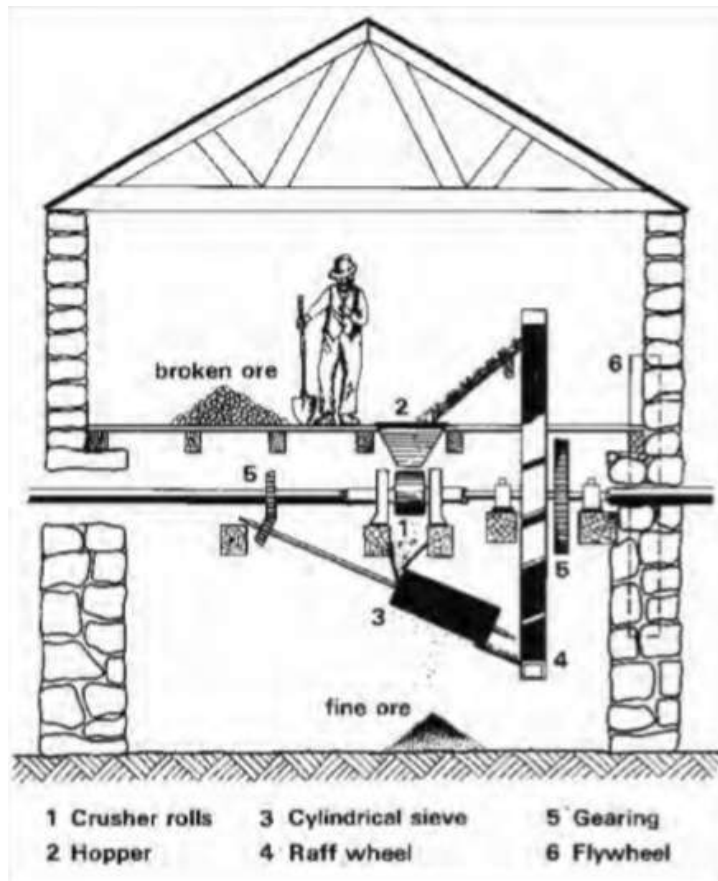2018: Source: Photograph taken by Swanbury Penglase

*Ore Dressing Tower*



*Dressing Tower Interior*
2018: Source: Photograph taken by Swanbury Penglase

## Other Material



Cross section of a Cornish Crusherhouse c.1860. Source: Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p7.

10055

CUTTING (NO WALLS)

STONE

10445

DRYSTONE

DRYSTONE

REFER 10445-02

0    5    10    15    20    25 m

## LEGEND

— · — · —   TITLE BOUNDARY

━━━━━   SIGNIFICANT PORTION OF THE STRUCTURE

– – – –   EXISTING SAHR SHAPE FILE

SCALE: 1:500

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**FORMER ENGINE / CRUSHER HOUSE**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10445-01**

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CRUSHER HOUSE — c

CUTTING THROUGH
GROUND

10445

DRYSTONE RETAINING
WALL

b

a

TUNNEL BELOW

DRYSTONE RETAINING
WALL

| 0 | 5 | 10 | 15 | 20 | 25 m |

## LEGEND

— · —   TITLE BOUNDARY

▬▬▬   SIGNIFICANT PORTION OF THE STRUCTURE

– – –   EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - MULTI LEVEL ARC DRESSING TOWER
b - RUINS OF LOWER STRUCTURE

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE
HISTORIC MINE AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL
REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES
INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE
SURFACE ONLY.

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# FORMER ENGINE / CRUSHER HOUSE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10445-02**
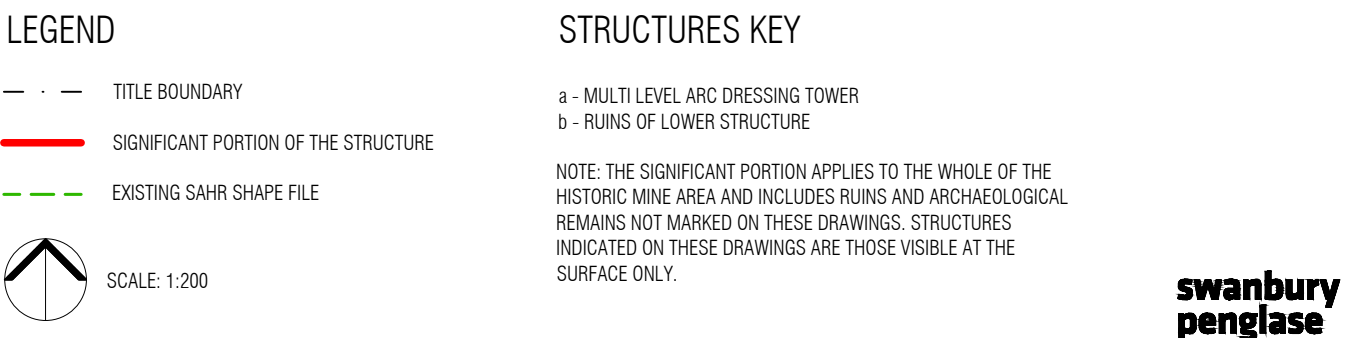
www.swanburypenglase.com

# 10447: 16 Upper Thames Street, Burra

## Item identification

| | |
|---|---|
| **Current name of item:** | Dwelling built by the South Australian Mining Association |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 16 Upper Thames Street, Burra |
| **CT Reference:** | CT 5916/430 F186830 A318 |
| **Heritage Listing Status:** | State<br>SAHR No. 10447<br>Confirmed 24 July 1980<br>Heritage database no. 14324 |
| | National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

With the Burra Burra Mine in full production, SAMA realised the immediate need to provide housing for its miners and their families. This cottage was built by SAMA on its land in their company town of Kooringa. The cottage was then rented to its miners. This cottage was constructed before 1849, as it appears on the 1849 Map of the Township of Kooringa. Although this Cottage is similar to those located at 2-12 Upper Thames Street, it is not attributed to Kingston.[1]

## Description

The single storey cottage is built on the front boundary. Originally, it was built as a pair of two-roomed cottages but was later altered to a single four-roomed cottage. There were side entrances and the side of the cottage faced the street however it was later altered with a new door opening on the street which became the front of the cottage. It was constructed from Hampton quarry random rubble bluestone with lined pointing and painted red brickwork quoins to doors and windows. It has painted red brickwork, curved voussoirs to windows and painted red brickwork sills. The roof is a gabled form and clad with corrugated iron sheeting roof to the front two rooms on the street, and a skillion roof to the rear two rooms, with a later skillion roof to another corrugated iron clad addition. There are two timber double hung windows facing the street. There is a central, diagonal, bluestone chimney.

## Significance

This cottage was constructed prior to 1849 by SAMA for its miners and is an early example of company housing. It is part of one of earliest collections of residential buildings in Australia which are still occupied.[2]

## Condition Notes

The building is generally in a good state of repair retaining many of the building's early features. The building is well maintained and is currently occupied as a residence.

The following issues were observed during the inspection:

- Salt attack & rising damp to sill height
- Suspected that the masonry has been entirely repointed using cement mortar
- Non-original profile 'D' gutters
- Minor cracking – three railway line plates and tie rods have been installed later
- Windows replaced with double hung sashes

## Endnotes

1   Langmead, Donald, "George Strickland Kingston: Pioneer and Architect", May 1983 PhD Thesis, Flinders University of South Australia, Fig xx.4, no page number.
2   Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
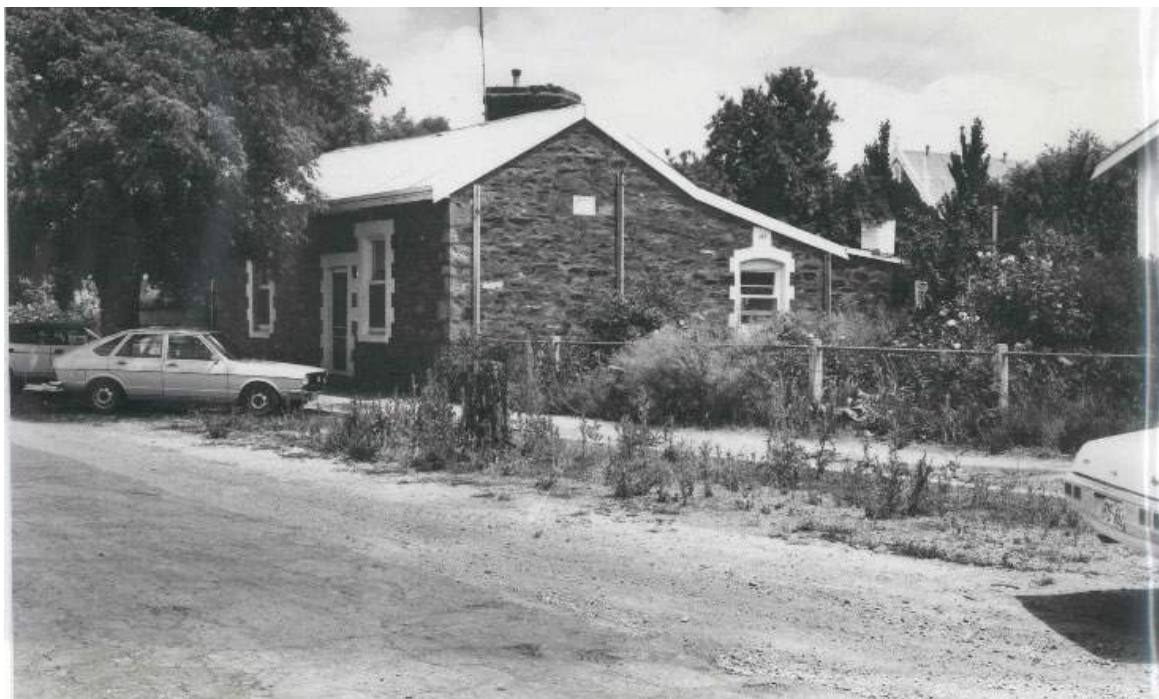
# Historic Photos



16 Upper Thames Street, 1978. Source: Heritage SA Research Packet



Original shingles revealed when re-roofing in February 2013. Source: Courtesy of the Burra History Group.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Upper Thames Street)*



2018: Source: Photograph taken by Swanbury Penglase

*View from North*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (South)*

## LEGEND

— · —      TITLE BOUNDARY

━━━      SIGNIFICANT PORTION OF THE STRUCTURE

– – –      EXISTING SAHR SHAPE FILE

SCALE: 1:250

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**DWELLING, 16 UPPER THAMES STREET**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

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ORIGINAL
CHIMNEY

a
10447

c

b

UPPER THAMES STREET

0    5    10    15    20    25 m

LEGEND

— · —    TITLE BOUNDARY

━━━    SIGNIFICANT PORTION OF THE STRUCTURE

- - - -    EXISTING SAHR SHAPE FILE

SCALE: 1:200

STRUCTURES KEY

a - c. 1846-1847 COTTAGE
b - MODERN SHEDDING
c - FORMER WC. DATE UNKNOWN.

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# 10970: Burra Mines Historic Site

## Item identification

| | |
|---|---|
| **Current name of item:** | Burra Mines Historic Site (includes Burra Jinker) |
| **Current use:** | Museum |
| **Address/Location of Item:** | Burra Mine Area, Burra |
| **CT Reference:** | CT 5250/610 F1763 A2,CT 5882/153 F186980 A468,CT 6152/669 D95074 A603,CT 6217/812 D119910 Q301,302 |
| **Heritage Listing Status:** | State<br>SAHR 10970<br>Confirmed 8 November 1984<br>Heritage Database No. 14312<br><br>National<br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

# History

In mid-1845, two shepherds independently discovered separate indications of copper near Burra Burra Creek. Shepherd William Streair discovered outcrops of copper. While shepherd Thomas Pickett discovered a "bubble of copper". Streair and Pickett told two different groups of their discoveries known as the "Nobs" (large capitalists including Bagot and Dutton of the Kapunda Mine) and the "Snobs" (minor capitalists – Hindley and Rundle Street shopkeepers and merchants who later merged with the South Australian Mining Association).[1]

In July 1845, Governor Grey was "presented with applications for a Special Survey and found himself with a battle on his hands, between the two groups, the "Nobs" and the "Snobs", for its possession".[2] The "Nobs" and "Snobs" both wanted possession of the land. Earlier, in 1842, regulations had been established that specified the minimum parcel of unsurveyed land which could be purchased was 20,000 acres, at a cost of one pound per acre. Grey confirmed that the survey would be 20,000 acres costing £20,000. Neither side had adequate funds, so the "Nobs" and "Snobs" jointly bought the land. However, soon after, they separated, and the 20,000 acres were halved. Each half incorporated one of the mining discoveries; Pickett's to the north and Streair's to the south. Each group drew lots to determine which parcel of land they were allocated. The "Snobs" (later the South Australian Mining Association) drew the northern lode - Pickett's lode. This became the highly lucrative Burra Burra Mine. The "Nobs" (later the Princess Royal Mining Association) drew the southern section – Streair's lode – which turned out to be an unproductive mine which later closed in 1851.

In September 1845, the "Snobs", the South Australian Mining Association (SAMA) and 10 Cornish miners with a Cornish mining overseer, Captain Thomas Roberts, commenced exploration and discovered a large mass of ore. On 29 September 1845, The Burra Burra Mine, located on Burra Burra Creek, was opened. It rapidly developed into "one of the great copper mines of the world",[3] and earnt its name of the "Monster Mine".[4] From 1845 to 1855, the Burra Burra Mine was the largest in Australia and, together with the Kapunda Mine, signalled the beginning of Australia's prosperous mining industry. By 1850, "South Australia was the third largest copper producer in the world, the bulk of this production coming from Burra".[5] Its influence was so great that, Henry Ayers (1821-1897), Secretary of the SAMA stated that "all of South Australia was directly or indirectly employed by the Burra Mine".[6] The success of the Mine is often reported to have saved the young colony from bankruptcy.

In South Australia, with the "discovery of minerals, it became ... [local] practice to recruit experienced teams of miners direct from Cornwall to open new mines; this ... happened at Kapunda in 1844, and at Reedy Creek (Tungkillo) and Glen Osmond in 1847."[7] Burra "was the first significant concentration of Cornish in Australia".[8] By 1846, the Burra Burra Mine was "known in Cornwall ... as 'the eighth wonder of the world'".[9] The SAMA employed mainly Cornish miners at the rapidly expanding Burra Burra Mine, who not only brought their social customs but also their "traditional mining methods".[10]

The Cornish system of working mines was implemented. Vertical shafts and horizontal levels were sunk which divided the mine into "pitches". This work was referred to as Tutwork, and prepared the lode for ore extraction, known as Tribute work.[11] Mine, "operations were organised on typical Cornish lines. Traditional methods of tribute [miners paid according to value of ore] and tutwork [miners paid according to volume of ground dug] were employed".[12] The "richness of ore and compositional similarity to those [mines] found in Cornwall allowed the miners of South Australia to follow traditional Cornish mining practice without the need for adaptation".[13] Deep, hard-rock mining was unprecedented in Australia, prior to the establishment of the Kapunda and Burra Burra Mines. It was well-established in Cornwall and thus the Cornish brought with them the skills and expertise.

Some of the earliest, extant, structures constructed on the Mine site included: the Powder Magazine (1847) (SAHR 10045), constructed to store gunpowder for mine blasting. It is renowned for being one of Australia's oldest remaining mine buildings. It was restored by the National Trust in 1976. Other structures include: the SAMA Storeman's Residence, Yard and Walls (1847) (SAHR 10019), built at the mine entrance and used as a depot; and the Mine Manager's Dwelling and Office (1849) (SAHR 10056).

It was not only the Cornish people who travelled to Burra. Cornish engines were imported directly from the Perran Foundry in Cornwall. The importation of these steam engines was fundamental to South Australia's, and indeed Australia's, industrialisation. It signalled the beginning of the change from an agrarian society to an industrialised one.[14] Burra was a "wet" mine, similar to the Cornish mines. In 1847, the first horse-whims were erected at the mine to not only raise ore but also water in an effort to keep water levels down.[15] However, as greater depths were reached, it soon became necessary to purchase steam powered pumping engines to dewater the mines.

There were two types of Cornish engines erected at the Burra Burra Mine: the Beam Pumping Engine; and the Beam Rotative Engine. One of the Cornish Beam Pumping Engines which was erected was Morphetts Engine. Morphetts Pump Enginehouse (1858) (SAHR 10053) housed the Cornish beam pumping engine and is still extant. Graves Pump House (Enginehouse) (1868) (SAHR 10054) was also erected for an 80-inch Cornish Beam Pumping Engine however, the Burra Burra Mine was converted to an open-cut mine shortly after, thus the order was cancelled. In spite of this, Graves Enginehouse was already constructed and is also extant.

There were several Cornish beam rotative engines erected in Burra. One of which was the second beam rotative engine which was a 30-inch engine. It was used as a winding engine and was known as Peacocks Engine. Peacocks enginehouse was constructed by Messrs Blackler and Hollow and completed in 1858. In 1972, the enginehouse and chimney were demolished to make way for the twentieth century open-cut mine. In the same year, the chimney, Peacock's Chimney (c.1857-58) (SAHR 10020), was rebuilt near the entrance of the mine.

Another Cornish beam rotative engine was erected in 1861. It was a 20-inch winding engine, known as Morphetts. In 1861, tenders were called for the construction of the Morphetts Winding Enginehouse. The engine operated from 1861 to 1874. Morphetts Winding House (1861) (SAHR 10052) is the "only surviving example of a half house" in South Australia.[16]

The Burra mining landscape is also formed by the complex structures which remain underground. The three remaining mine shafts include: the Waterhouse Shaft, Morphetts Shaft, and Hector Shaft (Burra Mines Historic Site SAHR 10970) which still connect via horizontal levels. Morphetts Shaft was the deepest reaching 85 Fathoms, Waterhouse Shaft - 70 Fathoms and Hector Shaft - 60 Fathoms. Morphetts shaft was retimbered in 1986 as part of Morphetts Pump Enginehouse (SAHR 10053) reconstruction. The other former shafts of the Burra Burra Mine including Tinline Shaft, Stock Shaft, Grahams Shaft, Ayers Shaft, Roach Shaft, Peacocks Shaft, and Peacock Air Shaft were destroyed when the twentieth century open-cut mine was opened and operational from 1971-81.[17] However, this was not the first time it had been an open-cut mine.

After 1861, ore production declined, and the Burra Burra Mine was overshadowed by the establishment of the mines at Moonta and the "Wallaroo Mines". This resulted in the Burra Burra Mine closing, for a short time, in 1867. However, the Mine later re-opened and was converted to an open-cut mine, following advice from English mining expert and engineer, John Darlington. Preparations began in 1869, and the open-cut mine officially opened in 1870. This extended the life of the Mine for an additional seven years. Other structures constructed at the Mine in the 1870s include: the Ore Sorting Floor (1870) (SAHR 10055); the Engine/Crusher House (1870) (SAHR 10445); the Cornish Crusher Chimney (1874), a round stone chimney with brick capping on a rectangular base (SAHR 10047); and the Welsh Haulage Engine Chimney (1876), a square stone structure with cement capping (SAHR 10046).

The Burra Burra Mine was an incredibly successful venture and led to the development of the surrounding townships. It was operational until 1877 when it finally closed, and 300 miners lost their jobs. It closed due to "high mining costs and falling copper prices. Between 1845 and 1877, about 50 000 tons of copper were produced. The mine was auctioned in January 1916 … for £3000 and the four remaining beam engines were removed for scrap".[18] However, this is debated, some reports date the closure as early as June 1914.[19]

Following the closure of the Burra Burra Mine in 1877, the townships collectively developed as a pastoral and agricultural centre. Land was ideal for sheep farming and the area is known for its surrounding Merino studs; the first being established in 1863. Burra also became a trade and supply centre for the region. From 1971-1981 open-cut mining returned to Burra, however this was the town's last operational mine. Although the population of Burra declined dramatically in the post-1877 period, the town continues to be an important pastoral and agricultural centre, with a particular focus on cultural heritage tourism.

On 9 May 2017, the "Australian Cornish Mining Sites: Burra and Moonta" were included on the National Heritage List, in recognition that Burra is "one of Australia's earliest, largest and best-preserved 19th century mining towns"[20] where "Cornish mining technology, skills and culture is demonstrated to a high degree".[21]

## Description

The Burra Mines Historic Site is a distinct area within the town. It lies west of Burra Creek between the former townships of Redruth / Aberdeen. The lower levels of the modern open-cut mine is filled with water and dominates the site while various underground workings survived the open cut operation. The barren, expansive landscape is defined by gently sloping hills and mine overburden. The site includes a collection of ruins, restored buildings and archaeological sites, disbursed with remnant mining machinery. Approached from Market Street, the first structure viewed is Peacocks Chimney which defines the Mine entrance. The Former SAMA Storeman's Dwelling, Storeroom, Yard and Walls are situated close by. A steep road leads up to the viewing area where the open-cut mine is seen. The two other chimneys are visible in the distance, as are the three remaining engine houses. Most of these structures are separately described on other sheets.

The other elements not separately described include the below:

- Ruins of various residences of mine officers
- Underground flues and chimney bases for no longer existent boiler houses, such as Schneider's engine house
- Ruins of Morphett's pool for storing water pumped from Morphett's pumping engine to operate the various machinery
- Underground drainage channel for the water from Morphett's pool
- Ruins of ore concentrating processes, such as the buddle pits and water wheel, with other areas concealed below overburden
- Former roadways
- Remnants of the floor of the stable complex
- Cuttings associated with mining operations, such as the haulage cutting
- Top of various mine shafts
- Timber jinker used to transport Cornish engines used at the mine, currently displayed in Market Street
- While Captain Roach's headstone is displayed on the site, it has been relocated to this position

## Significance

The Burra Burra Mine was one of the State's most influential copper mines. It reportedly saved the colony's fledgling economy from bankruptcy. The copper lode was so extensive that it became known as the "Monster Mine" both in Australia and overseas. Thousands of Cornish miners and their families flocked to Burra joining the already well-established Cornish community in South Australia. The Burra Mines Historic Site provides evidence of the scale and success of the Mine. Enginehouses, chimneys and associated structures reflect Cornish copper mines and the mining process can be interpreted and followed in principle from the remaining places. It was one of Australia's earliest and one of its most profitable copper mines, and was influential in the establishment of Australia's hard rock mining industry.

## Condition Notes

The following issues were observed during the inspection:

All of the elements are in a ruinous state and suffer from the typical issues below:
- Stone and pointing deterioration through dampness, whether rising, falling or penetrating
- Collapse of top sections of underground flues etc.
- Damage caused by vegetation, particularly woody weeds

# Endnotes

1    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p34.

2    Auhl, Ian, and Perry, Maurice, *Burra Sketchbook*, (Adelaide: Rigby Limited, 1969), p11.

3    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

4    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*.

5    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

6    Auhl, Ian, and Finch, Perry, *Burra in Colour*, (Adelaide: Rigby Limited, 1973), p1.

7    Australian Government, Australian Heritage Database website, [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304), accessed 1 October 2018.

8    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p18.

9    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p15.

10    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

11    Drew, Greg, "The Significance of the Australian Cornish Mining Heritage Site", *2014 South Australian Engineering Heritage Conference: Transactions*, p2.

12    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

13    Gohman, Sean, "Cornish Periphery Analysis", p20.

14    Australian Government, Australian Heritage Database website, [http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304](http://www.environment.gov.au/cgi-bin/ahdb/search.pl?mode=place_detail;place_id=106304), accessed 1 October 2018.

15    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp195-196.

16    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p41.

17    Refer diagram. Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p82.

18    Drew, Greg, and Connell, J.E., *Cornish Beam Engines in South Australian Mines*, p83.

19    "Meetings: South Australian Mining Association", *The Register*, 16 June 1914, p4.

20    Heritage SA, Burra State Heritage Area, website, [https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra](https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra), accessed 1 October 2018.

21    Australian Government, National Heritage Places website, [http://www.environment.gov.au/heritage/places/national/australian-cornish-mining-sites](http://www.environment.gov.au/heritage/places/national/australian-cornish-mining-sites), accessed 1 October 2018.

## Historic Photos



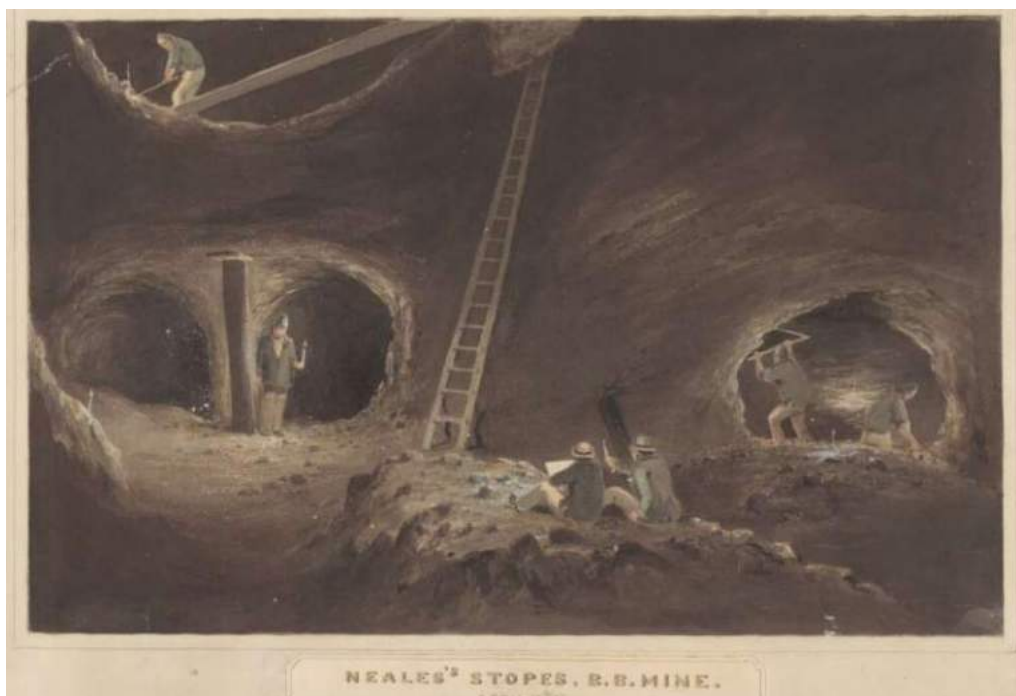Burra Mines Historic Site by S.T.Gill, 1850. Source: Art Gallery of South Australia
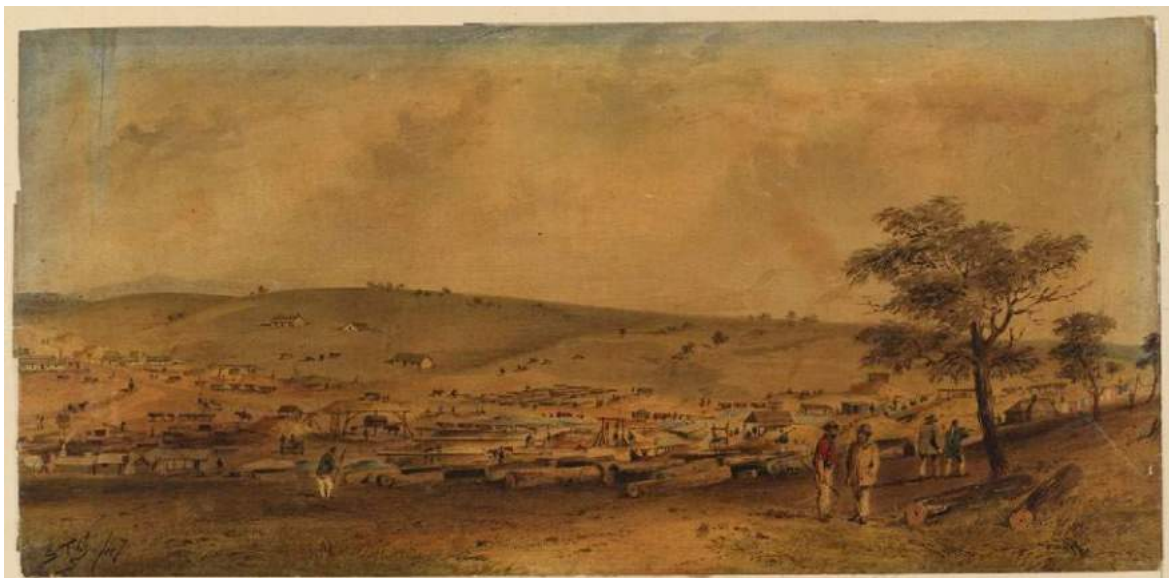


'The Burra Burra Mine, 1847 ST Gill' Source: State Library of NSW

Penny's Stopes, Burra Burra Mine, April 12th 1847. Source: Art Gallery of South Australia



Neale's Stopes, Burra Burra Mine, April 12th 1847. Source: National Library of Australia

Burra Burra Mine, 1869. Source: The Burra History Group Inc.



Burra Burra Mine showing Peacock's Chimney before it was re-sited, undated. Source: The Burra History Group Inc.

B4147. Source: State Library of South Australia



B4149. Source: State Library of South Australia

Jinker c.1933. Source: State Library of South Australia B 8637



Burra Jinker. Source: Heritage SA Research Packet

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*



2018: Source: Photograph taken by Swanbury Penglase

*1870 Mine Cottage*

2018: Source: Photograph taken by Swanbury Penglase

*Mine Dwellings*



2018: Source: Photograph taken by Swanbury Penglase

*Mine Dwellings*

2018: Source: Photograph taken by Swanbury Penglase                    *Schneiders Flue*



2018: Source: Photograph taken by Swanbury Penglase                    *Schneiders Flue*

2018: Source: Photograph taken by Swanbury Penglase                    *Morphett Pool*



2018: Source: Photograph taken by Swanbury Penglase                    *Paved Work Area*

2018: Source: Photograph taken by Swanbury Penglase

*Buddle Pits*



2018: Source: Photograph taken by Swanbury Penglase

*Waterwheel Base*

2018: Source: Photograph taken by Swanbury Penglase

*Former Roadway*



2018: Source: Photograph taken by Swanbury Penglase

*Mine Shaft*

2018: Source: Photograph taken by Swanbury Penglase                    *Mine Shaft*



2018: Source: Photograph taken by Swanbury Penglase                    *Haulage Cutting*

2018: Source: Photograph taken by Swanbury Penglase
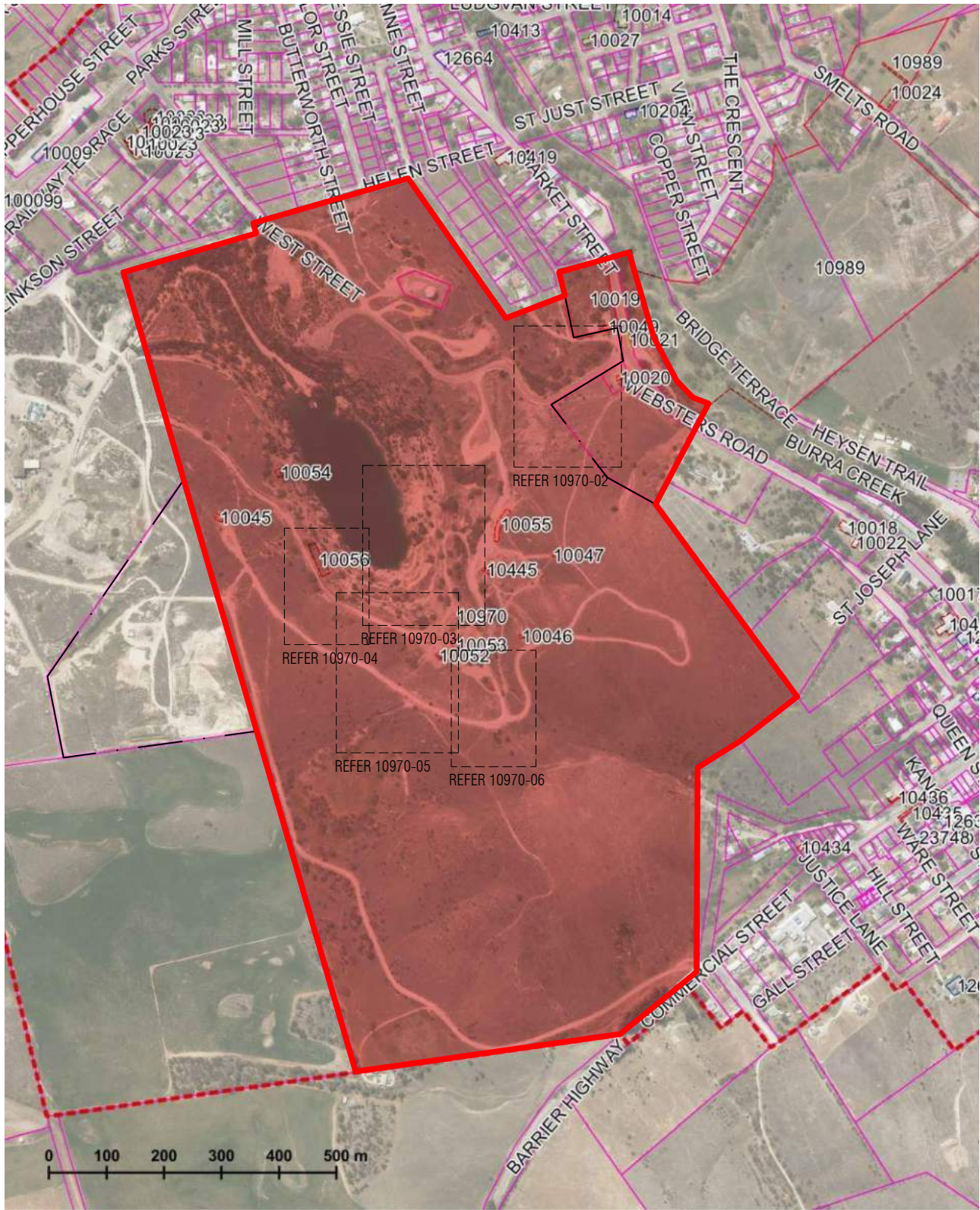
*Captain Henry Roach Headstone*



2018: Source: Photograph taken by Swanbury Penglase

*Burra Jinker*

## Other Material



Plan of Burra Burra Mine, 1852. Source: SLSA C178

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

- - - EXISTING SAHR SHAPE FILE

SCALE: 1:10000

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**BURRA MINES HISTORIC SITE (INCLUDES BURRA JUNKER)**
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## LEGEND

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**10**

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**BURRA MINES HISTORIC SITE (INCLUDES BURRA JUNKER)**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10970-05**

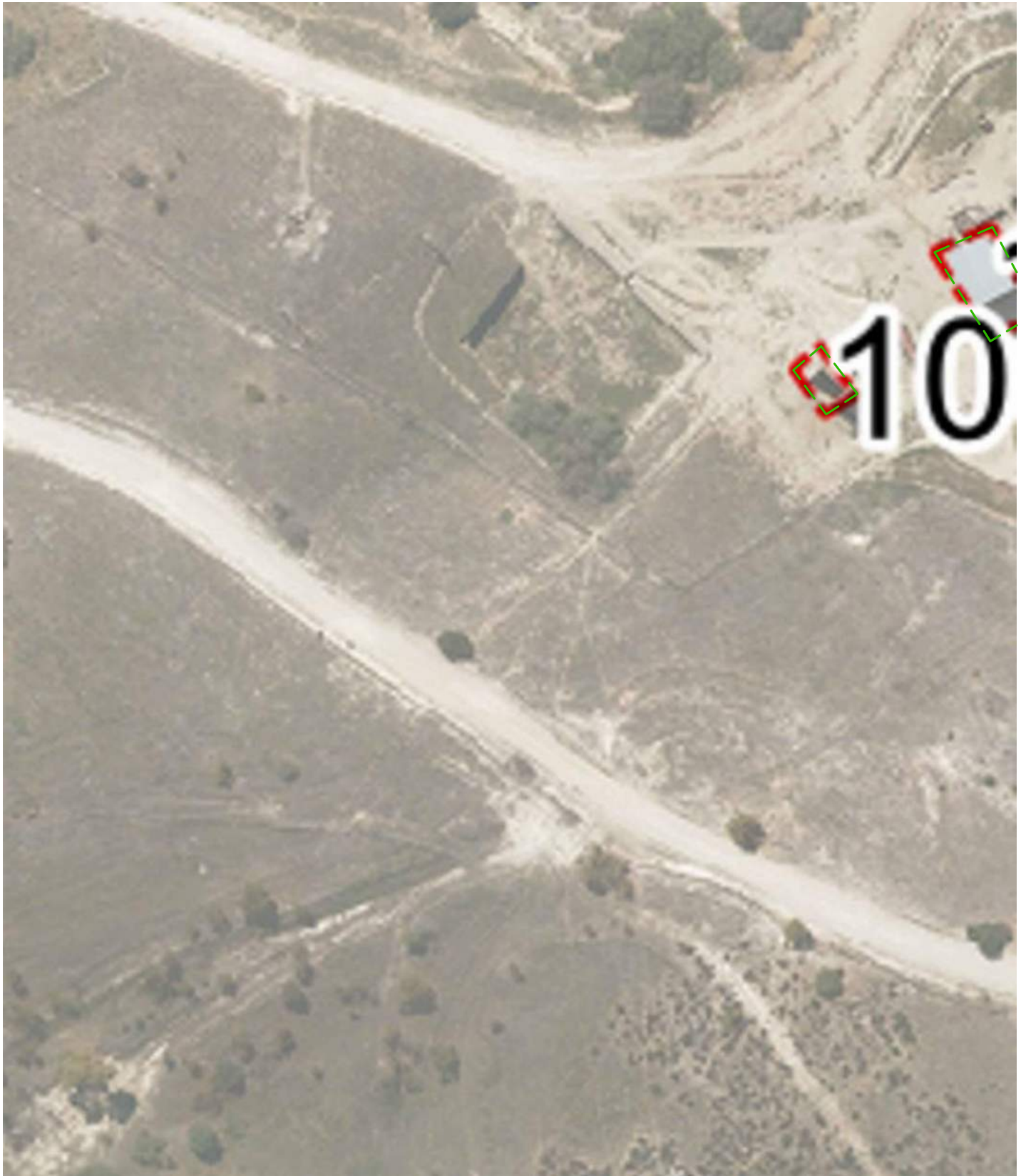www.swanburypenglase.com

LEGEND

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— — —   EXISTING SAHR SHAPE FILE

SCALE: 1:1000

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**BURRA MINES HISTORIC SITE (INCLUDES BURRA JUNKER)**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**10970-06**

# 10989: Former Burra Smelts Historic Site



## Item identification

| | |
|---|---|
| **Current name of item:** | Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office |
| **Current use:** | Museum Ruin |
| **Address/Location of Item:** | Smelts Road, Burra |
| **CT Reference:** | CT 5333/577 F171450 A91, CT 5409/72 F186880 A368, CT 5783/900 F210067 A91, CT 5793/688 F186848 A336, CT 5879/402 F186995 A483 |
| **Heritage Listing Status:** | <u>State</u><br>SAHR No. 10989<br>Confirmed 8 November 1984<br>Heritage database no. 14319<br><br><u>National</u><br>Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017 |



2018: Source: Photograph taken by Swanbury Penglase

## History

Following the establishment of the Burra Burra Mine, copper ore was transported initially to Swansea in Wales for processing and later to the Yatala Smelting Works. Both necessitated the carting of ore using bullock carts on unmarked, dirt tracks and roads. In the summer of 1848, it was estimated that there were 1,200 bullock carts, each carrying 2½ tonnes of ore, on the road to Adelaide.[1] Thus, it was desirable for further concentration of the ore to minimise transport and the construction of a local smelter was investigated. After SAMA's failed attempt at smelting, SAMA leased land on the east side of Burra Creek to the English smelting firm, the Patent Copper Company (later the English and Australian Copper Company). In 1848, the Company "was preparing to send out to South Australia 'the whole *materiel* [sic] for a smelting establishment, accompanied by practical assistants and ample means of support'".[2] In May 1848 it was reported the "imminent departure from Swansea of the barque *The Richardsons* of 361 tons, charted especially by the Patent Copper Company of Swansea to transport 'materials, men and staff' sufficient to establish a smelting-works in South Australia. 'Including women and children, the party will number not fewer than 70 souls. A surgeon has been engaged to accompany them'".[3] On 3 October 1848, *The Richardsons* arrived in South Australia.

On 11 December 1848, the foundation stone was laid for the Smelting Works. By mid-January a "furnace-house to contain eight furnaces was under way, thirty feet of the furnace chimney had been erected and a casting-house and assay offices had been completed. The Company was advertising for firewood, slates for roofing, and large numbers of teams and drays. By mid-February it was reported that 'furnaces, stocks, shops, houses, stables, and works of all kinds are progressing rapidly and in about two months' time the copper smelting is expected to begin at the rate of 800 to 1,000 tons of ore per month'".[4] In April 1849, the "first furnace was ceremoniously lit",[5] and by 6 May 1849, several furnaces were completed, and they were smelting "day and night".[6] While there were five other smelters operating across South Australia by this time, the Burra Smelter is considered "integral to Burra's copper mining past, and one of the earliest major smelting works established in South Australia".[7] By 1851, there were sixteen furnaces in operation, initially using timber from crown land but the Land Commissioner later stopped this practice.[8] Coal therefore had to be carted from Port Adelaide or Port Wakefield. In c.1853-54, the Company imported mules and their drivers from Chile to aid in carting. With the opening of the company's Port Adelaide smelter in 1862, smelting operations at Burra declined and in late 1863 some of the older smelters were dismantled. The works closed down in early 1869. The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, records on the site; offices, cottages, stone house – "9 rooms, stables, yards, & sheds, smelting works & workshops, 80 acres open pasture @ 1/6 £6".[9] Components of the buildings were salvaged over the subsequent years. The tall brick chimney stack was demolished by dynamite in 1956 when it was considered to be dangerous.

The Former Smelts Historic Site includes the Smelts Manager's Residence and Office. It was reportedly built c. 1849 and "originally housed the offices of the English and Australian Smelting Co. and the residence of its manager".[10] In 1881, the offices "were converted to residential use".[11] The residences were leased until 1917 when the Smelting Company sold the property including the entire smelting site. Miss E.M. McBride purchased the site and, in 1920, subdivided it.[12] There has been a number of private owners since that time.

## Description

Former Burra Smelts Historic Site including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office occupies a large area from the west bank of the Burra Creek through to Smelts Road to the east. The Bridge Abutments are located on either side of the Burra Creek east of the original mine entrance road, and provided access between the mine and the smelters. The other components are concentrated near the east side of the site. With the exception of the Smelts Managers Residence and Office, which has been converted into a residence, all of the other components are in ruins. The remnants are primarily masonry with the outline of the base of various walls being visible together with remnants of paved areas. Other floors etc. are likely to be concealed below debris from collapsed walls etc. The Smelts Managers Residence and Office is a single storey structure which has two attached buildings with a party wall. It is constructed from stone with a gable roof and skillion verandah. It has several masonry chimneys together with timber framed doors and windows.

## Significance

The Burra Smelts Historic Site is significant because of its close association with the Burra Burra Mine. The Smelts were integral in processing the copper ore from the Mine which eliminated the need to cart ore over long distances. The Smelts facilitated the success of not only the Mine but also the townships of Burra Burra. It was one of the earliest Smelting Works of a significant size in Australia and one of the earliest major smelters in South Australia.[13] The English and Australian Copper Company was one of the earliest major foreign investors in the State.[14]

## Condition Notes

With the exception of the Manager's Residence and Offices, the remaining elements are in a ruinous state and suffer from the below issues:

▪ Stone and pointing deterioration where the latter remains, due to rising and falling dampness

▪ Undermining of remaining wall sections

▪ Damage caused by vegetation, particularly trees and woody weeds

## Endnotes

1    Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.
2    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.
3    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.
4    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.
5    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p172.
6    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p168.
7    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
8    Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10024.
9    http://www.burrasa.info/pages/kooringaward.html
10   Burra Heritage Plaque
11   Burra Heritage Plaque
12   Burra Heritage Plaque
13   Auhl, Ian, "Burra Conservation Plan: Historic Buildings and Areas Survey", p44.
14   Iwanicki, Iris, Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10989.
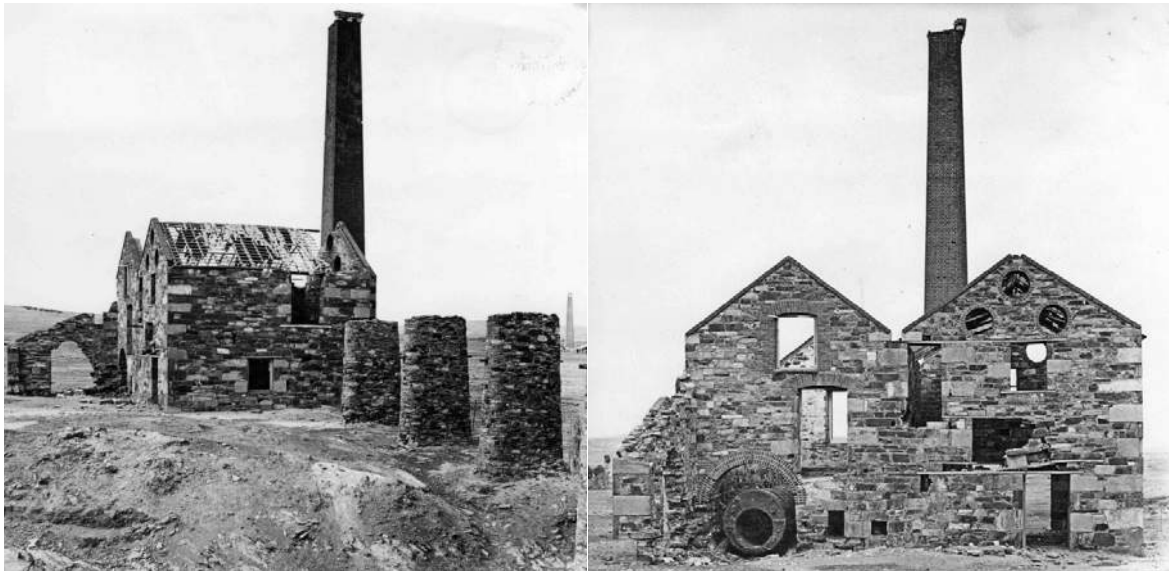
## Historic Photos



Former Burra Smelts Historic Site by S.T. Gill, 1850. Source: Art Gallery of South Australia



Ruins of the Burra Smelting Works 1890s. Source: The Burra History Group Inc.

Ruins of the boiler-house at the Burra Smelter 1890s. Source: The Burra History Group Inc.



"Old Burra Smelting Works", 1890s. Source: Art Gallery of South Australia

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*



2018: Source: Photograph taken by Swanbury Penglase

*Storage Yard*

2018: Source: Photograph taken by Swanbury Penglase

*Smeltermen's Cottages*



2018: Source: Photograph taken by Swanbury Penglase

*Smelter Flue*

2018: Source: Photograph taken by Swanbury Penglase                    *Smelter Chimney*



2018: Source: Photograph taken by Swanbury Penglase                    *Charge Yard*

2018: Source: Photograph taken by Swanbury Penglase                    *Interior View*



2018: Source: Photograph taken by Swanbury Penglase                *Smelting Furnace*

2018: Source: Photograph taken by Swanbury Penglase

*Smelts Manager's Residence & Offices*

## LEGEND

| | |
|---|---|
| — · — | TITLE BOUNDARY |
| ▬▬▬ | SIGNIFICANT PORTION OF THE STRUCTURE |
| ─ ─ ─ | EXISTING SAHR SHAPE FILE |

SCALE: 1:5000

**swanbury penglase**

**FORMER BURRA SMELTS HISTORIC SITE**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**10989-01**

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SLAG PILES

WALL AT GL

BRICK

SLAG

FLAT STONES
WALL AT GL

SLAG
FIRE
BRICKS

SLAG & BRICK
FRAGMENTS

BRICK FLUE?
EDGE OF FLUE
BRICK

SLAG & BRICK

PAVING

WALL AT GL
WALL FACE
AT GL

FLUE TRENCH

PIT

BRICK FLOOR

WALL FACE AT
GROUND LEVEL

VOID

DISTINCT TOP OF
WALL AT GROUND
LEVEL

BRICK FLUE EDGE

SECTION
UNDER-MINED

SLAG WALLS

STONE FLOOR

COBBLE FLOOR

NOTE: THE SIGNIFICANT PORTION APPLIES TO THE WHOLE OF THE SMELTS AREA AND INCLUDES RUINS AND ARCHAEOLOGICAL REMAINS NOT MARKED ON THESE DRAWINGS. STRUCTURES INDICATED ON THESE DRAWINGS ARE THOSE VISIBLE AT THE SURFACE ONLY.

CURVED EDGE OF
FLUE TO CHIMNEY

BASE OF BRICK
CHIMNEY

N

0        50        100        150 m

## LEGEND

— · —    TITLE BOUNDARY

——    SIGNIFICANT PORTION OF THE STRUCTURE

– – –    EXISTING SAHR SHAPE FILE

SCALE: 1:1000

## STRUCTURES KEY

1 - RUINS OF FIRST FURNACE HOUSE (1849)
2 - RUINS OF REFINING HOUSE (1849)
3 - RUINS OF SECOND FURNACE HOUSE (1851)
4 - RUINS OF CASTING HOUSE (1849)
5 - RUINS OF PAVED YARD (1848)
6 - RUINS OF WORKERS COTTAGE (1848)
7 - RUINS OF CHARGE YARDS
8 - RUINS OF KILN

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## FORMER BURRA SMELTS HISTORIC SITE
## 18188 CMP for Australian Cornish Mining Sites

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a

## LEGEND

—  ·  —   TITLE BOUNDARY

━━━━   SIGNIFICANT PORTION OF THE STRUCTURE

━ ━ ━   EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - FORMER SMELTER OFFICES AND RESIDENCE

**swanbury penglase**

## SMELTER OFFICE & RESIDENCE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**10989-03**

# 11187: Former Dugout Sites

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Dugout Sites |
| **Current use:** | Reserve |
| **Address/Location of Item:** | Mitchell Flat, Burra Creek |
| **CT Reference:** | CT 5864/98 F218454 A21 & 22 |
| **Heritage Listing Status:** | State<br>SAHR No. 11187<br>Confirmed 28 November 1985<br>Heritage database no. 14379 |

<u>National</u>
Identified in National Heritage Values (Gazette - C2017G00516), 4 May 2017



2018: Source: Photograph taken by Swanbury Penglase

## History

In 1851, it was recorded that there was a "total population of 4,403 men, women and children living in the townships of the Burra Burra Mine ... a total of 1,800 men, women and children are shown as living in 'the portion of the Burra Creek, adjoining Kooringa, Redruth and Aberdeen'. The compiler of the census found it necessary to explain in a footnote, 'There are no houses, the dwellings being excavated in the banks of the Burra creek'".[1] The thousands of people who lived in the Burra Burra Creek dug-outs were mainly miners and their families. The ""creek habitations" which are nothing more or less than excavations of a small size in the banks of a rivulet, at the present time supplied with water from the engines at the mine. As far as the eye can reach down the creek, these human wombat holes are to be seen – one long hole for a door, and a small square or round one for a window ... Such is the force of habit, that the miner never thought of building a house but mining one, and accordingly the Burra Creek is riddled like a honeycomb".[2] The interior of the dug-out was described as "whitewashed inside, and sometimes outside, the most of them having paling verandahs, lean-tos etc. The chimneys are merely holes opening from the footpath above, with a tub on a few clods put around. ... The great secret of their selecting such a place is its being rent-free".[3] The popularity of this type of housing was due to shortages in conventional housing, high rents charged by the SAMA for company housing and their failure to provide freehold land.[4] However, living in a creek bed had its perils. In 1851, there was a series of destructive floods which tore through the Burra Burra Creek and devastated the dug-outs. Fortunately, the number of fatalities was low with only one death being recorded. In fact, there were more deaths caused by the unsanitary conditions of the creek including the outbreak of diseases such as typhoid fever, smallpox and typhus. The floods of 1851 largely discouraged people from continuing to live in the creek however the practice did continue until 1859-60. In addition, SAMA began to refuse to hire those living in the creek.[5] By 1925, the only largely intact dugouts were those in the gully east of the creek on the property of Charles Grow. Reports of that time did suggest that others were likely still present but that due to the collapse of their fronts, they were difficult to identify.

## Description

This is essentially an archaeological site, with no remnants being visible above ground other than the occasional depression which may suggest the site of a dugout.

## Significance

The Dugouts were built prior to 1850 in the banks of the Burra Creek and its tributary, by predominantly Cornish miners as a form of free and expedient housing as opposed to living in SAMA's company township of Kooringa. The sheer scale of this housing, with up to 1,800 miners living in dugouts in 1851, is notable and rare. It is both testament to the size of the Burra Burra Mine and the number of Cornish miners who emigrated to work there. The dugouts are "intrinsically linked to the settlement and industrial life of early Burra".[6]

## Condition Notes

While essentially an archaeological site, it is noted that the drainage from the roadway to Flat Place on the east side of the site drains through the site potentially risking erosion and potentially further compromising the integrity of any remains.

## Endnotes

1    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p122.
2    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p124.
3    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p126.
4    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
5    Heritage SA, Burra State Heritage Area, website, https://www.environment.sa.gov.au/topics/heritage/state-heritage-areas/Burra, accessed 1 October 2018.
6    ANU Australian Cornish Mining Heritage Site, July 2014, p12.

## Historic Photos



"Burra Creek" 1850 by W.A. Cawthorne. Source: Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p125.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Overall View*

LEGEND

— · — TITLE BOUNDARY

**———** SIGNIFICANT PORTION OF THE STRUCTURE

**– – –** EXISTING SAHR SHAPE FILE

SCALE: 1:2000

STRUCTURES KEY

FORMER DUGOUT SITE

**FORMER DUGOUT SITES, BURRA CREEK**
**18188 CMP for Australian Cornish Mining Sites**

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September, 2019

**11187-01**

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# Former Foreman's Residence

## Item identification

| | |
|---|---|
| **Current name of item:** | Former Foreman's Residence |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 10 Market Street, Burra |
| **CT Reference:** | CT 5657/854 F21411 A57 |
| **Heritage Listing Status:** | Not Individually State Heritage Listed |
| | Within the Burra State Heritage Area |

<u>National</u>
Not referenced in the National Heritage Values



2018: Source: Photograph taken by Swanbury Penglase

## History

The residence is located on the original mine site. On the c.1852 mine site plan, the residence is denoted as the "Foreman's House".[1] On the 1867 mine site plan, the building is denoted as a "dwelling"[2] but on the later 1875 plan of the Township of Graham, which occupied the northeast corner of the mine site and was surveyed and sold by the SAMA, the building is denoted as "Mr Furniss".[3] The first assessment book for Kooringa, 1 July 1872 to 30 June 1873, recorded that Matthew H. Furniss occupied a stone house with 6 rooms on the mine site and it was valued £26. It also recorded that there were fourteen houses on the mine site associated with mine operations.

Matthew Henry Furniss (1825-1895) arrived in South Australia in 1851 from England. In his obituary, it was reported that he was employed by the SAMA as an accountant for the Burra mine "a position he held for twenty-four years".[4] He left Burra in 1874 to move to Adelaide. However, at his farewell dinner in 1874, it was reported that Furniss had resided in Burra for 23 years and was "employed as Clerk of the Burra Mines".[5] In Auhl's key text, *The Story of the 'Monster Mine',* he identified Matthew Furniss as "second assayer"[6] who worked as early as 1854,[7] and later stated that "Matthew Furniss, who had been appointed mine storekeeper in 1869, was asked to take over as Accountant in place of Challoner".[8] Auhl later stated that "Challoner's place was taken by William H. Furniss, previously chief storekeeper and Mine Assayer. Furniss resigned in 1874",[9] however it appears he was referring to Matthew Furniss and it is unclear who William H. Furniss was. Auhl went on to write that:

> "In July of 1874, Ayers wrote to Sanders asking him to arrange with the mine surveyor to lay out a new town-
> ship on Section 1 adjoining the mine. The new township of some six acres, divided into twenty-one allotments
> was named Graham … after 'Sammie's' wealthiest shareholder, J.B. Graham. Buildings already within Graham
> were the Smelters Arms Hotel, the mine hospital and the home of the mine assayer, Mr Furniss. Allotments in
> the new township were ready for sale by April 1875 but there was little demand, either for land in Graham, or in
> Graham East, subsequently laid out on the flats east of the Burra Creek by the S.A.M.A. in 1905".[10]

Thus, the building appears to have been the residence of Matthew Henry Furniss. The position which Furniss held in the SAMA appears to have changed over time. It is clear though that, as denoted on the C. 1852 plan of the Mine, the early use of the house was the Foreman's Residence. Other important individuals also resided on the mine site such as the Mine Captain, Mine Accountant, and there was also a Watchman's House.[11]

## Description

The Former Foreman's Residence is a single storey hipped roof structure constructed from coursed bluestone with white lined pointing. It is a symmetrical double fronted cottage with a bullnose verandah and has a central door with timber framed double hung windows with glazing bars either side. There is a random rubble bluestone rear lean-to with a skillion roof clad with corrugated roof sheeting. There are also later adjoining skillion carports to each side.

## Significance

The Former Foreman's Residence is significant because it dates from the early period of the Burra Burra Mine. Although it is a typical dwelling, its location - on the mine site, and use – housing the mine Foreman, both demonstrate the importance of these supporting structures to the operation of the Mine.

## Condition Notes

The Former Foreman's Residence is generally in good condition and is currently occupied. The following issues were noted:

- Large addition to rear.
- Verandah unlikely to be the original form.
- Intrusive carport structures to each side.
- Rising damp and salt attack in select areas.

## Endnotes

1    Burra Burra Mine plan, dated c.1852, C 178, State Library of SA (SLSA).
2    Burra Burra Mines plan, dated 1867. Department of Energy and Mining, SARIG website, Photo No. 039747, www.sarigbasis.pir.sa.gov.au, accessed 19 October 2019.
3    Plan of the township of Graham, the property of the South Australian Mining Association, dated 1875, C41, SLSA.
4    "The Late Mr M.H. Furniss", *Adelaide Observer*, 29 June 1895, p30.
5    "Dinner to Mr. M.H. Furniss, at Kooringa", *The Express and Telegraph*, 28 August 1874, p2.
6    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p235.
7    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p235.
8    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p371.
9    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, pp244-245.
10   Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p386.
11   Burra Burra Mine plan, dated c.1852, C 178, SLSA.

## Historic Photos



Former mine hospital at Burra mine site with Former Foreman's residence in the background. "Stacey, Wes. 1968, *Stone office building on Burra mine site, South Australia, ca. 1970*", National Library of Australia website, http://nla.gov.au/nla.obj-152105679, accessed 21 June 2019.



Former company store yard at Burra mine site with Former Foreman's residence in the background. "Stacey, Wes. 1968, *Stone wall at Burra mine site, South Australia, ca. 1970, 3*", National Library of Australia website, http://nla.gov.au/nla.obj-152109387, accessed 21 June 2019.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*



2018: Source: Photograph taken by Swanbury Penglase

*View of Context from North-West*

2018: Source: Photograph taken by Swanbury Penglase
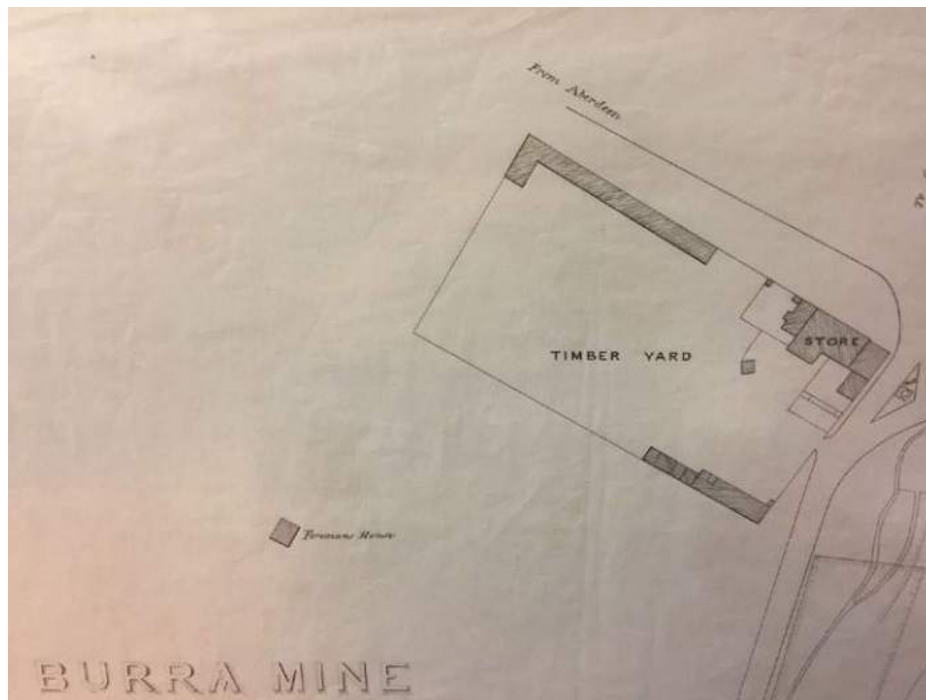
*View from East*



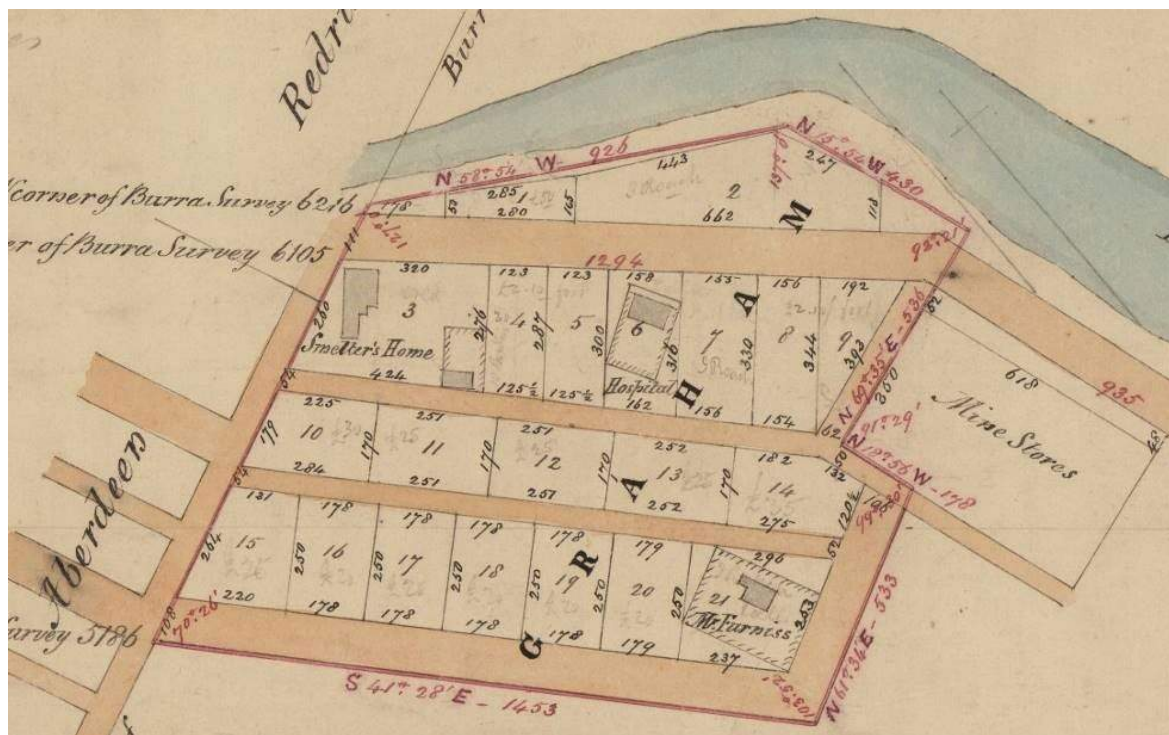2018: Source: Photograph taken by Swanbury Penglase

*View of Verandah from East*

## Other Material



"Burra Burra Mine Plan", c. 1852, Plan shows "Foremans House". Source: SLSA C178



Part of "The Township of Graham" map showing the Former Foreman's Residence noted as "Mr Furniss", 1875. Source: State Library of South Australia Map C41.

Part of 1867 SAMA "Burra Burra Mines" map showing the relationship between the Company stores building and yard and the Foreman's residence labelled 'dwelling' [indicated]. Source: Department of Energy and Mining, SARIG website, Photo No. 039747, www.sarigbasis.pir.sa.gov.au, accessed 19 October 2019.

EXTENT OF C. 1850'S FABRIC UNKNOWN

UNLISTED 3

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

— — — EXISTING SAHR SHAPE FILE

SCALE: 1:200

## STRUCTURES KEY

a - C.1850'S DWELLING. ORIGINAL CHIMNEYS LOST.
b - LATER LEAN-TO
c - CARPORT
d - CARPORT
e - LATER BULLNOSE VERANDAH

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penglase

## FORMER FOREMAN'S RESIDENCE
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

-01

# Mine Hospital

## Item identification

| | |
|---|---|
| **Current name of item:** | Mine Hospital |
| **Current use:** | Private Dwelling |
| **Address/Location of Item:** | 18 Market Street, Burra |
| **CT Reference:** | CT 5697/ 455 F21411 A65 |
| **Heritage Listing Status:** | State<br>Not Individually State Heritage Listed<br>Within the Burra State Heritage Area |
| | National<br>Not referenced in the National Heritage Values |



2018: Source: Photograph taken by Swanbury Penglase

## History

As was the practice in Cornwall, medical care and welfare relief was provided to men working at the Burra mine from a common 'club and doctor' fund. Miners were levied for contributions to a fund out of which the salaries of two resident doctors was paid, and support from the fund also extended to convalescence at home.[1] However, the provision of a dedicated hospital building was generally viewed with suspicion by the miners. The first miners' hospital in Cornwall was not constructed until 1864.[2] It is curious then that the South Australian Mining Association elected to construct a mine hospital at Burra. The motivation for the venture may have been prompted by rising criticism of the mine proprietors concerning the welfare of mine workers.[3] The arrangement however was used as a model for those calling for a similar arrangement to be adopted at the Yorke Peninsula mines.[4]

In 1847, SAMA ordered Superintendent Samuel Stocks to find a suitable site for a cottage hospital. Construction started in the same year and the cottage was completed in early 1848.[5] Although it was initially leased as a residence, in 1850 the cottage reverted to its intended use as a hospital and run by the mine doctor, Dr Henry Chambers.[6] On an c.1860-1870 map of Kooringa, and an 1875 map of the township of Graham, the mine "Hospital" is clearly shown.[7]

There is only limited evidence about its operation as Burra was considered a safe mine, with only 15 fatal accidents in 32 years of operation.[8] According to historian Ian Auhl, the "hospital was little used except as an immediate place of reception for men injured on the mine and as a morgue for victims of fatal mine accidents. Cornish miners had a strong aversion to using the mine hospital. They preferred the security of their own homes and of traditional remedies".[9] By 1869 the hospital was deserted and children of the Opie family rummaging around found the body of a newly-born infant under the floor-boards.[10] As Auhl comments, "It was hardly to be wondered that the isolated cottage hospital built on the side of a bare hill became known as 'Bleak House'".[11] It was used as one of the many places of refuge for families living in the dugouts made homeless by the floods in the Burra Burra Creek in May 1851.[12]

In 1871, it was again rented as a residence, but in 1875 SAMA donated it to the community with the adjoining land for its conversion into a new general hospital for the public.[13] Although this gift was initially accepted and alterations commenced, it was returned in exchanged for the purchase from SAMA of the original Burra Hotel which was considered a better building and site. The former hotel was then converted into the Burra Hospital and opened on 27 February 1877, and while the hospital remains on that site, the original building was demolished and replaced in the 1960s.[14] From 1887 to 1907, the former Mine Hospital was used as the Burra High School.

Although the building has been extended, initial investigations indicated that the early portion of the building is largely intact although some changes have occurred to the separate mortuary building located to the rear which has been integrated into a shed.

## Description

The mine hospital is a substantial symmetrical stone cottage with a central door and a pair of windows each side. It has a hipped roof clad with corrugated roof sheeting and a bullnose verandah clad with corrugated roof sheeting which returns around one side of the cottage, the return being constructed post-1970. There are two prominent stone retaining walls at the front of the house; one which forms the verandah plinth and includes steps which lead to the entrance door. To the rear of the cottage are two stone lean-tos with skillion roofs clad with corrugated roof sheeting. They are both rendered and have red brickwork quoins to window and door openings. The doors are timber framed as are the double hung windows.

The mortuary is located to the west at the rear of the building and has been integrated into later shedding.

## Significance

The Mine Hospital was constructed by the SAMA in c.1847-1848 at the Burra Mine to attend injured men. While it appears to have received limited use for its intended purpose, it was an integral part of the infrastructure of the mine and is a further example of the transplanting of Cornish mining traditions to Burra. No other comparable company constructed mine hospital is known to exist in Australia, or elsewhere, and further research is needed to understand its national and international significance.

## Condition

The mine hospital is generally in fair condition and is in current use as a residence. The following issues were noted:

- Signs of red rust to roofing.
- Severe salt attack and rising damp to lean-to walls to the rear of the cottage. The likely cause is a combination of a solid internal floor, poor site drainage and leaking laundry drain.
- Intrusive alterations and additions in concrete block.
- The integrity of the mortuary is unknown. It is believed that internal walls to the enclosing shed walls have been removed.

## Endnotes

1    Johns, Keith R. 'The Cornish at Burra', *Journal of Australasian Mining History*, Vol. 4, September 2006
2    Cornwall Website, https://www.cornwall.gov.uk/environment-and-planning/conservation/world-heritage-site/delving-deeper/mining-characters-and-society/work-life/, accessed 16 October 2019.
3    Pike, Douglas *Paradise of dissent- South Australia 1829-1857.* (Longman, Green), 1957; p334.
4    "Kadina", *The Wallaroo Times & Mining Journal*, 23 June 1866, p5.
5    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321.
6    Dr. Henry Chambers was reportedly a nephew of Captain Matthew Flinders. He arrived to South Australia in 1849, but returned to England a few years later. On returning to South Australia he settled in Adelaide and was for some time in charge of the Adelaide Hospital and City Coroner. Refer: "CONCERNING PEOPLE", *The Register,* 23 June 1913: p.6.
7    SLSA Map C41
8    Keith Johns, R, "The Cornish at Burra, South Australia", *Journal of Australasian Mining History*, Volume 4, September 2006, p.172.
9    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321
10    "THE REVENUE AND EXPENDITURE", *South Australian Register,* 5 February 1869: p.2
11    Auhl, Ian, *The Story of the 'Monster Mine': The Burra Burra Mine and Its Townships 1845-1877*, p321
12    "Waterspout at Kooringa", *Adelaide Times*, 17 May 1851 p3.
13    "Another Munificent Gift", *South Australian Register*, 5 July 1875, p.5.
14    "The Burra Hospital", *South Australian Register*, 24 May 1878, p6.

## Historic Photos



Former mine hospital (Bleak House School), c.1905. Source: The Burra History Group Inc.



"Stacey, Wes. 1968, Stone office building on Burra mine site, South Australia, ca. 1970", National Library of Australia website, http://nla.gov.au/nla.obj-152105679, accessed 21 June 2019.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Market Street)*



2018: Source: Photograph taken by Swanbury Penglase

*Exterior View*

2018: Source: Photograph taken by Swanbury Penglase

*View from South*



2018: Source: Photograph taken by Swanbury Penglase

*Rear View (West)*
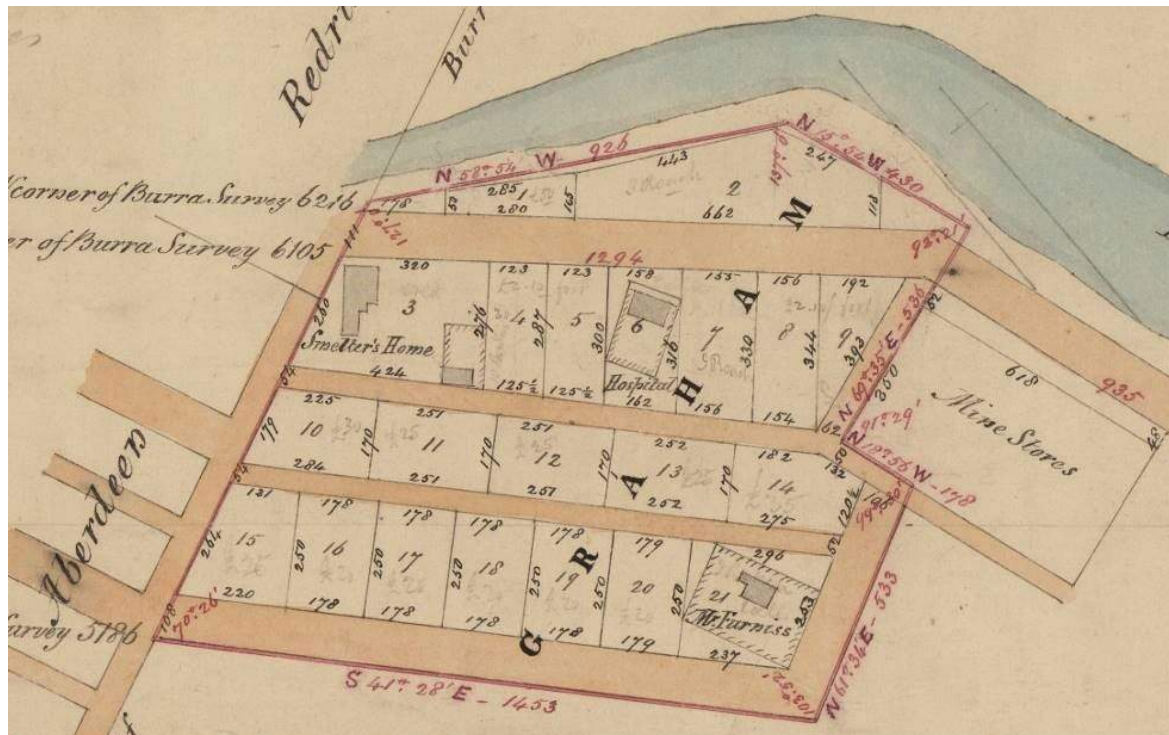
2018: Source: Photograph taken by Swanbury Penglase          *View of Outbuilding (former Mortuary) from North-East*
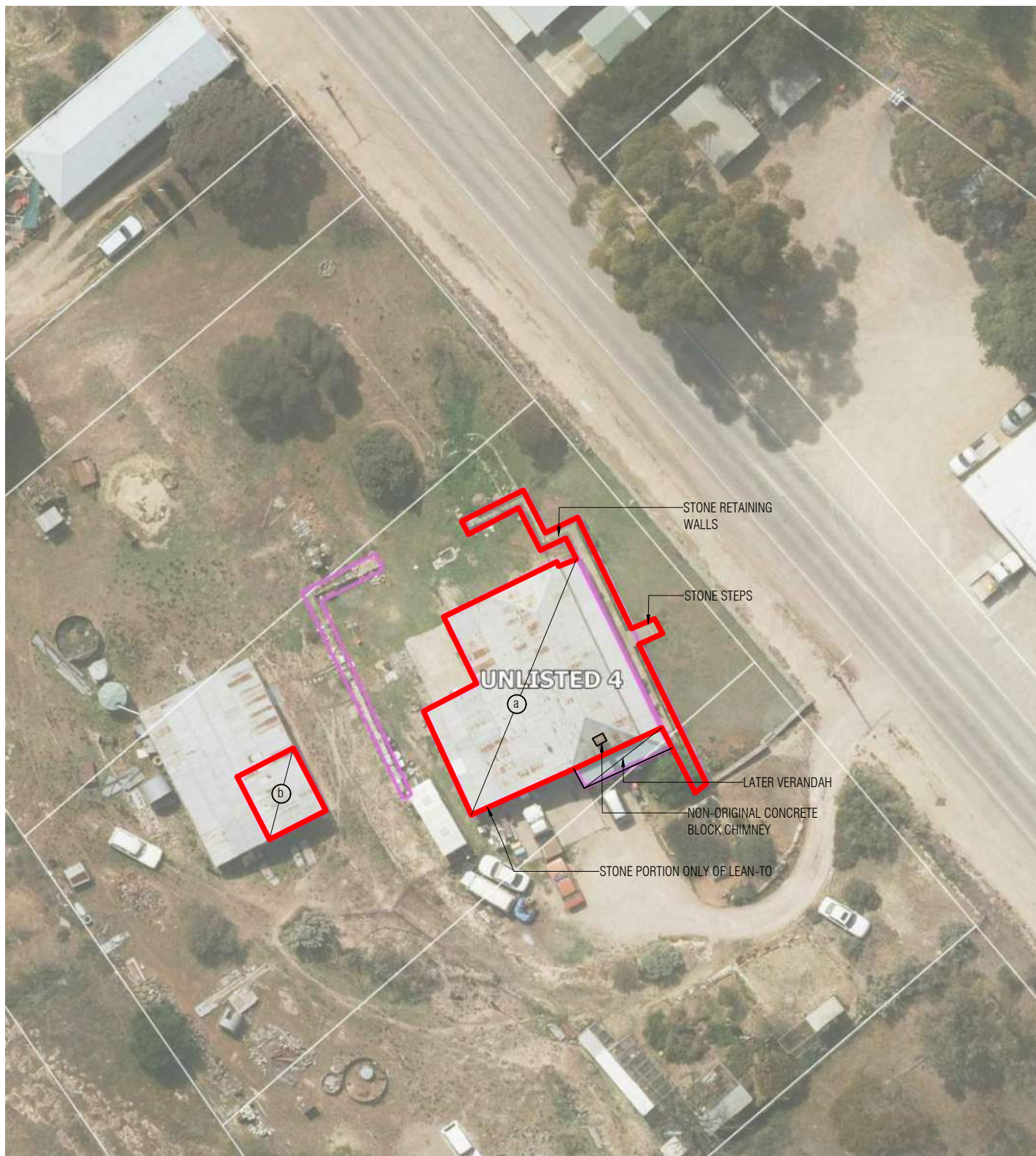
## Other Material



Part of "The Township of Graham" map showing the Mine Hospital, 1875. Source: State Library of South Australia Map C41.

STONE RETAINING WALLS

STONE STEPS

UNLISTED 4

LATER VERANDAH

NON-ORIGINAL CONCRETE BLOCK CHIMNEY

STONE PORTION ONLY OF LEAN-TO

## LEGEND

— · — TITLE BOUNDARY

━━━ SIGNIFICANT PORTION OF THE STRUCTURE

– – – EXISTING SAHR SHAPE FILE

SCALE: 1:500

## STRUCTURES KEY

a - C.1848 MINE HOSPITAL
b - C.1848 MORTUARY

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## FORMER MINE HOSPITAL & MORTUARY
## 18188 CMP for Australian Cornish Mining Sites

September, 2019

**-01**

# Redruth Wesleyan Church

## Item identification

| | |
|---|---|
| **Current name of item:** | Redruth Wesleyan Church |
| **Current use:** | Bed & Breakfast Accommodation |
| **Address/Location of Item:** | 4 Ludgvan St, Burra |
| **CT Reference:** | CT 6065/ 986 F186855 A343 |
| **Heritage Listing Status:** | Not individually listed within the Burra State Heritage Area |



2018: Source: Photograph taken by Swanbury Penglase

## History

The Cornish brought Methodism to Burra. It was the predominant Christian denomination in Cornwall and few areas of the United Kingdom were so overwhelmingly identified with the Methodist movement,[1] of which there were three main branches including the: Wesleyans, Bible Christians, and Primitive Methodists. The "first religious service"[2] was held in Burra by the Wesleyans in 1846 at the home of a local preacher, John Chapman. The Wesleyans were one of the main religious groups in Burra, as demonstrated by the 1855 census, which records that the "greatest number of Wesleyans returned in any one district [in South Australia was] … 795, in the District of Burra".[3]

In c. 1852, construction commenced on the Wesleyan Chapel in the newly established town of Redruth.[4] This building had an inauspicious start due to the loss of population caused by the Victorian gold rushes, and although it appears to have been completed, its roof and fittings were removed in 1854 to construct another church near Clare. It was later rebuilt and was apparently in use by 1857.[5] It was replaced in 1874 by the current church constructed at a cost of £600, for which the construction of the masonry and plastering was the responsibility of James Tiver. It was designed by the Adelaide architect Rowland Rees, who at that time was also the local Member of Parliament in the South Australian House of Assembly.[6] The completed building, which internally was 42x24 feet and could seat 200, was opened on 20 September 1874.[7]

An important part of Wesleyan Church was the Sunday School, and for this purpose an addition was soon erected to the rear of the building soon after its completion. Due however to a growing congregation a decision was made in 1879 to remove the wall separating these sections to provide an additional 100 seats.[8] The importance of the Sunday School can be seen in the substantial adjoining building erected fifty years after the completion of the church in 1924.[9]

The Redruth church was closed as a centre for regular worship in 1970 and the building lay vacant until 2011 when it was bought for conversion to bed and breakfast style accommodation.[10] The adaptation to a dwelling included the installation of a kitchen to the eastern end of the transept and the conversion of the former vestry to amenities.

## Description

Redruth Wesleyan Church is a single storey structure. It is a substantial building constructed from coursed bluestone with white lined pointing. It has a symmetrical front façade with a central arched door opening with decorative pilasters and capitals and a pair of timber double doors. There is a central louvred oriel window above. There are painted, stepped stone buttresses to the corners. The gable parapet is surmounted with a small spire. Each side of the Church is divided into bays defined by pilasters which sit on a plinth. In each bay, sits an arched window with rendered quoins and sills. The front section of the Church has a gabled roof clad with corrugated roof sheeting. This section intersects perpendicularly with the middle section of the building which is also constructed from bluestone and has a gabled roof clad with corrugated roof sheeting and stone gables at each end. There is a later rear section with a gabled roof clad with corrugated roof sheeting and a stone gable at the end with a decorative window. There is a stone outbuilding and several stone walls on the site.

## Significance

The Wesleyans were a prominent group of Burra's townspeople. This Church represents this denomination and was constructed during the period of significance.

## Condition Notes

The building is in a good state of repair and retains most of the structure's early features. The form and design of the building have been substantially maintained. The conversion to a dwelling has been done sensitively and has not diminished its integrity.

The following issues were noted at the inspection:
- Dolomite gravel has been laid adjacent to the base of walls. Dolomite can contain high levels of salts.
- Build-up of level adjacent to the base of walls and lack of perimeter paving
- Rising damp and salt attack to lower portions of walls. Select areas have been repointed using cement mortars.
- Rusted roof sheets
- Biological growth to rendered surfaces: copings, string courses, sills & buttresses

## Endnotes

1   Payton, John Philip, *The Cornish in South Australia: Their Influence and Experience from Immigration to Assimilation*., A thesis presented for the Degree of Doctor of Philosophy, University of Adelaide, 1978., p436.
2   In c.1849, 400 people attended each of the three daily services at the Wesleyan Chapel. Refer Alvey, Harry, Burra, Its Mines and Methodism, p7. Refer to: Register of State Heritage Items, Item Evaluation Sheet, Heritage SA Research Packet 10013.
3   "The Census of South Australia for 1855", *Empire*. 3 September 1855, p.2.
4   "88th Anniversary of the Burra-Redruth Methodist Church", *Burra Record*, 30 May 1939, p3.
5   "Burra Methodism", *Australian Christian Commonwealth*, 4 April 1930, p3.
6   "Building Improvements", *The South Australian Advertiser*, 31 January 1874, p5.
7   "Religious and Philanthropic", *South Australian Register*, 10 October 1874, p6.
8   "Burra Wesleyan Church", *South Australian Register*, 9 December 1879, p5.
9   "A New Sunday School", *Chronicle*, 19 April 1924, p13.
10  Heritage SA, *Redruth Methodist Church – Conservation Management Strategy*, May 2013

## Historic Photos
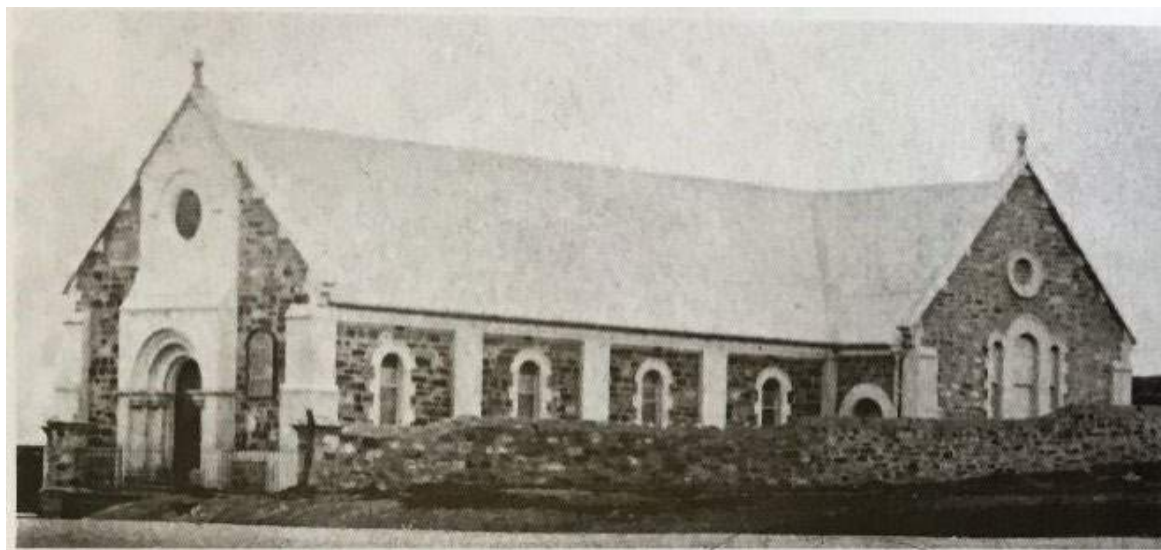


Redruth Wesleyan Church, undated. Source: The Burra History Group Inc.



REDRUTH-METHODIST-CHURCH

Source: Courtesy of Burra History Group.

## Current Photos



2018: Source: Photograph taken by Swanbury Penglase

*Street View (Ludgvan Street)*



2018: Source: Photograph taken by Swanbury Penglase

*View of Entrance from South-West*

2018: Source: Photograph taken by Swanbury Penglase

*Rear View (West)*



2018: Source: Photograph taken by Swanbury Penglase

*View of Outbuilding from North*

Source: Conservation Management Study: Old Redruth Methodist Church, 2013          *Interior View*



*Interior Views*
Source: Conservation Management Study:
Old Redruth Methodist Church, 2013



*Interior Views*
Source: Conservation Management Study:
Old Redruth Methodist Church, 2013

***Interior Views***

Source: Conservation Management Study:
Old Redruth Methodist Church, 2013

RETAINING WALL COLLAPSED

(b)

(a)

UNLISTED 2

## LEGEND

— · —   TITLE BOUNDARY

━━━   SIGNIFICANT PORTION OF THE STRUCTURE

— — —   EXISTING SAHR SHAPE FILE

SCALE: 1:2000

## STRUCTURES KEY

a - C.1874 CHURCH
b - EARLY STONE OUTBUILDING

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**REDRUTH WESLEYAN CHURCH**
**18188 CMP for Australian Cornish Mining Sites**

September, 2019

**-01**

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