

DRAFT

Burra Township and Historic Mine Site Conservation Management Plan

July 2019, ref 18188

Swanbury
Penglase





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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.

Executive Summary



Preface

Our new Conservation Management Plan for the National Heritage List Australian Cornish Mining Sites: Burra has been 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.

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.

The Conservation Management Plan will be used as a tool by Council and management to conserve, protect, identify, present, transmit and enhance the National and State Heritage values of the Australian Cornish Mining Sites: Burra to all generations.

David J Stevenson CEO
Regional Council of Goyder

May 2019

Executive Summary

Swanbury Penglase were engaged by the Regional Council of Goyder to develop a Conservation Management Plan (CMP) for the town of 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.

Burra is an important pastoral district and well-preserved historic mining tourism town in the mid north of South Australia. The town form of Burra presents as a collection of townships created as a result of copper being discovered and land divided to allow for prospecting. The Burra Creek runs through the centre of the town, and the Bald Hills Range of the northern Mount Lofty Ranges provide a scenic backdrop to the town.

From its peak population in the 1850's of approximately 5000. Burra's population has reduced significantly to just 907 people (2016 Census).

The significance of the investment in Cornish mining practices and infrastructure, and the development of the town fabric which is still relatively intact is what led to the development (and naming) of the Burra Charter in 1979. This important guidance document defines the core principles and procedures required to enable the conservation of heritage places in Australia.

The overall purpose of this CMP is to formulate a strategic and holistic cross-discipline approach to the management of the National Listing of Australian Cornish Mining Sites in Burra, in the context of the surrounding town.

The Plan determines the cultural significance of the Nationally listed places and seeks to introduce a hierarchy of levels of significance based on research, review, physical investigation and best practice methodologies.

The conservation policy chapter provides general overarching principles and town wide objectives which establish the overall basis for decision making, followed by policies related to the heritage listing of the place, its use and the fabric overall, before establishing detailed policies and guidelines relating to precincts in Burra.

It is envisaged that the policy and guidelines written as part of this CMP are adopted and included, or at least referenced in the Regional Council of Goyder 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.

It should be noted that the policies written in this CMP 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.

The Plan includes an Implementation chapter which advises on future management and funding opportunities for conservation actions and proposes a priority of actions based on the significance of place, and the immediacy of works needed for places at risk.

Tourism is an important component of this CMP. Key strategic documents such as the Goyder Tourism Strategic Plan 2017, the Goyder Master Plan 2018 - 2033, and the Burra Tourism Concept - Feasibility Study 2015 have guided the creation of conservation policy which is complementary to the objectives and outcomes of these documents. In some cases the priority of conservation actions for particular places has been influenced by these documents to assist in leveraging synergies for their implementation.



1. Introduction



Background

This CMP was commissioned by the Regional Council of Goyder and addresses the Australian Cornish Mining Sites: Burra located in the Mid North region of South Australia. The Cornish Mining Sites at 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 (**Figure 1**) 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 with change. It is intended to be used as a tool by Council and State and Commonwealth Government agencies to inform future development and decision making and management strategies for Burra.

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.

Objectives

The primary objectives of the CMP are to:

- Review, identify and analyse the heritage values of Burra 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 a historic township.
- Contribute to the community's sense of identity – its past, present and future.
- Provide the basis for ongoing cultural resource management.

In addition, the Plan has the opportunity to influence:

- Tourism and marketing of heritage sites.
- The aesthetic form, function and accessibility of the town and to its heritage sites.
- Staging and sequencing of projects.
- Funding opportunities.

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, Llchwyr and Hampton and other key elements such as the Mine site, Smelts site, the cemetery and the Burra Creek.



Figure 1: Burra State Heritage Area

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.

To assist with defining what constitutes authenticity and integrity, definitions have been drawn from the 'Operational Guidelines for the Implementation of the World Heritage Convention 2013. (Refer to Figure 2)

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 town 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 the Environment and Energy – 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 town showing all State Heritage registered places, as well as those listed in the National Values Statement was pinned up for attendees to interrogate and add notes / queries and concerns to via post-it notes.

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.

Physical Investigations

A week-long exercise was carried out in Burra to undertake a physical inspection of all state heritage places listed in the National Heritage Values Statement. This inspection process analysed the condition and heritage value of the sites listed 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.



Level of Significance	Definition
A Exceptional significance	These elements are essential to the significance of the place. They play a crucial role in supporting this significance.
B High significance	These elements are of high significance. They play an important but not necessarily crucial role in supporting the significance of the place.
C Moderate significance	These elements are of moderate significance and provide support to elements or functions of higher significance. They play a role in supporting the significance of the place, but may be inadequate in their current configuration or use.
D Low significance	These elements are of low significance. They play a minor role in supporting the significance of the place, or may have been compromised by later changes.
int Intrusive	This relates to an item or component that obscures, impedes, diminishes or otherwise damages the significance of an element or its component parts.
The following definitions have been drawn from the 'Operational Guidelines for the Implementation of the World Heritage Convention' 2013:	
Authenticity	Is a measure of the honesty of a place as an authentic product of its history and of historical processes. Cultural heritage places may meet the conditions of authenticity if their cultural values are truthfully and credibly expressed through a variety of attributes such as form and design, materials and substance, traditions, techniques and management systems, location and setting, language and other forms of intangible heritage, spirit and feeling. Sources of information about these cultural values should also be credible and truthful.
Integrity	Is a measure of the wholeness and intactness of the place and its attributes. Examining the conditions of integrity, therefore, requires assessing the extent to which property: <ol style="list-style-type: none"> includes all elements necessary to express its Outstanding Universal Value; is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; suffers from adverse effects of development and / or neglect.
The following definitions are based on relevant dictionary meanings, adapted for this Conservation Management Plan :	
Tangible	Means something that can be perceived by touch, and can be measured, and includes the form and fabric of the places. (E.g. form and fabric of the shells)
Intangible	Means an abstract quality, value or aspect of the place that cannot be perceived by touch. It includes cultural practices and performance, and may be perceived at an emotional, intellectual or cultural level, but cannot be precisely measured (E.g. the ability of the place to encourage excellence in the performing arts; its use as a venue for community celebrations; and the sense of anticipation and arrival evoked by the deliberately designed sequence of spaces, culminating in the performance)

Figure 2: Kerr's Levels of Significance

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 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 the Burra area and establishment of the Burra State Heritage Area.

Following the nomination of 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 Burra's national significance.

In addition, conservation plans and studies have been prepared for several heritage places mentioned in the 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).

Statutory Framework

Environment Protection and Biodiversity Conservation Act 1999

The *Environment Protection and Biodiversity Conservation Act 1999* is the Australian Government's central piece of environmental legislation. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places. The Act establishes the National Heritage List and a place may be included in the list if the Minister for the Environment is satisfied, after receiving formal recommendation from the Australian Heritage Council, that the place meets one or more of the National Heritage Criteria.

On 9th May 2017 the Australian Cornish Mining Sites: Burra was included in the National Heritage List. The place was included with a schedule that described its values under criteria (a) and criteria (f) of the Act. Refer Appendix A for a full copy of the gazette.

The Schedule specifies the boundary of the listing as the approximately 640ha at Burra comprising the Burra State Heritage Area (State Heritage ID 16183) and the accompanying statement describes numerous features within the boundary that demonstrate or express the National Values. Table 1 at the beginning of Chapter 4: Description provides a summary of the places specifically mentioned in the values statement.

Any action that may have a significant impact on the values of a National Place requires approval from the Minister. An action includes a project, development, undertaking, an activity or series of activities. The approvals process and how it relates to approvals under South Australian state laws is discussed in more detail in Chapter 5 – Policy of this report.



South Australian Heritage Places Act 1993

The *South Australian Heritage Places Act 1993* (Heritage Places Act) which replaced an earlier 1978 Act was enacted for the purposes of the identification, recording and conservation of places and objects of non-Aboriginal heritage significance, and establishes the South Australian Heritage Council. For the purposes of the Act, a State heritage area is referred to as a place.

Burra was a designated State heritage area in 1978 pursuant to the *South Australian Heritage Act 1978* and reconfirmed as a State heritage area under the transition arrangements of the 1993 Act. The extent of the Area was defined in the 1978 public notice by a map describing the area. Refer [Figure X](#). Separately, the Burra State heritage area contains seventy individual State heritage places and one object listed in the SAHR. Not all these places are considered significant to the national values mentioned above.

Responsibility for the Heritage Places Act falls within the portfolio of the South Australian Minister for Environment and Water. Places that are considered significant to the national values are subject to the requirements of both the EPBC Act and the Heritage Places Act. This document does not consider the state heritage values of individual sites but notwithstanding, the interrelation between the two Acts and approvals required is discussed in further detail in Section 6 – Implementation.

South Australian Development Act 1993 and the Goyder Council Development Plan

Development and planning in South Australia are controlled by the *South Australian Development Act 1993* (Development Act). The Development Act requires the establishment of a Development Plan for council areas, to be administered by the local government. A Development Plan is the statutory policy document intended to inform the community about how an area is expected to be developed and provides the basis against which development assessment decisions are made.

Development in Burra is guided by the Regional Council of Goyder Development Plan which set out objectives and principles of development control relating to state and local heritage places which have statutory effect within the Council area. As the places mentioned in the national values statement are also State heritage places, the policies guiding development in the context of the sites of national significance are relevant to conserving their values and are reviewed in this report.

South Australian Planning, Development and Infrastructure Act 2016

The *Planning, Development and Infrastructure Act 2016* (the PDI Act) was enacted in 2014 to replace the 1993 Development Act. The major changes include the consolidation of planning policy to a single state-wide Planning and Design Code, an online approvals system, and the establishment of an Accredited Professionals Scheme. It is anticipated that the new Act will be fully operational by mid-2020. The aim of this report is to provide planning and development policy for the Burra State heritage area that can easily be adopted into the new Planning and Design Code.

Aboriginal Heritage Act 1998

In South Australia the *Aboriginal Heritage Act 1998* requires the maintenance of a register of Aboriginal Sites and Objects. The Register is administered by the Department of State Development – Aboriginal Affairs and Reconciliation (DSD-AAR) on behalf of the Premier as Minister for Aboriginal Affairs and Reconciliation and is the first point of contact for land use proponents. Information in the Register may be sensitive and cannot be shared publicly but the DSD-AAR can provide guidance as to whether the Register identifies a site within a defined area. Applications for access to information must be made in writing.

In February 2019 a formal request was made to the DSD-AAR for information on registered sites within the Burra state heritage area. On 14th February 2019 DSD-AAR responded to advise that the Register has no entries for Aboriginal sites for the subject area.

Notwithstanding this, objects or remains may exist in the Burra area, even though the Register does not identify them. All Aboriginal sites and objects are protected under the *Aboriginal Heritage Act 1988*, whether they are listed in the central archive or not. Land within 200 metres of a watercourse in particular, may contain Aboriginal sites and objects. Aboriginal sites, objects or remains, discovered on the land, need to be reported to DSD-AAR.

Non-statutory Heritage Lists

National Trust (South Australia) Heritage Register

The National Trust SA keeps a list of individual buildings, groups of buildings, objects, significant trees, gardens or places of great environmental importance.

The purpose of classification is to raise public awareness of the state's heritage, and to preserve a permanent record of places that may be lost sometime in the future.

Numerous sites in Burra are entered on the National Trust list and several sites mentioned in the National Values Statement are owned, or are under the care of, the National Trust (SA). No significant trees are registered. There is no statutory consequence of the National Trust Register.

Tourism

Tourism is noted as a strong focus for Burra, and strategic documents such as the Goyder Tourism Strategic Plan 2017, the Burra Tourism Concept - Feasibility Study, 2015; and Exploring Heritage - South Australia, 2015 (Heritage SA) all contain key strategic goals that are considered in the CMP.

Policies and guidelines proposed in the CMP are intended to support and promote a broader tourism action plan, and reinforce that new development, tourism and the maintenance of heritage places can co-exist.

In addition, Council has prepared The Goyder Master Plan 2018 – 2033 which is a strategic long-term document, written as a community plan to guide the future direction for investment in the Council area. Heritage protection is included in one of the six pillars of the Master Plan (Our environment & Heritage is Protected and Valued), and Objective 26: Develop the Conservation Management Plan and 2018 Heritage Development Strategy is noted.

At the time of preparing this Conservation Management Plan, the 2018 Heritage Development Strategy has not been received or reviewed.

Heritage is an important component of Council's revenue, in 2017-2018 the Heritage Passport Sales contributed \$125,443 * to Council's income'.

Whilst the Master Plan is written to support Council wide initiatives, Burra features prominently in the Objectives Chapter. The following objectives are listed in the Master Plan for actioning as either short term or ongoing projects:

Bike Track

Scope: To create, extend upgrade and enhance the existing bike track with the inclusion of historical information strategically and specifically placed at points of interest along the trail to educate and inform the community and visitors to the region.

Street Caravan Parking

Scope: Engaging a specialist to establish a holistic approach to parking and redevelopment with access to accurate and realistic cost estimates.

Connectivity Burra North & South

Scope: Council supports the vision for connectivity throughout Burra. Connecting Burra North and Burra South will rebalance growth and Council will be able to deliver its benefits more equally and equitably to residents across the Region. A key strategy to connectivity is incorporating signage directing visitors accordingly.

Burra Cultural Precinct

Scope: The "Space" will see a unique collaboration with the Commonwealth, South Australian Government and Council to deliver a "Statement piece" based in the heart of Burra. A stunning addition to the region providing a venue for use as a creative studio, exhibition and performance space or conference venue to complement its historic setting. The flexibility of this venue will see an exciting time within tourism in Burra through the attraction of the festival, corporate and international markets to Burra and the wider Goyder region.

Paxton Square Cottages Heritage Site

Scope: To develop the internal space of Paxton Square for guest and community use including landscaping and beautification of the common space also completing salt damp damage on external walls.

Burra Skate Park

Scope: Council has engaged Town Planning HQ Pty Ltd to prepare a concept plan for the Burra skate park and better coordinate access and vehicle parking adjacent the park in a project that has become known as 'Finish the Skate Park'.

Sport & Recreation Shared Facilities

Scope: The sporting facility is outdated and well below acceptable standard. The kitchen requires upgrades and the community would benefit from having a larger venue to host functions. The netball courts require better lighting to cover all courts.

The school facilities were built in the 1970's. The courts are not full size, the floor needs replacing and the basketball association would benefit from two courts. The hockey club would like an artificial surface provided and require a permanent clubhouse and canteen. The gym is currently housed in a refurbished shed that isn't built for capacity and requires a dedicated area. The tennis club have indicated that they would be happy to relocate and share facilities.

Town Hall Upgrade

Scope: The Burra Town Hall Committee is proposing the venue be used for world class seminars, events and productions. The committee would like to see volunteers or paid guides incorporated as part of this plan.

The Master Plan also lists the following medium to long term proposals for Burra:

- Burra Sporting Hub.
- Burra Regional Art Gallery Sculpture Garden.
- Weir Construction.
- Outdoor Performance Area.
- Heritage Marketing & Promotion.

In addition, the following Council wide objectives are relevant to this CMP:

Arts & Cultural Facilitator

Scope: The Arts & Cultural Facilitator would be responsible for spear heading and representing the Burra Regional Art Gallery and Goyder on a local, state and national level.



Conservation Management Plan

Scope: In accordance with The Burra Charter (The Australia ICOMOS Charter for Places of Cultural Significance) 2013, to develop a Conservation Management Plan that will be used to support the management and decision-making processes for Council, government agencies and other managers to conserve and protect the National and State Heritage values of the Australian Cornish Mining Site: Burra.

National Trust Joint Venture

Scope: Council and National Trust SA working together to promote tourism to the region.

Preservation of Historical Documentation

Scope: Gathering documents for preservation, preparing documents, scanning, post capture, naming, structure, image optimisation, catalogue, indexing, pagination, media output and storage.

Historical document scanning of not only papers but books, photos, plans and much more with specialist technicians using highly specialised equipment. Combined with a customisable electronic management system, and indexing files to make them electronically searchable.

Stormwater Management

Scope: Develop the Stormwater Management Plan for the township of Burra and continued works as recommended from the Management Plan.

Streetscapes & Appearances

Scope: Council's budget currently includes funding for improvements to Burra Market Square including lawn, paving and relocation of WWI trophy.

Township Entrance Signage

Scope: Council will strategically develop and place tourist/recreational Council infrastructure and signage to reflect 'brand' as well as town history, consistency and theme. Council will look at developing township signs, town and service signs and community-initiated township entrance signs.

Township WiFi

Scope: Council in collaboration with Legatus Group will work on strategies to put plans into place to install free public Wi-Fi connections in Goyder townships. Installing a digital regional network with access to high speed broadband and the digital economy will offer unprecedented opportunities for rural, remote and regional Australia.

The objectives and projects contained in this Master Plan have helped to influence and justify the Policies created in this CMP.

Innovation

It has been the desire of the consultant group in the production of this report to enhance the usability and relevance of its findings.

New digital aerial photography was commissioned for the project area to inform both the physical investigation and be available for future study and analysis. The mapping component of the plan has been undertaken in vector-based software which is then updateable and importable to a GIS based platform. The aim in having this data available is to give the ability to search for attributes and amend / update information attached to individual sites and assess new proposals online and remotely.

This project is timely given South Australia is going through a Planning Reform process to digitise and simplify development assessment in the State, as discussed above. It is envisaged 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.

Project Limitations and Assumptions

As implied in the National Heritage Listing, 1877 is the cut-off date for heritage places considered in this study. This does not infer that other heritages listed places within the Burra state heritage area are not of value, but that these places do not contribute to the national values.

The assessment of individual places consists of: a brief history; a description of the place; identification and assessment of relative significance of the constituent elements that comprise the place (as they relate to the national values); contemporary and historical photographs; a map of the place; a summary of the place's integrity, condition and major conservation issues. Their relative significance to the national values is discussed further in Chapter 4. Each individual place warrants the preparation of a full conservation management plan; however, it is not the role of this document to provide detailed recommendations for each place.

Physical investigation of places was constrained by safe access to sites such as mine shafts and underground areas, and the willingness of owners to allow access onto private land and to enter buildings. In some cases, it was not possible to contact the owner.

The physical investigation was a visual inspection predominantly focused on the general condition of the external fabric. Where the interior was accessible, no furniture was moved in visual inspections, and no floor coverings disturbed to inspect the condition of flooring. Generally, no access to roof spaces and sub-floor spaces was available and therefore these areas were not inspected. Roof condition was recorded from the ground and was limited to those roof planes visible.

This CMP does not include a formal assessment of Aboriginal cultural heritage values, or shared values, but acknowledges that these may exist.

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
- Greg Drew (Peer review of History Section)

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



2. Historical Outline of Burra: 1845-1877



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.

2.1. 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.² For almost 2,000 years, tin mining was a major industry in Cornwall with traders exporting to Europe and throughout the Roman Empire.³

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".⁴ 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.⁵ By the early nineteenth century, Cornwall became the world's leading producer of copper,⁶ "producing two-thirds of the world's supply".⁷

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".⁸ 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".⁹ At its peak, there were approximately 1,000 mines in the region.¹⁰



"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”.¹¹

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.¹² 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.¹³

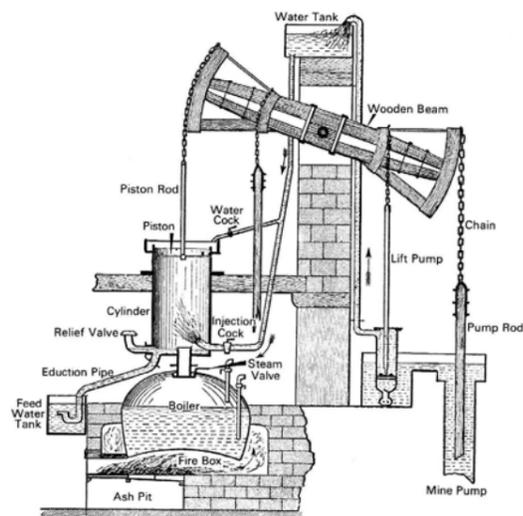
From 1700 to the early 1900s Cornish mining entered a new phase. This was initiated by the introduction not only of gunpowder for rock breaking but also, more importantly, steam power. The challenge of mining in Cornwall was that it:

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.¹⁴

Earlier, around 1712, the first Atmospheric Steam Beam Engine was designed by British ironmonger and inventor, Thomas Newcomen (1664-1729).¹⁵

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.¹⁶

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.¹⁷ 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”.¹⁸ 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.¹⁹ By 1800, these engines allowed, “mines ... to attain depths of 300 metres below adit”.²⁰

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”.²¹ 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”.²² These large steam engines required purpose-built, masonry, Cornish Engine Houses and at its peak there were around 3,000 engine houses in Cornwall.²³

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”.²⁴ 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”.²⁵

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”.²⁶ 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.²⁷

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.²⁸

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.²⁹

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.³⁰

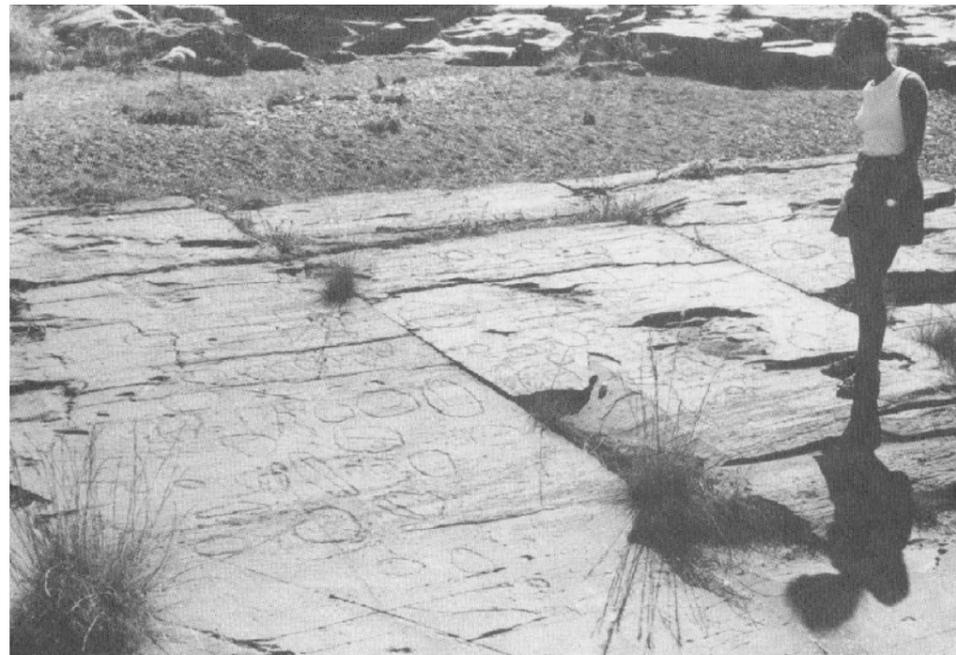


2.2. National context

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".³¹ 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"³² 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".³³ The mine was officially opened by German mineralogist and geologist, Professor Johannes Mengé.³⁴ 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."³⁵ However, concurrently copper was discovered at Burra.



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.

2.3. Burra

The Ngadjuri: the traditional land owners

The traditional owners of the Mid North area of South Australia, including the town which is now known as 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'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.*³⁶

The "Ngadjuri language has contributed many names to the modern landscape".³⁷ These include the names of surrounding local towns: Bundaleer (meaning "among the hills"); Bungaree ("my country"); and Kapunda ("water jump out").³⁸ Ancient Aboriginal tool fragments have been found in Redbanks Reserve, not far from Burra. In addition, Ngadjuri rock engravings (petroglyphs) can also be found near Burra, around Firewood Creek.

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".³⁹ 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, moved north squatting on tracts of land which became the Booborowie (D.C. Burra Burra) and Canowie (outside the region) runs in 1843".⁴⁰ Near Clare, George Charles Hawker established Bungaree in 1841, and John Horrocks also established a sheep station in 1839.

In mid-1845, two shepherds independently discovered separate indications of copper near Burra Burra Creek. Shepherd William Strear discovered outcrops of copper. While shepherd Thomas Pickett discovered a "bubble of copper". Strear 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).⁴¹

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".⁴² 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 enough money, 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 Strear'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 - Strear'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".⁴³

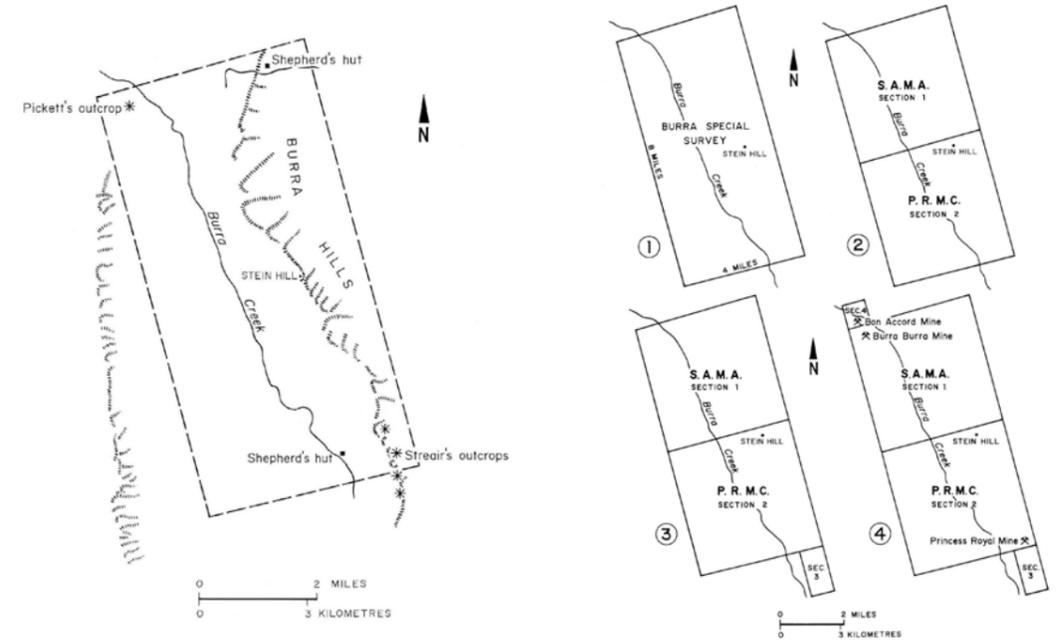


Diagram showing Burra Special Survey and the location of Pickett's and Strear's copper discoveries.

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.

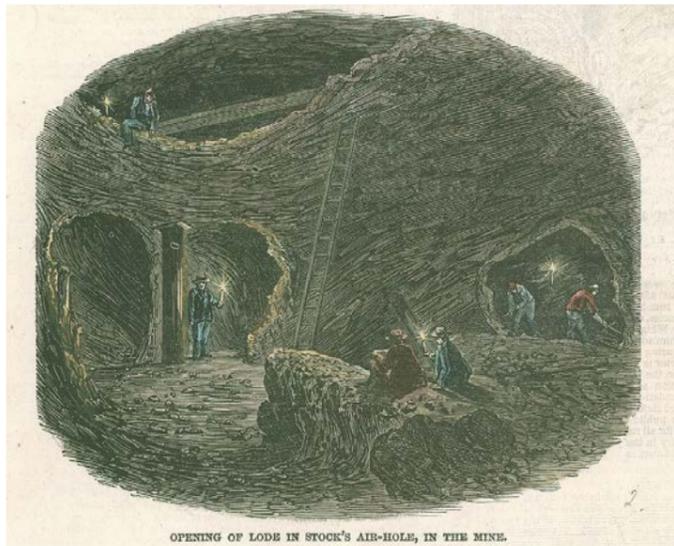


The Burra Burra Mine: the “Monster Mine”

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”,⁴⁴ and earned its name of the “Monster Mine”.⁴⁵ 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”.⁴⁶ 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”.⁴⁷ 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 69728/1



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

The Cornish in Burra

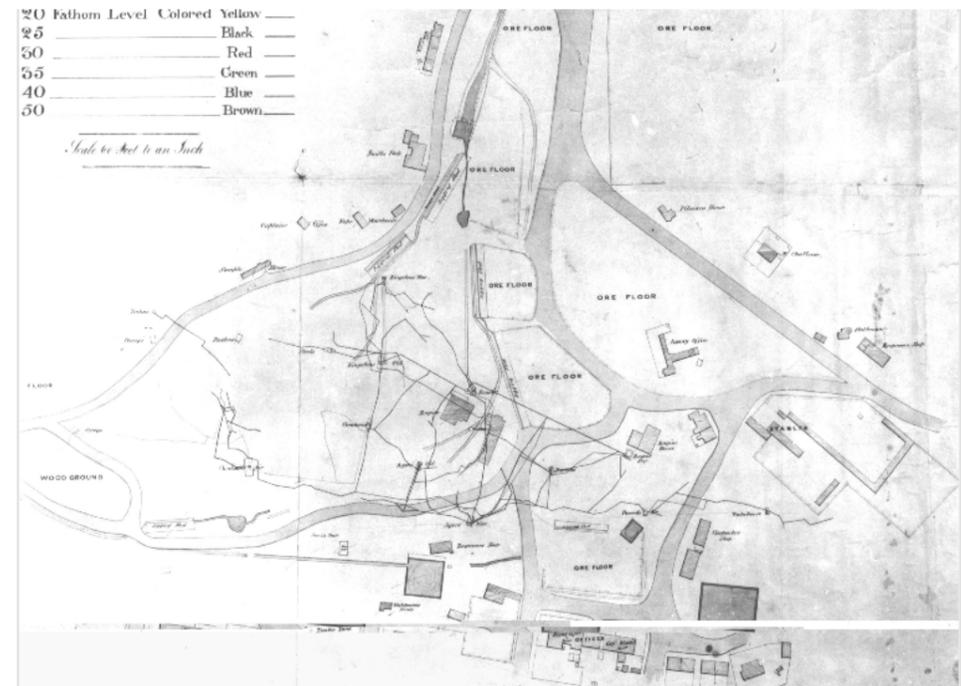
In South Australia, with the “discovery of minerals, it became ... [local] practice to recruit experienced teams of miners direct from Cornwall to open new mines; this ... happened at Kapunda in 1844, and at Reedy Creek (Tungkillo) and Glen Osmond in 1847.”⁴⁸ However, the Cornish were already well-established 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).⁴⁹

Burra “was the first significant concentration of Cornish in Australia”.⁵⁰ By 1846, the Burra Burra Mine was “known in Cornwall ... as ‘the eighth wonder of the world’”.⁵¹ 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.⁵² 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’”.⁵³ “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.⁵⁴ 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”.⁵⁵ 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”.⁵⁶ They also “brought with them their technology, their ways of work, their Cornish culture and their religion”.⁵⁷ Importantly, “all positions of responsibility at Burra went to Cornishmen, from commencement until closure in 1877”.⁵⁸ 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”.⁵⁹

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.⁶⁰ 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”.⁶¹ 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”.⁶²

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”.⁶³ 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). 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.⁶⁴

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.⁶⁵ However, as greater depths were reached, it soon became necessary to purchase steam powered pumping engines to dewater the mines.

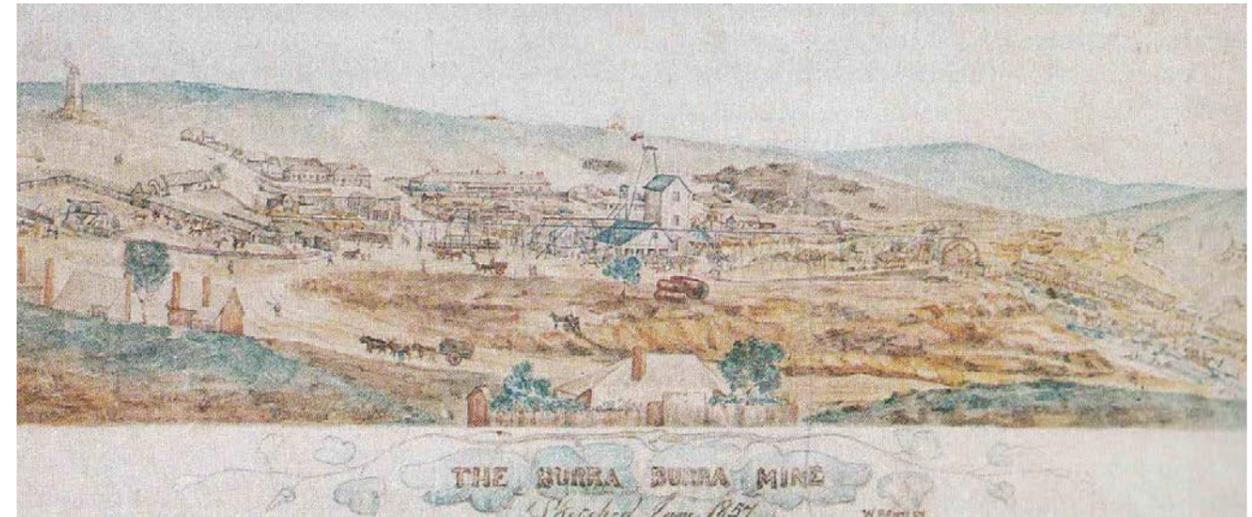
The engines were developed over time, but the "period of greatest development of the Cornish engine ... between 1820 and 1850, ... coincided with the installations in South Australia ... at Burra".⁶⁶ Fortunately, South Australia's strong ties with Britain ensured that this revolutionary technology could be imported, which "at the time was protected to prevent transfer to [other] competitor nations".⁶⁷ 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.*⁶⁸

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.*⁶⁹

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".⁷⁰



"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

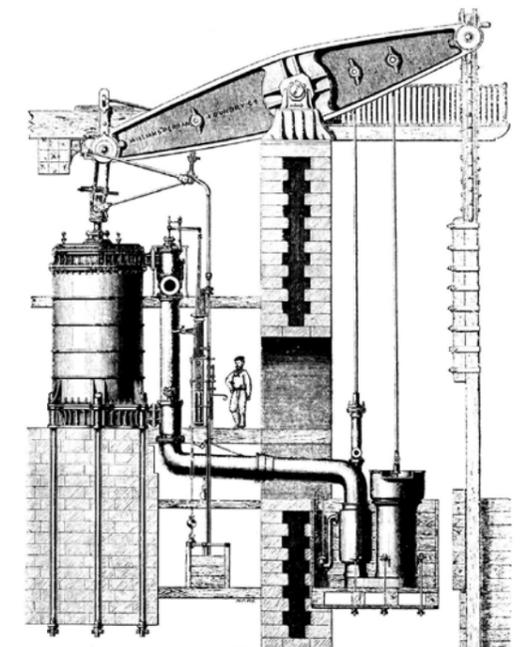
In 1848, the first steam powered Cornish pumping engine was erected in South Australia at the Kapunda Mine, and the last, in 1888, was installed at the Wallaroo Mine.⁷¹ The first engines imported for the Burra Burra Mine were from the Perran Foundry in Cornwall. Thus, the SAMA "pioneered the large-scale importation of Cornish beam engines and experienced enormous difficulties considering the distance and communications".⁷²

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.⁷³

Interestingly, the "plans for the engine house were sent directly from Cornwall".⁷⁴ 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".⁷⁵

*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.*⁷⁶

WILLIAMS' PERRAN FOUNDRY CO. ELEVATION OF PUMPING ENGINE.



BUILT FOR ST. DAY UNITED MINES.

This Engine, made by us for the St. Day United Mining Company (now called the Public Mines), is a good example of the Cornish Engine as at present made, and gives a satisfactory idea of the general proportion of these Engines. It has been working under a load of 120,000 lbs. for the past eight years, and during the winter time has been kept continuously at work for six months, at an average rate of nearly eight strokes per minute doing its work to the satisfaction of all concerned. Estimates on application.

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, in an astonishing two weeks. 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 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".⁷⁷ 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".⁷⁸ 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.



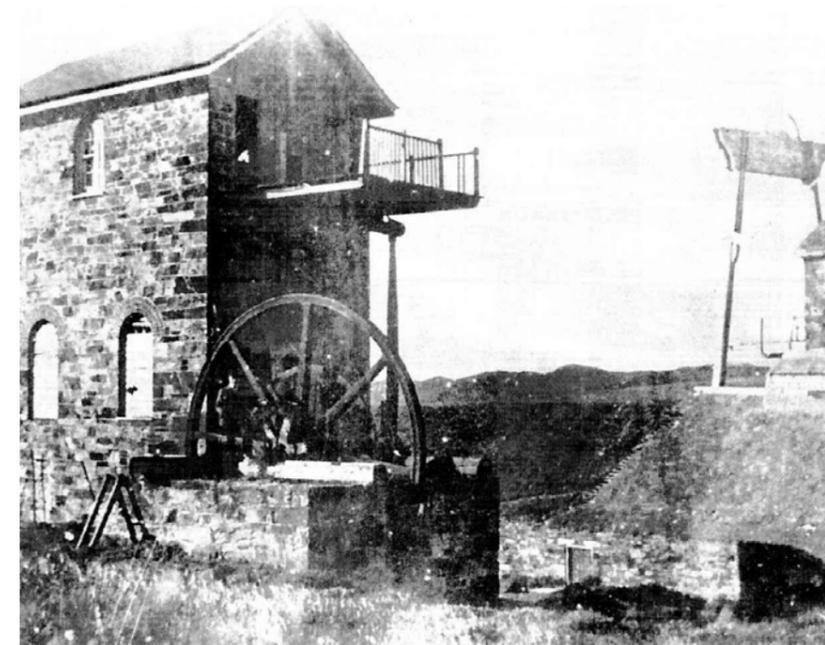
Morphett's Pump Engine house, boiler house and Morphett's Winding House, c.1915-30. Source: SLSA PRG 733/507

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".⁷⁹ 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.⁸⁰

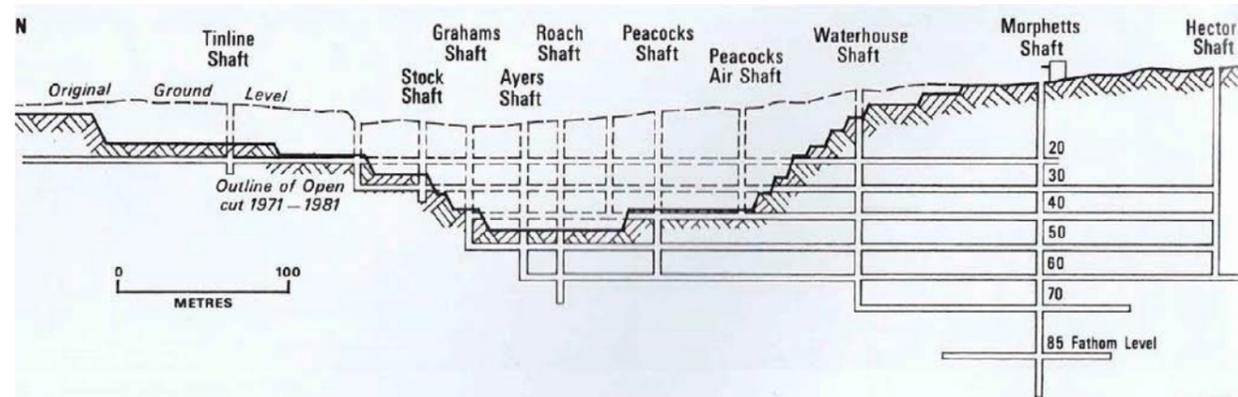


Morphett's Winding house, c.1915. Source: Drew, Greg, and Connell, J.E., Cornish Beam Engines in South Australian Mines, (Adelaide: Government of South Australia, 2012), p100.



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, Morphet's Shaft, and Hector Shaft (Burra Mines Historic Site SAHR 10970) which still connect via horizontal levels. Morphet's Shaft was the deepest reaching 85 Fathoms, Waterhouse Shaft - 70 Fathoms and Hector Shaft - 60 Fathoms. Morphet's shaft was retimbered in 1986 as part of Morphet'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 1971-81.⁸¹ However, this was not the first time it had been an open-cut mine.

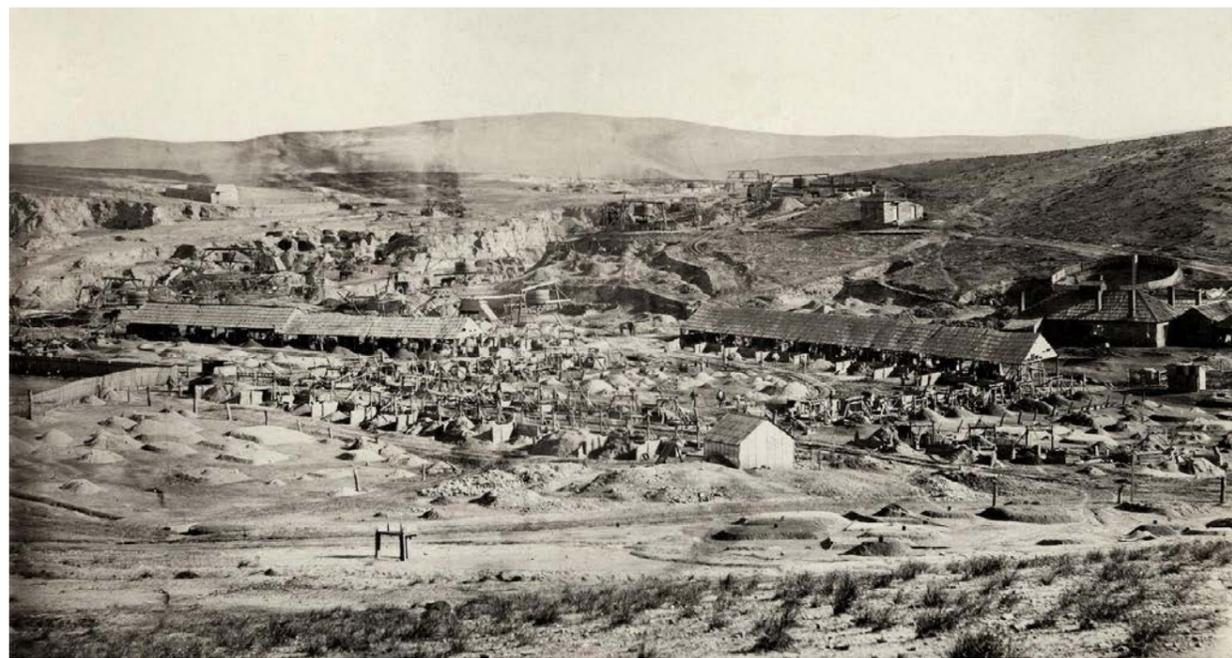


Longitudinal section showing shafts at Burra Burra Mine.

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 4149.



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

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.⁸²

Australia's first coppersmelter was constructed at Burra c.1846-97.⁸³ 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.⁸⁴ 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.*⁸⁵

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'".⁸⁶ In May 1848, it was reported:

*The imminent departure from Swansea of the barque The Richardsons of 361 tons, chartered 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.'*⁸⁷

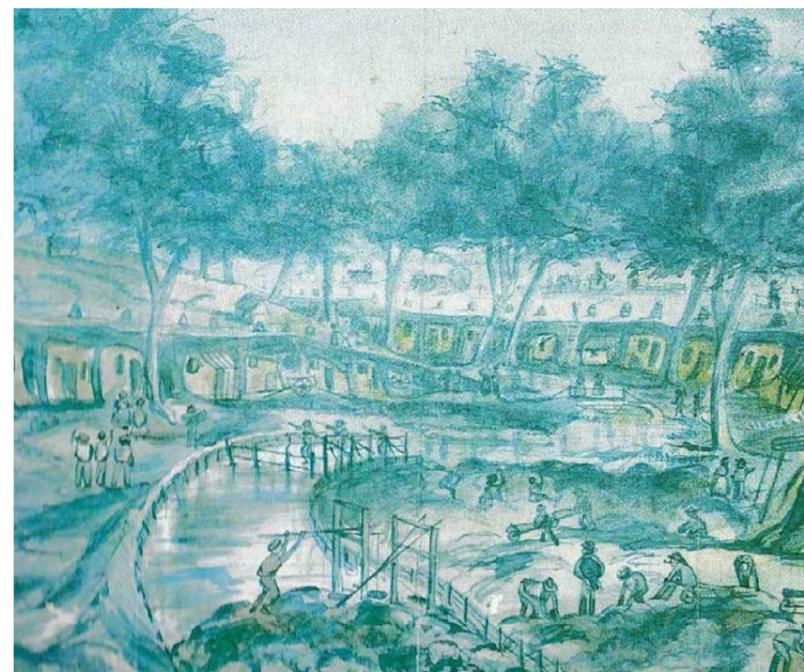
On 3 October 1848, *The Richardsons* arrived in South Australia. The Smelter (Burra Smelts Historic Site SAHR 10989) was established on the SAMA's land, on the eastern side of Burra Burra Creek, which was leased to the Patent Copper Company. On 11 December 1848, the foundation stone was laid for the 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.'*⁸⁸

In April 1849, the "first furnace was ceremoniously lit",⁸⁹ and by 6 May 1849, several furnaces were completed, and they were smelting "day and night".⁹⁰ 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".⁹¹

Welshman, Thomas H. Williams was 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 1854.⁹² 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".⁹³ Around 1853 the smelting company also imported mules and their drivers from Chile, adding to the diversity. Until 1861 the smelting works at Burra were "the largest smelting works out of Swansea".⁹⁴ After 1861 the majority of Burra ore was taken to the Port Adelaide Smelting Works and by 1866 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.*⁹⁵

In 1851 there were no other "metal-mining" towns elsewhere in Australia.⁹⁶ In fact, the Burra Burra Mine was the largest in Australia for fifteen years.⁹⁷

"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.'*⁹⁸



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.*⁹⁹

The inhabitants were often referred to as "creek dwellers"¹⁰⁰ or living on "creek street".¹⁰¹ 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.*¹⁰²

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.¹⁰³

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",¹⁰⁴ 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.¹⁰⁵ 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".¹⁰⁶ 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.¹⁰⁷ 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. The square also became an assembly place for many miners' meetings".¹⁰⁸

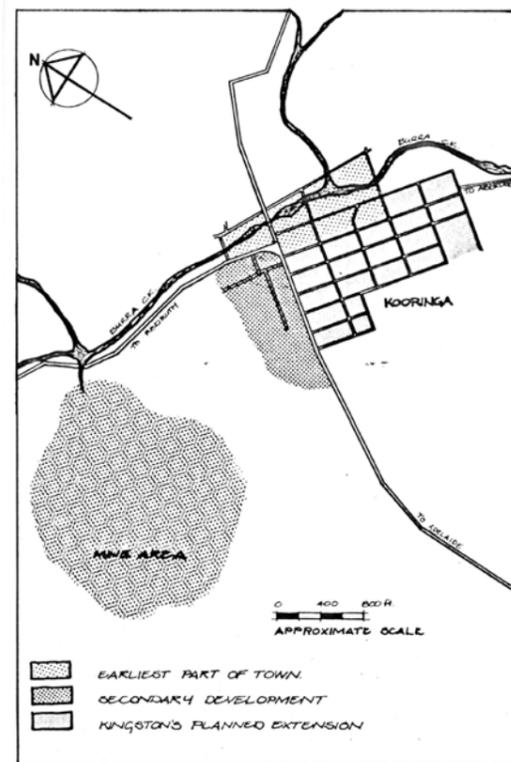


Fig. XX.9 Conjectural map showing early growth of Kooringa, South Australia, 1845-1849.

"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]".¹⁰⁹ 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".¹¹⁰ 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".¹¹¹



Site plan of Kooringa, 1849.

Source: SLSA, <https://digital.collections.slsa.sa.gov.au/nodes/view/815> accessed 1 October 2018.

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".¹¹²



Early photograph of Kooringa, dated 1874

Source: <http://www.burra.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 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).¹¹³ 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.¹¹⁴ 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.*¹¹⁵

Indeed, "Paxton Square and cottages in Thames Street were among the first company housing in Australia".¹¹⁶ It is claimed that the Mine Square Cottages at Kapunda, completed by July 1845, are Australia's first company housing.¹¹⁷

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.*¹¹⁸

However, the SAMA did permit some public buildings to be constructed on their land. The Burra Hotel, formerly the Miners Arms Hotel (1847) (SAHR 10404), was one such building. The Cornish social traditions and customs were played out in the 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*¹¹⁹

In 1878, the hotel was damaged by fire, but it was rebuilt in 1880.

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.*¹²⁰

The Burra Burra Miners and Mechanics Institute, (Burra Town Hall & Institute) (pre-1858) (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)."¹²¹

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, possibly to a design by Edmund Wright*¹²²

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.'*¹²³

The Telegraph Station and Post Office (1861) (SAHR 10017) also influenced the development of the town. The first mail run to Burra began in 1846 and the first post office was located in an office at the Mine. With the population reaching 5,000 in 1851, correspondence became crucial to Australia's largest inland town. This resulted in the construction of the town's purpose-built Telegraph Station and Post Office. Indeed, in 1862 explorer John McDouall Stuart sent a telegram to the Governor of South Australia reporting that he had successfully crossed the continent.¹²⁴

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",¹²⁵ the South Australian Government laid out its township named Redruth in 1849. 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.*¹²⁶

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".¹²⁷ 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*¹²⁸



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)".¹²⁹ 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 (1878) (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".¹³⁰ Shortly after, in 1857, the Courthouse was erected.

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".¹³¹ 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".¹³² 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.*¹³³

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 1863.¹³⁴

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".¹³⁵ 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.¹³⁶

The establishment of the private township Llŵchwr – 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 Llŵchwr (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"¹³⁷ 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".¹³⁸

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.*¹³⁹

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."¹⁴⁰

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".¹⁴¹

The development sequence of the Burra townships between 1845 and 1877 is depicted on pages 38 - 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".¹⁴² 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".¹⁴³

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".¹⁴⁴ 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".¹⁴⁵

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".¹⁴⁶

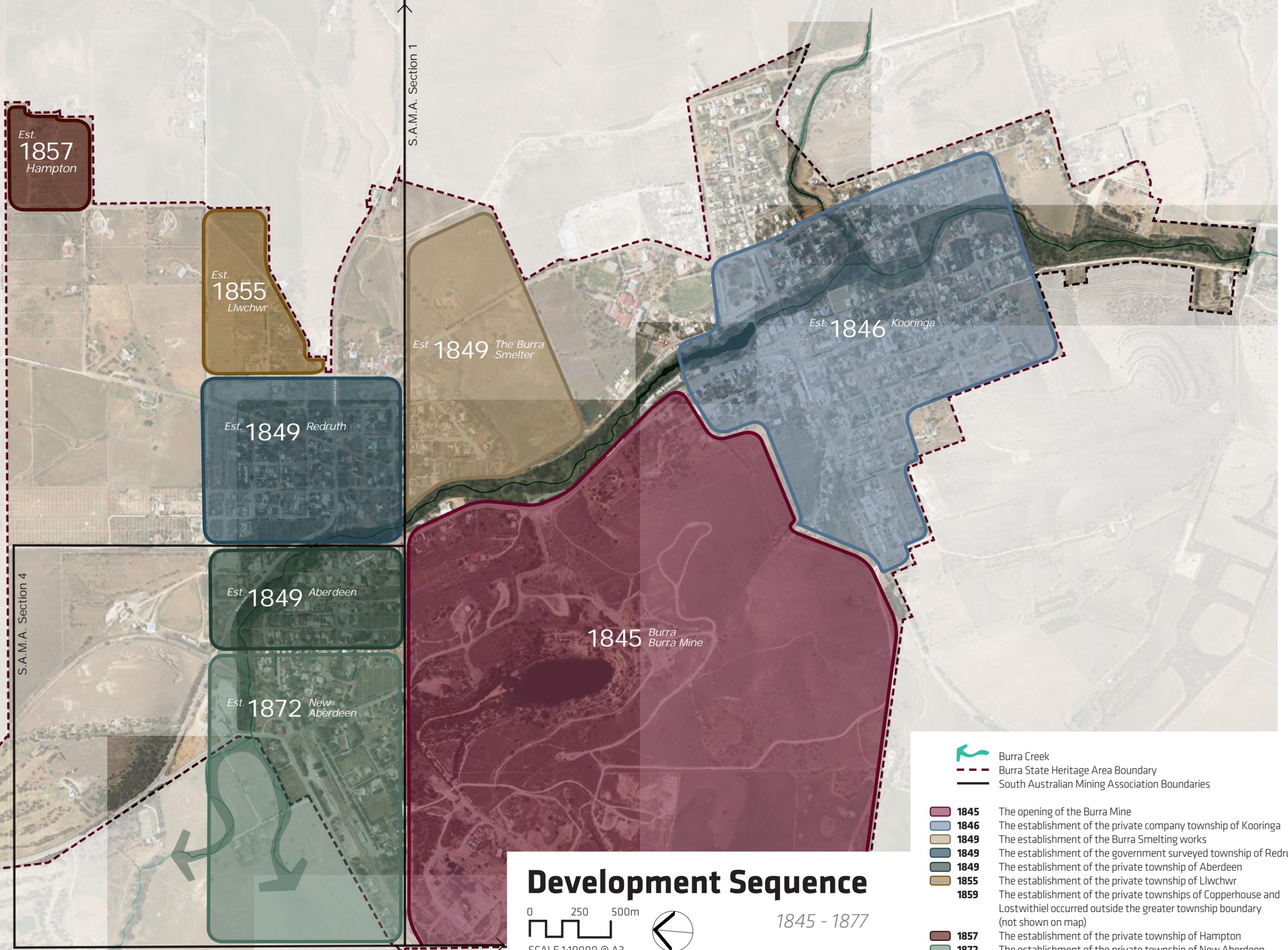
Post 1877: Burra's post-mining phase

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).



Development Sequence



1845 - 1877

-  Burra Creek
 -  Burra State Heritage Area Boundary
 -  South Australian Mining Association Boundaries
-
-  **1845** The opening of the Burra Mine
 -  **1846** The establishment of the private company township of Kooringa
 -  **1849** The establishment of the Burra Smelting works
 -  **1849** The establishment of the government surveyed township of Redruth
 -  **1849** The establishment of the private township of Aberdeen
 -  **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



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".¹⁴⁷

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".¹⁴⁸ "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".¹⁴⁹

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"¹⁵⁰ where "Cornish mining technology, skills and culture is demonstrated to a high degree".¹⁵¹

2.4. Summary of Significant Events (1836 - 1893)

Date	Physical	Historical
1836	Founding of the Colony of South Australia	
1841		Colony of South Australia struggling economically
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.
		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. 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	
1840s-1850s	Former Miner's Dugouts built (tributary of Burra Creek) (SAHR 10050)	
1840s-1850s	Former Dugout Sites built (Burra Creek) (SAHR 11187)	
c.1845-50		Copper ore from the Burra Burra Mine shipped to Welsh smelters in Swansea.



Date	Physical	Historical
1846	South Australian Mining Association (SAMA) laid out Kooringa	
1846	Bon Accord Company (Scottish) established mine	
c.1846-1847	Thames Street Cottages built (2,4,6,8,10,12 and 16 Thames Street) (SAHR 10040,10041,10028,10029, 10030,10031,10447) Kooringa	
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, & Storeman's Dwelling built (SAHR 10019)	
1847	Miners Arms Hotel (Burra Hotel) originally built in 1847. Damaged by fire in 1878 and rebuilt in 1879. (SAHR 10404)	
1848	Former Burra Primitive Methodist Church built (SAHR 10011)	
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". ¹⁵²
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) – constructed by Cornish masons for SAMA	
December 1849	Former Burra Bible Christian Chapel built (SAHR 10013)	
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 Offices & Captain's Residence built (SAHR 10056)	



Date	Physical	Historical
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)	
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) (Cornish Engine house and engine demolished no evidence)	
1851		Population of Kapunda - 1000
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". ¹⁵³ Pumping engines were stopped, mines filled with water, smelting works allowed furnace fires to die out.
1852	80-inch Cornish Beam pumping engine installed at Schneiders Shaft (operated 1852-62) (not commissioned until January 1855 because of Gold Rush) (stopped in 1862) (Perran Foundry) (Cornish Engine house and engine demolished in 1866 no evidence)	
1852-55	The Burra Burra Mine closed due to the Victorian Gold Rush	
July 1853		Mules from Montevideo, South America and Spanish-speaking muleteers arrive
c.1850s	Attached cottages, 9-13 Truro Street built – Cornish style (SAHR 10033,10034,10036) Redruth	
c.1854-56		Full work was resumed at Burra Burra Mine
c.1856	Tiver's Row, 8-18 Truro Street built – Cornish plan (SAHR 10203,10032,10446,10037,10038,10039) Redruth	
1857-58	Peacock's Chimney in construction (SAHR 10020)	
1858	Peacocks Cornish Engine house completed (operated 1858-1877) (Engine house and engine demolished in 1972 however chimney rebuilt)	
1858	30-inch Beam rotative engine – Peacocks engine (operated 1858-77) (Perran Foundry) (Engine house and engine demolished in 1972 however chimney rebuilt)	



Date	Physical	Historical
1858	Morphett's Cornish Engine house built (SAHR 10056) (operates 1858-1877) (reconstructed in 1986)	
Pre c.1858	Burra Town Hall (originally Miners' and Mechanics' Institute) built	
1859	Bon Accord Mine Buildings - mine offices, blacksmith's forge, carpenter's shop and manager's residence built (SAHR 10023) (owned by National Trust)	
1859		1200 miners
c.1859-60	80-inch Cornish Beam pumping engine installed at Morphett's Engine house, the water raised drove waterwheels, powering crushing and dressing works (operated 1860-77) (refer above)	
1860s-1870s	Hampton Township Precinct (SAHR 10359)	
1861	Morphett's Cornish Winding house built - typical Cornish winder (SAHR 10052) (conserved in 1987)	
1861	20-inch Beam rotative engine - Morphett's (operated 1861-74) (Perran Foundry) (refer above)	
1859-61		Moonta Mines and Wallaroo Mines established. These "overshadowed" Burra. ¹⁵⁴
1861		Port Adelaide smelting is established
1863		First Merino stud near Burra
1867	Graves Cornish Engine house being constructed and an 80-inch beam pumping engine ordered from Cornwall (never installed)	
1868	Graves Pump house built - Cornish enginehouse (SAHR 10054)	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	
c.1870s	Stone wall located on the east side of Commercial Street and Ware Street, Burra (SAHR 10435)	
c.1870s	Stone wall located on the west side of Commercial Street, Burra (SAHR 10436)	
1870	Ore Floor built - represents Cornish mining practice (SAHR 10055)	
1874	Cornish Crusher Chimney/Dressing Tower Complex built (SAHR 10047)	

Date	Physical	Historical
1876	Haulage Engine Chimney built (Welsh) (SAHR 10046)	
c.1876		First Mayor and Corporation elected
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)	



3. Description & Condition

3.1. Introduction

To establish the cultural significance of the Australian Cornish Mining Sites in Burra, a physical survey has been undertaken to identify and record the condition of significant buildings and sites. Various individual places are specifically referenced in the National Heritage Listing, but other potential places were identified as part of the preparation of the historic summary. Both the nominated and the potential additional places have been surveyed.

The CMP divides this process into two distinct sections. Firstly, the places are described, and secondly, the places are surveyed, with the latter including their classification according to their condition and a summary of typical external dilapidations.

It should be noted that each place has a proforma which provides specific details about its location, configuration and condition. These are located at the end of this report in **Appendix C**.

3.2. Physical Description

The Site

Location

Burra is a town located in the mid-north of South Australia. It lies approximately 160km north-east of Adelaide along the Barrier Highway in the Regional Council of Goyder and the Hundred of Kooringa. It is sited on Burra Creek, and “nestled in a valley surrounded by bare, rolling hills”¹⁵⁵

Extent

The physical scope or boundary of the Australian Cornish Mining Sites in Burra is as per the map in the Government Gazette notices relating to the National Heritage List (Burra). This scope correlates with the State Heritage Area of the Town (Heritage Number 27549 and State Heritage ID 16183) and which is included in the existing Development Plan. It includes all former villages which now constitute the town of Burra including Kooringa, Redruth, New Aberdeen, Aberdeen, and Hampton and other key elements such as the mine and smelter sites, cemetery and Burra Creek.

General Description

The National Heritage Listing for the Burra component of the Australian Cornish Mining Sites includes not only the Burra Mines Historic Site and the Smelts Historic Site, but also many other significant places located in the adjacent original townships as described below.

The Burra Mines Historic Site

The Burra Mines Historic Site is a distinct area of the town. It lies west of Burra Creek between Burra (formerly Kooringa) and North Burra (formerly Redruth and Aberdeen). The open-cut mine which resulted from the mining operations that occurred between 1970 and 1981 is filled with water and dominates the site. The barren landscape includes rolling hills and large artificial heaps of mine spoilings.¹⁵⁶ The site has “abandoned buildings, various ruins, and archaeological sites”.¹⁵⁷ The Mine is approached from Market Street. The first structure viewed is Peacocks Chimney which signals the Mine entrance, while 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 Cornish Engine houses. The steep road continues to the Mine Lookout where the full expanse of the mine site can be appreciated.

The principal built elements of the mine site are the:¹⁵⁸

- **Powder Magazine** (1847), constructed to store gunpowder for mine blasting, it is located on the crest of the hill to the west of the mine site to be well away from everyday operations for safety reasons. It is a single room stone structure, with a vaulted roof and reinforcing stone buttresses, all surrounded by a high stone wall. It was restored by the National Trust in 1976. (SAHR [South Australian Heritage Number] 10045)
- **South Australian Mining Association Storeman’s Dwelling** (1847), **Storeroom, Yard and Walls** (SAHR 10019) (1847), built at the mine entrance and used as a depot for building timber, iron, tools and mining machinery. The main building is located at the southeast corner of a large rectangular stone walled yard which was built to discourage theft. There are remains of various earlier structures that were built against the inside faces of these walls. (SAHR 10049)
- **Mine Manager’s Dwelling and Office** (1849) is a ruined structure located on the west side of the mine site on the edge of the modern open cut. It was a long single storey structure which integrated the captain’s residence at the south end and the offices to the north, with this latter section also integrating a basement level. The ruined remains of other captain’s cottages are located to the south. (SAHR 10056)
- **Peacock’s Chimney** (1857) was constructed of stone and brickwork, on a site within the present open-cut area. It provided an updraught to the boilers at Peacock’s Engine House and was named after one of the SAMA directors. The reopening of the open cut mine in the 1970s required the destruction of the chimney which led to it being rebuilt on its present site by the National Trust in 1972. (SAHR 10020)



- **Former Morphett's Pump [Engine] House** (1858), is a tall masonry structure with several floor levels located south of the modern open cut. It originally housed an 80-inch diameter Cornish beam pumping engine and a shaft plunging to 600 feet depth and powered by six Cornish boilers located in the adjoining boiler house. The engine was operational from 1860 to 1877. In 1986, the engine house was reconstructed and the shaft retimbered, and in 1988 the original bell reinstated at the top. 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). (SAHR 10053)
- **Winding House** (1861) is a tall masonry structure which originally had several levels. It originally housed a 20-inch diameter Cornish beam winding engine powered by the boilers in the adjacent Morphett's boiler house, it was designed for hauling from Hectors shaft located approximately 90m to the southeast, but it was later converted to operate ore dressing machinery. It was operational from 1861 to 1874. (SAHR 10052)
- **Graves Pump [Engine] House** (1868) located on the west edge of the modern open cut, it was constructed to house an 80-inch diameter Cornish beam pumping engine, but the engine was never installed after the conversion the mine to open cut (SAHR 10054)
- **Ore Sorting Floor** (1870) is located southeast of the modern open cut below the Crusher House, this large stone paved area was used to prepare, grade and sample ore sourced from the historic open cut. (SAHR 10055)
- **Engine/Crusher House** (1870) is located southeast of the modern open cut, the Crusher house is built into the east side of an embankment, while the ruins of the later (1874) Engine House with its associated adjoining boiler house is located further to the east (SAHR 10445)
- **Cornish Crusher Chimney** (1874), a round stone chimney with brick capping on a rectangular base located on the rise of the hill to the east of the Engine/Crusher house and is connected to this later structure by an underground flue. (SAHR 10047)
- **Welsh Haulage Engine Chimney** (1876), a square stone structure with cement capping located high on the hill to the south of the ruined remains of the Engine house, located southeast of the modern open cut. (SAHR 10046)
- **Mine Bridge** (1868) is a stone arched structure located above the gully which drained the mine site into the Burra Creek. It carries Market Street over this watercourse adjacent to the east entry to the mine site. (SAHR 10021)
- **Foreman's/Mine Assayer's Residence** (c.1867) is a small single storey stone residence located to the east of the mine site on the hill above the yard of the Mining Association's Store.
- **Burra Mine Historic Site** includes all of the above individual places together with other sites related to the operation of the mine, including Morphett's Pool, and the remains of various structures including cottages, the stables, chimney bases and flues, mine shafts and the buddle pits. (SAHR 10970)

The Burra Smelts Historic Site

The Burra Smelts Historic Site is another distinct area of the town. It is adjacent the Burra Mines Historic Site, but it lies east of Burra Creek. It is similarly located between Burra (formerly Kooringa) and North Burra (formerly Redruth and Aberdeen). It includes "structures, buildings and ruins of the Burra Smelting Works".¹⁵⁹ The Smelts site is approached from Smelts Road. Either side of the road sit buildings related to the Smelting works. The Smelts Ruins and Furnace Ruins, and the Smelts Manager's Residence and Office, sits one side, and the other side is defined by the Smeltsyard and Store. A short drive around the corner lies the former Smelts Superintendent's Dwelling and Wall, on St Just Street.

The principal built elements of the Smelts are the:¹⁶⁰

- **Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager's Residence and Office** (1849) 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. (SAHR 10989)
- **Smeltsyard and Store** (1849) 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. (SAHR 10024)
- **Former Smelts Superintendent's Dwelling and Wall** (1849) 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 and its associated stone boundary walls are built upon the site boundary on the south side of St Just Street. (SAHR 10204)

Kooringa

To the south of the Burra Mines Historic Site and the Burra Smelts Historic Site, lies the historic town of Kooringa established in 1845. Now known as Burra, the town includes many places of significance. Many of these are focused around Market Square and Upper Thames Street reflecting the early nucleus of the town. Importantly, George Strickland Kingston was the town planner responsible for the extension of the town in c.1846.

The principal components of Kooringa and its associated built elements include:

Burra Creek and Tributary of Burra Creek

The Burra Creek is a prominent feature of Kooringa and the surrounding townships which collectively now make up the town of Burra. The Creek and its tributary are lined with trees and vegetation and is at times prone to flooding. Historically, this was also the case. Importantly, the Burra Creek banks provided early housing for thousands of miners and their families in the form of dugouts such as the:

- **Former Miners' Dugouts**, tributary of Burra Creek, (c.1840s-1850s) which entails three separate structures, they are located on the east side of the Creek south of the central part of the town. Two structures are located on the south side of the gully while a third is on the north side, this latter structure having a timber roof structure covered with earth. These were few of the original structures to survive, being "renovated" in 1925 and largely rebuilt in 1970 and 1974. (SAHR 10050)
- **Former Dugout Sites**, Burra Creek, (c.1840s-1850s) encompasses both sides of the creek to the south of the town. 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. (SAHR 11187)

Upper Thames Street

This group of Upper Thames Street buildings are located on the wide, tree lined (Melia Azedarach) street. The Church is a focal point of the street, being a taller structure than the surrounding single storey cottage housing. Places include:

- **Kingston's Thames Street Cottages**, 2, 4, 6, 8, 10, 12 Upper Thames Street, (c.1846-1847); a group of stone single storey cottages are located on the west side of the street and were designed by Kingston. They originally were configured as a pair of attached two room cottages but have since been converted into a single dwelling. (SAHR 10 040/10041/10028/10029/10030/10031)
- **Thames Street Cottage**, 16 Upper Thames Street, (c.1846-1847) is another stone cottage also located on the west side of the street similar to those located at 2-12 Upper Thames Street. (SAHR 10447)
- **Former Kooringa Primitive Methodist Church**, (1848) 9 Upper Thames Street, is located on the east side of the street. It is a large stone building with pointed arched openings having rendered dressings and detail to the main elevation facing Thames Street. (SAHR 10011)



Market Square and Market Street

Market Square is a large, open public square with a central island with later public monuments. This early part of the town is evident through its angled blocks which centre around the Square. Several key public buildings are located on the Square and adjacent Market Street. Market Street extends to the north where, at some distance, the former Smelter's Home Hotel is located adjacent the Burra Mine, and this street connects Kooringa to the historic townships of Redruth and Aberdeen to the north. Places include:

- **Burra Hotel (Former Miners Arm Hotel)**, 5 Market Street, (1847) is a large masonry building located on the east side of the square. The building has been modified a number of times, including rebuilding in 1880 after an earlier fire, the addition of the first floor to the principal west elevation in 1912 and the associated two storey verandah in 1920. It includes two separate cellars connected by a tunnel. (SAHR 10404)
- **National Bank of Australasia**, 1 Market Street, (1862) is located on the corner of Mt Pleasant Road. It is a two-storey building with rendered dressings and rear single storey elements, all built to the site boundaries at the corner. (SAHR 10007)
- **Art Gallery (Former Burra Post & Telegraph Office)**, 5 Market Street was constructed as a two storey stone building completed in 1860 on the west side of the street. The south arched section was added in 1875, while the original building was much altered retaining only the small two storey central section when the north arched wing was added in 1911. (SAHR 10017)
- **St Mary's Anglican Church**, Market Street, (1879) is a large stone Church with rendered dressings located on the west side of the street about halfway between Kooringa and the entry to the mine site. The building faces south with short transepts and the sanctuary to the north. A separate free-standing stone hall constructed in 1893 is located to south of the church facing east. (SAHR 10018)
- **Burra Town Hall**, Market Street, (pre c.1858) is located on the west side of the street, and is largely comprised of a central stone hall flanked by lower rooms to the north and south sides facing the street to the east. The current building was largely completed in 1875 with a number of later additions. (SAHR 10403)
- **St Joseph's Catholic Church and Wall**, Market Street (1874) located on the west side of the street, the Church building faces east and is set well back from the street boundary which has a substantial stone retaining wall. The stone building is distinguished by pointed arched openings and a narrow central tower to the main elevation.
- **Mine Hospital**, Market Street (c.1848) is a single storey symmetrical stone building of substantial domestic scale, it located on the west side of the street. Associated separate structures, including the mortuary, is located to the west at the rear of the building.
- **Former Smelter's Home Hotel**, 26 Market Street, (1849) is a large single storey stone building located on the west side of the street and facing to both the northeast and northwest with a chamfered corner entry at the north corner of the building. (SAHR 10419)



Bridge Terrace and Kingston Street

Bridge Terrace and Kingston Street are located across Burra Creek from Market Square and Upper Thames Street. They were also part of the early nucleus of the town of Kooringa. Some of the town's earliest buildings are located on the renowned Paxton Square which sits at the intersection of these two streets. The Paxton Square row housing is stepped along Kingston Street, which is a wide, tree lined (Melia Azedarach) street. The housing continues along Bridge Terrace, overlooking Burra Creek, and Paxton Terrace. The three sections of row housing enclose Paxton Square; a grassed area which sits behind the housing. Places include:

- **Former Bible Christian Chapel**, Kingston Street, (1849) is a simple single roomed stone building defined by substantial stone buttresses, which addresses Kingston Street to the southeast. A more recent addition is built on its northeast side. (SAHR 10013)
- **Paxton Square Cottages**, (1849-1851) are comprised of three rows of attached single storey stone cottages built on the street boundaries and arranged around a large central space open to the east. (SAHR 10159)
- **Salvation Army Citadel**, 11 Kingston Street, (1885) is a large stone building with brick dressings located on the north side of Kingston Terrace east of Paxton Square. (SAHR 10160)

Commercial Street

Commercial Street was part of the secondary development of the town of Kooringa. It developed as a result of expediency rather than through town planning. Commercial Street is the extension of the Barrier Highway and thus, is the main southern entrance to the town. One of the houses along this tree lined street is the Timber Dwelling, built by the SAMA and located adjacent "The Paddock" where bullock teams were pastured. There is various housing along the street along with Burra's hospital. Commercial Street leads to Market Square. Places include:

- **Timber Dwelling of the 1840s**, 39 Commercial Street, (1849) is set well back from the north side of the street and is orientated to address the lesser road to the north. The single storey shiplap clad building has a later stone addition to its south side. (SAHR 10434)
- **Bank of Australasia**, Commercial Street (1860) is a single storey stone building with rendered dressings and detail built into the boundary located on the north side of the street.
- **Stone Wall**, Commercial Street, is a stone boundary wall located on the south side of the street and extends from Ware Street through to and extending along Kangaroo Street, with this later portion following the angled alignment of the creek. The west portion to Commercial Street and to Ware Street has been modified to include lowered sections. (SAHR 10435)
- **Stone Wall**, Commercial Street, is a stone boundary wall located on the north side of the street, east of Ware Street. (SAHR 10436)

Cemetery

The Cemetery is located along Burra Creek but to the south, at some distance, from the town of Kooringa. However, it is not accessed near the creek but via the other side on Challoner Terrace. It is set in a wide clearing, with a backdrop of Burra Creek and the surrounding, revegetated hills.

- **Burra Cemetery**, Spring Street, (1850) is comprised of a rectangular grid of graves divided by pathways surrounded by a stone boundary wall. It has been extended to the south with the graves and wall to this section being of more recent construction. (SAHR 10432)

Redruth

To the north of the Burra Mines Historic Site and the Burra Smelts Historic Site, lies the historic town of Redruth established in 1849 includes many places of significance. All of the various town names were eventually replaced with the common name 'Burra'.

The principal built elements of Redruth include:

- **Attached Dwellings "Tiver's Row"**, 8-18 Truro Street, (c.1856) is located on the north side of the street and is comprised of a series of symmetrical but attached stone cottages built on the street boundary which step up the slope which rises to the west. (SAHR 10203,10032,10446,10037,10038, 10039)
- **Attached Dwellings**, 9-13 Truro Street, (c.1850s) is located on the south side of the street and is comprised of four original symmetrical but attached stone cottages built on the street boundary which step up the slope which rises to the west. (SAHR 10033,10036,10034)
- **Former Redruth Gaol**, Tregony Street, (1856) is located on an open site well to the north of the town isolated from other buildings. Approached from the southwest, its façade of rendered stone, flanks a central arched gate opening into walled entry yards. The remainder of the complex is comprised of two principal yards surrounded by high stone walls divided by a central building containing the kitchen, dining rooms and cells that open directly into the yards. (SAHR 10042)
- **Former Redruth Courthouse**, Sancreed Street, (1857) is located in the southwest corner of the site near the corner of Helston Street. It is a stone building with a rendered façade and entry porch to the main facade to Sancreed Street. (SAHR 10027)
- **Former Redruth Police Station, Cells and Stables**, Helston Street, (c.1847-1878) predates the development of the town, and hence does not follow the alignment of the surrounding streets with the exception of Tregony Street to the east which has been aligned to the building orientation against the general alignment of the township streets. The building is located in the north corner of the site set back from the street boundaries, with the oldest portions being the stone structure associated with the stables at the north end of the complex of stone walled yards associated with the stables and cells, which dates largely from 1873. The later stone and rendered police station building, built in 1878, faces south at the south end of the complex. (SAHR 10014)
- **Redruth Wesleyan Church**, (1874) Ludgvan Street is located on the north side of the road. It is a substantial stone building with rendered dressings and detail, particularly to the main south elevation facing the street, with transepts opening off the north end of the central nave.

Aberdeen and New Aberdeen

Prior to the establishment of Aberdeen (1849) and New Aberdeen (1872), the Bon Accord Mine was established on a site immediately adjacent to the north of the Burra Mine in the expectation that the copper lode extended past the original surveyed section, but this proved not to be the case. Although unsuccessful, the Bon Accord retains many of its early structures and is utilised as a Mine Museum. Aberdeen was established close by. It was an important early town, along with Redruth and Kooringa.

The principal built elements of Aberdeen include:

- **Former Tiver's Railway Store**, Morehead Street (1870) is a large single storey masonry building built to the street boundaries at the corner of Young Street.
- **Former Bon Accord Mine Buildings**, Railway Terrace, (1859) is located on a site within New Aberdeen which was a subdivided around the mine complex, and is surrounded by Railway Terrace to the northwest, West Street to the northeast, and Linkson Street to the southeast. It is comprised of 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 store wall. (SAHR 10023)

Hampton

Hampton is located on the outskirts of the former towns of Redruth and Aberdeen, to the north. It is surrounded by grassed hills with occasional trees. There are no other buildings in the vicinity illustrating its isolation from the main townships. Hampton is now a site of ruins of a number of separate residential buildings and their associated outbuildings.

- **Hampton Township Precinct**, (c.1860s-1870s) (SAHR 10359)



Condition 1 Good state of repair and/or restoration - more than 75% of intrinsic fabric remains



3.3. Summary of Condition

In order to assess the condition of the places, a week-long site visit was undertaken, and all places were inspected during a week spent in Burra in November 2018. Each place was classified according to its condition.

Classification of Condition

The condition of the places have been assessed and are generally based on the criteria established in the ANU "Australian Cornish Mining Site" Report.¹⁶¹ However, these criteria have been modified to include more detailed information and include an additional condition relating to ruins.

The Condition Criteria used in this document are therefore as follows:

Condition 1: *The 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. Generally, this would signify more than 75% of intrinsic fabric remains.*

Condition 2A: *The building is in a good state of repair retaining many of the building's early features or modernised where some early features have been lost. The integrity of the early construction materials and building layout has been retained or sensitively restored. The form, design, use and function of the building have been largely maintained. Generally, this would signify more than 50% of intrinsic fabric remains.*

Condition 2B: *The building or place has lost many of its early features to dereliction or modernisation. However, the integrity of the remaining materials and features has largely been retained with repair or sensitive restoration. Generally, this would signify less than 50% of intrinsic fabric remains.*

Condition 3: *At Risk. The integrity of the early construction materials and building layout has been retained. The form and design of the building have been substantially maintained but sections of the structure are now at risk of collapse or under threat from development. Actions can be taken to recover/conservate its significance.*

Condition 4: *Ruins. The integrity of the early construction materials and majority of the building layout has been lost and cannot be recovered. Generally, there is no roof and the building is not habitable. Stabilisation is necessary and the building is to be managed as a ruin.*

Individual Places based on Condition

All of the individual places which potentially form a part of the National Heritage Listing have been classified into the condition categories outlined above as outlined below.

Other than the places identified as either Condition 1 or Condition 4, a brief justification is provided to explain why places have been placed in that category. Reference however should be made to the sheet on the individual place (**Appendix C**), which provides more detailed information about its particular condition.



Powder Magazine (SAHR 10045)



Peacocks Chimney (SAHR 10020)



Morphett's Engine house (SAHR 10053)



National Bank of Australasia (SAHR 10007)



Burra Post and Telegraph Office (SAHR 10017)



Burra Town Hall (SAHR 10403)



Kooringa Bible Christian Chapel (SAHR 10013)



Paxton Square Cottages (SAHR 10159)



Redruth Police Station, Cells and Stables (SAHR 10014)



Redruth Gaol (SAHR 10042)



Redruth Courthouse (SAHR 10027)



St Mary's Anglican Church (SAHR 10018)



Kooringa Primitive Methodist Church (SAHR 10011)



Burra Jinker (Object) (SAHR 10970)



Smelters Home Hotel (SAHR 10419)



Smelts Manager's Residence and Office (SAHR 10989) (Part of former Burra Smelts Historic Site)



Smelts Superintendent's Residence and Wall (SAHR 10204)



Redruth Wesleyan Church



Former Bank of Australasia



Former Mine Assayer's Residence



Tiver's Row, 8 Truro Street (SAHR 10203)



9 Truro Street (SAHR 10033)



Tiver's Row, 10 Truro Street (SAHR 10032)



Tiver's Row, 12 Truro Street (SAHR 10446)



Tiver's Row, 14 Truro Street (SAHR 10037)



Tiver's Row, 16 Truro Street (SAHR 10038)



Tiver's Row, 18 Truro Street (SAHR 10039)



Salvation Army Citadel, 11 Kingston Street (SAHR 10160)



Stone Wall, Commercial Street, West Side (SAHR 10436)

Good state of repair retaining many of the building's early features or modernised where some early features have been lost - more than 50% of intrinsic fabric remains



SAMA Storeroom (Part of SAMA Storeroom, Yard and Walls (SAHR 10019)

SAMA Storeman's Dwelling (SAHR 10049)

Reason for inclusion in this category:

- Deterioration through limited maintenance due to parts of structure being unoccupied



Ore Floor (SAHR 10055)

Reason for inclusion in this category:

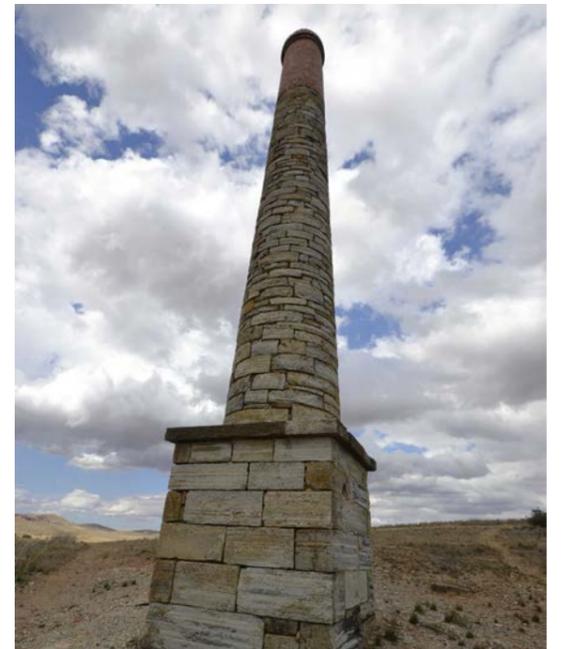
- Deterioration through limited maintenance due to redundant use



Haulage Engine Chimney and Complex (SAHR 10046)

Reason for inclusion in this category:

- Deterioration through limited maintenance due to redundant use



Cornish Crusher Chimney/Dressing Tower Complex (SAHR 10047)

Reason for inclusion in this category:

- Deterioration through limited maintenance due to redundant use

Condition 2A



Former Mine Hospital (Bleak House)

Reason for inclusion in this category:

- Compromised integrity of mortuary at rear



Bon Accord Mine Site (SAHR 10023)

Reason for inclusion in this category:

- Compromised integrity due to demolition of yard walls



Burra Hotel (SAHR 10404)

Reason for inclusion in this category:

- Compromised integrity due to addition of first floor



2-4 Upper Thames Street Cottages (SAHR 10040, 10041)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling



Stone Wall, Commercial Street, East Side (SAHR 10436)

Condition 2A



6 Upper Thames Street (SAHR 10028)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling



8 Upper Thames Street (SAHR 10029)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling



10 Upper Thames Street (SAHR 10030)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling



12 Upper Thames Street (SAHR 10031)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling



16 Upper Thames Street Cottage (SAHR 10447)

Reason for inclusion in this category:

- Compromised integrity due modification to conversion into a single dwelling

Condition 2B
Has lost many of its early features to dereliction or modernisation - less than 50% of intrinsic fabric remains



Burra Cemetery (SAHR 10432)

Reason for inclusion in this category:

- Past clearance of large areas of the early headstone and associated railings etc.



11 Truro Street (SAHR 10036)

Reason for inclusion in this category:

- Building is unoccupied and unmaintained leading to deterioration



13 Truro Street (SAHR 10034)

Reason for inclusion in this category:

- Building is unoccupied and unmaintained leading to deterioration



Miners' Dugouts (SAHR 10050)

Reason for inclusion in this category:

- Structure has been largely rebuilt
- Deterioration of clay walls and ceilings due to construction

Condition 2B



Miners' Dugouts (SAHR 10050)

Reason for inclusion in this category:

- Structure has been largely rebuilt
- Deterioration of clay walls and ceilings due to construction



Miners' Dugouts (SAHR 10050)

Reason for inclusion in this category:

- Structure has been largely rebuilt
- Deterioration of clay walls due to construction



Mine Bridge (SAHR 10021)

Reason for inclusion in this category:

- West side of structure has been significantly changed as a result of the widening of the road
- Deteriorated condition of remaining masonry



Morphett's Winding House (SAHR 10052)

Reason for inclusion in this category:

- Loss of roof and floors leading to deterioration of the remaining masonry



Graves Engine House (SAHR 10054)

Reason for inclusion in this category:

- Loss of roof and floors leading to deterioration of the remaining masonry



SAMA Yard and Walls (Part of SAMA Storeroom, Yard and Walls (SAHR 10019)

Reason for inclusion in this category:

- Yard walls have not been maintained with sections collapsing and are close to ruinous



Former Engine/Crusher House (SAHR 10445)

Reason for inclusion in this category:

- Stability of remaining walls and the retaining wall supporting the embankment, including the deterioration of the remaining timber beams



Mine Offices (SAHR 10056)

Reason for inclusion in this category:

- One of the few remaining full height walls at risk of imminent collapse



Smeltworks Stableyard and Storehouse (SAHR 10024)

Reason for inclusion in this category:

- Complex is unoccupied and is verging on being ruinous with parts having been already been demolished

Condition 3



1840s Timber Dwelling (SAHR 10434)

Reason for inclusion in this category:

- Building is unoccupied and has been unmaintained resulting in it being close to ruinous



Drainage Tunnel, Burra Mine Historic Site (SAHR 10970)

Reason for inclusion in this category:

- Vaulted tunnel located below roadway with collapsed sections

Condition 4 - To be Managed as a Ruin



Hampton (SAHR 10359)



Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins (SAHR 10989)



Former Dugout Sites (SAHR 11187)



Morphett's Pool, Burra Mine Historic Site (SAHR 10970)



Buddle Pits, Burra Mine Historic Site (SAHR 10970)



Waterwheel, Burra Mine Historic Site (SAHR 10970)



Mine Cottage, Burra Mine Historic Site (SAHR 10970)



Schneiders Chimney & Flue, Burra Mine Historic Site (SAHR 10970)



Stables Floor, Burra Mine Historic Site (SAHR 10970)



Mine Shafts, Burra Mine Historic Site (SAHR 10970)



Haulage Cutting, Burra Mine Historic Site (SAHR 10970)

Typical Dilapidation

The Australian Cornish Mining Sites in Burra has a period of significance from 1845 to 1877. Naturally therefore the buildings and sites predominantly date from that time period.

As South Australia had limited native timber resources, masonry buildings have predominated. This situation was exaggerated at Burra whose location required all building timbers to be transported over considerable distances adding to their cost. With only a few exceptions therefore, the structures reviewed are masonry structures, essentially constructed of locally quarried stone, occasionally supplemented by dressings of brick or render. Timber is largely confined to roof and floor structures, or to joinery such as doors and windows.

Buildings of this construction and era, although varying in condition, typically display similar dilapidation such as those outlined in the following pages.

Rising Damp and Salt Attack (including poor site drainage)

Rising damp is defined as the “upward capillary migration of water in masonry”.¹⁶² Salt attack is defined as the “decay of masonry materials due to the crystallisation of soluble salts within the pores of the material”.¹⁶³ A more detailed explanation is as follows:

Rising damp is caused by capillary suction of the fine pores or voids that occur in all masonry materials. The capillaries draw water from the soils beneath a building against the force of gravity, leading to damp zones at the base of walls. Many traditional buildings were constructed on footings of dense stone which helped reduce the upward passage of water ... In modern construction rising damp is prevented by the insertion of a damp-proof course (DPC) which is generally 0.5mm thick sheet of polyethylene (plastic). Because many nineteenth century buildings were constructed without DPCs and because some DPCs have failed, been bridged, or damaged, there are now common problems of dampness at the base of walls. In most cases that dampness will have salt associated with it.

*Salt attack is the decay of masonry materials such as stone, brick and mortar by soluble salts forming crystals within the pores of the masonry. As the salt crystals grow the masonry is disrupted and decays by fretting and loss of surface skins. The salt commonly comes from the soils beneath and is carried up into walls by rising damp. When the dampness evaporates from the walls the salts are left behind, slowly accumulating to the point where there are sufficient to cause damage. Repeated wetting and drying with seasonal changes leads to the cyclic precipitation of salts and the progressive decay of the masonry.*¹⁶⁴

An appreciation of the problem of rising damp and salt attack were not understood until the end of the significant period, and therefore the inclusion of damp courses into masonry construction did not become common practice until the mid-late 1870s. Problems generated by this issue are therefore common with the various structures, often exaggerated by poor stormwater disposal, alterations such as the addition of concrete floors or previous inappropriate repair practices.

Key examples

Some of the key places which display signs of rising damp and salt attack are as follows:



National Bank of Australasia (SAHR 10007) – Deterioration of stone to boundary wall



National Bank of Australasia (SAHR 10007) – Deterioration of stonework above the plinth to the front façades, together with lightweight cladding of plinth probably concealing further deterioration



Redruth Gaol (SAHR 10042) – Deterioration of mortar to wall face



Redruth Gaol (SAHR 10042) – Deterioration of stone and mortar



National Bank of Australasia (SAHR 10007) – Collapsing section of boundary wall



SAMA Storeman's Yard and Walls (SAHR 10019) – Deterioration of mortar to lower wall



Powder Magazine (SAHR 10045) – Deterioration of mortar at base of walls



Miners Dugouts (SAHR 10050) – Deteriorated stone to base of walls



SAMA Storeman's Dwelling (SAHR 10049) – Deterioration of mortar to lower wall



11 Truro Street (SAHR 10036) – Deterioration of stone and mortar to lower walls



Morphett's Winding house (SAHR 10052) – Deterioration of stone to base of walls



SAMA Yard and Walls (10019) – Deterioration of mortar and stone at base of east wall



Redruth Courthouse (SAHR 10027) - Poor stormwater drainage at base of wall



Paxton Square Cottages (SAHR 10159) - Low level deterioration of paint, stone and mortar joints



Burra Hotel - Deterioration of stone over earlier cement render repair to lower portion of wall



Former Mine Hospital - Significant deterioration of stone probably due to internal moisture issues associated with services and concrete floor



Mine Offices (SAHR 10056) - Significant low level deterioration of stone and mortar threatening the structural integrity

Falling Damp

Falling damp is defined as the "dampness in buildings resulting from water entering at upper levels and percolating downwards".¹⁶⁵ A more detailed explanation is as follows:

Falling damp is moisture entering masonry walls from above and percolating downwards through the network of pores that most materials possess. The numerous sources of falling damp ... include failed roof coverings, blocked or leaking gutters, failed flashings and joints that have lost their mortar. Build-up of dirt and mosses on upper surfaces of parapets and cornices encourages water retention which in turn promotes downward percolation through the masonry. Most cases of falling damp lead to relatively localised patches of damage. ... As with rising damp, the damage caused by falling damp happens not where moisture enters the masonry, but at the point where it evaporates from the wall surface and leaves the salts behind.¹⁶⁶

While Burra does not have a high rainfall, roof and gutter failures if not rectified for some time can lead to considerable damage. Given that the majority of the structures are of masonry construction, this problem typically results in the deterioration of softer mortar joints. The degree of the problems observed are quite typical and are not considered to be peculiar to Burra.

Key examples

Some of the key places which display signs of falling damp are as follows:



Kooringa Primitive Methodist Church (10011) - Deterioration of mortar joints to upper walls caused by blocked or leaking gutter



SAMA Storeman's Dwelling (SAHR 10049) - Deterioration of pointing to top of wall from earlier leaking gutter



Mine Bridge (SAHR 10021) - Falling damp caused by inadequate coping and exaggerated by hard pointing



Smelters Home Hotel (SAHR 10419) - Deterioration of coping to parapet



Penetrating Damp

Penetrating damp is the "horizontal penetration of dampness into walls".¹⁶⁷ A more detailed explanation is as follows:

*Penetrating damp can be due to leaking water or waste pipes; to failure of tile-grouts in kitchens, bathrooms and laundries; or to defective mortar joints in external walls ... Like falling damp, penetrating damp generally produces small, localised patches of dampness and decay. Exceptions are cellars and basements, where ground and surface water may penetrate laterally through the walls, due to the failure or lack of external damp-proofing or drainage. In these cases damage may be widespread.*¹⁶⁸

The problem at Burra is generally confined to areas below ground or where the structure retains soil, and given the masonry nature of these structures results in deterioration of pointing and stone surfaces. The degree of the problems observed are quite typical and are not considered to be peculiar to Burra.

Key examples

Some of the key places which display signs of penetrating damp are as follows:



Bon Accord basement (SAHR 10023) – Deteriorated pointing and paint finish due to contact with the soil



Burra Hotel Cellars (SAHR 10404) – Deterioration of mortar joints and stone due to soil backing the walls



Mine Bridge (SAHR 10021) – Severely decayed stonework due to retained soil



Burra Town Hall (SAHR 10403) – Salt efflorescence on internal wall surface caused by retained soil

Chimney Deterioration

Given their function, chimneys are almost inevitably of masonry construction. In the case of Burra, other than the earliest structures or the large industrial scale chimneys associated with the mine which are occasionally of stone, most chimneys are of brickwork. These tall, thin structures are particularly exposed to the weather and are usually well above the normal viewing angle. Many suffer from deterioration of the surface of masonry units and mortar joints, typically on the down wind or leeward side due to turbulence or vortices created by the area of low pressure and leading to scouring.

The degree of the problems observed are quite typical and are not considered to be peculiar to Burra, although it was noted that due to the early age of the structures they typically include softer, lower fired bricks which are more prone to deterioration in chimneys.

Key examples

Some of the key places which display chimney deterioration are as follows:



SAMA Storeman's Dwelling (SAHR 10049) – Deteriorated if individual bricks and mortar joints



13 Truro Street (SAHR 10034) – Collapse to side due to deterioration of mortar joints



Paxton Square Cottages (SAHR 10159) – Deterioration of mortar joints of chimney above roof



Cornish Crusher Chimney/Dressing Tower Complex (SAHR 10047) - Deterioration of pointing to one side



11 Truro Street (SAHR 10036) - Mortar deterioration to joints and delamination of render to chimney



Burra Hotel (SAHR 10404) - Deterioration of low fired early brickwork to the chimney exaggerated by wind turbulence

Structural Movement

Structural movement is defined as “Cracking, deflection, bulging or failure of walls”.¹⁶⁹ Due to the masonry nature of the buildings at Burra, structural movement is essentially displayed through cracking, typically extending through weaker mortar joints, but also occasionally extending through masonry units. The stability of some walls were also of concern, particularly where these are freestanding and not braced by other walls.

The degree of the problems observed are quite typical and are not considered to be peculiar to Burra.

Key examples

Some of the key places which display signs of structural movement are as follows:



Mine Offices (SAHR 10056) - Significant lean to standing wall



Smeltsyard (SAHR 10024) - Major cracking



Smeltsyrd (SAHR 10024) – Major cracking



Redruth Courthouse (SAHR 10027) – Major cracking



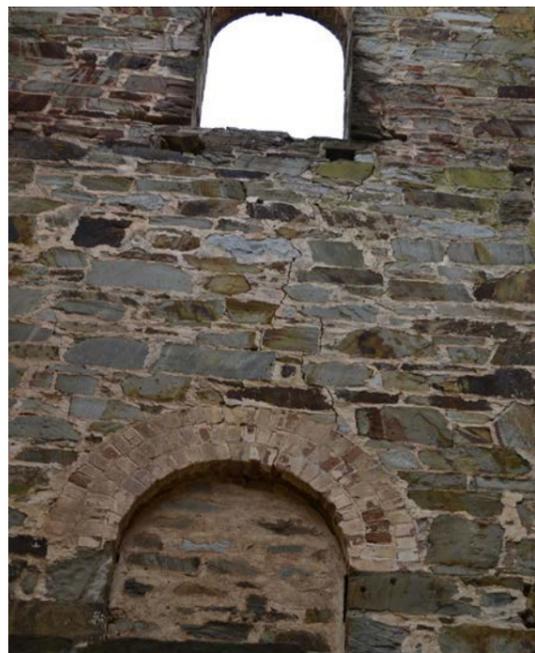
Morphett's Winding house (SAHR 10052) – Moderate cracking between openings



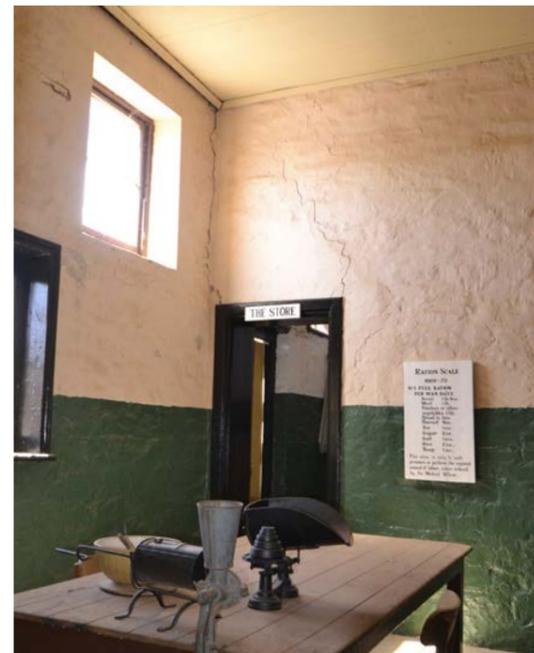
Redruth Courthouse (SAHR 10027) – Major cracking



Redruth Courthouse (SAHR 10027) – Moderate cracking



Graves Engine house (SAHR 10054) – Cracking to stone lintel



Redruth Gaol (SAHR 10042) – Internal cracking



Burra Town Hall (SAHR 10403) – Minor render cracking



Roof Deterioration and Water Damage

The earliest buildings at Burra pre-date the introduction of the now ubiquitous corrugated steel, with many of the early buildings originally roofed with split timber shakes or slate tiles, evidence of some of these original roof materials were observed to be retained in place under the current roofing. The current roofing of the buildings inspected at Burra are almost universally currently clad in corrugated steel of varying finishes.

The integrity of the roof to any structure is essential. The deterioration of the masonry structures such as those at Burra is typically quite slow until a roof fails, and without rectification this will inevitably lead to its ruination. Issues observed include loose or missing roof sheets or components such as flashings and cappings, as well as corrosion of older galvanised steel roofing, particularly those comprised of short roofing sheets.

The degree of the problems observed are quite typical and are not considered to be peculiar to Burra.

Key examples

Some of the key places which display signs of roof deterioration are as follows:



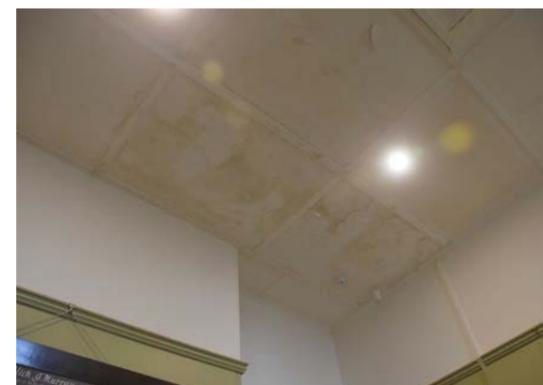
Smeltsyard (SAHR 10024) – Water damage to Calico ceilings



Smeltsyard (SAHR 10024) – Corrosion to corrugated roof sheeting



Burra Hotel (SAHR 10404) – Corrosion to valley of verandah



Burra Town Hall (SAHR 10403) – Water damage to ceiling caused by roof leaks



Smelters Home Hotel (SAHR 10419) – Corrosion to roof sheeting

Weathering

Weathering can be defined as “a change in colour, the corrosion, or the deterioration of building materials after exposure to rain, frost, pollution, salt air, ultraviolet, etc. Wood suffers from the mechanical and chemical break-up of its surface”.¹⁷⁰ While weathering impacts on all materials, the relative durability of the masonry which make up most of the structures at Burra mean that here the observed deterioration caused by weathering primarily occurs to timber surfaces but also to painted masonry surfaces.

Timber surfaces which are not protected by coatings such as paint deteriorated through the breakdown of its organic structure which can lead to its disintegration over time and exposing it to biological attack, such as rot. This was observed in a number of cases at Burra due either to the deterioration of the paint finishes or where unpainted timber has been left exposed by the loss of roof structures.

The degree of the problems observed are quite typical and are not considered to be peculiar to Burra perhaps with the exception of where timbers are associated with buildings that are without roof structures.

Key examples

Some of the key places which display signs of weathering are as follows:



Former Engine/Crusher house (SAHR 10445) – Deterioration of remaining timber beams bracing external walls



Graves Engine house (SAHR 10054) – Deterioration to timber joists within cockpit



13 Truro Street (SAHR 10034) – Deterioration of paint finishes leading to the weathering of the timber substrates and loss of window putty



Redruth Courthouse (SAHR 10027) – Weathering to end of timber wallplate and end rafter/barge to outbuilding



Paxton Square Cottages (SAHR 10159) – Blistering paint surfaces



Paxton Square Cottages (SAHR 10159) – Deterioration of paint finish of exposed end of bargeboard leading to deterioration of timber substrate



Paxton Square Cottages (SAHR 10159) – Deterioration to end of exposed end of timber wallplate due to failure of paint system



Burra Town Hall (SAHR 10403) – Deteriorated paint finish exposing masonry surfaces to deterioration



Burra Town Hall (SAHR 10403) - Deteriorated paint finish to fascia leading to weathering of timber substrate



1840s Timber Dwelling (SAHR 10434) – Deterioration of paint finish to shiplap cladding and joinery leading to deterioration of the timber surface, exaggerated by missing sections of the cladding



1840s Timber Dwelling (SAHR 10434) – Failure of paint finish to door leading to weathering of timber substrate



4. Cultural Significance



4.1. 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 intent of this section of the CMP is to define the special cultural values we have inherited from the past at Burra so these can be conserved and passed on to future generations. To do so requires a re-examination of the values identified in the current listing so to allow a better understand of the contribution of the individual sites within the context of its recognised national heritage values.

4.2. Heritage Cultural Value

The *Burra Charter* in the section on definitions describes cultural significance of a place as embodied in its fabric, its setting and its contents; in the associated documents; in its use; and in people’s memory and association with the place.¹⁷¹ Places worth keeping as part of our heritage were first identified at federal level by the *Australian Heritage Commission Act 1975*. The Commonwealth Act defined four types of heritage value represented by the National Estate, including aesthetic, historic, scientific and social heritage. The Commonwealth, state and local levels of government have variously defined these four types in legislation.

National Heritage Value

The values at a national level are defined by the *Australian Heritage Council Act 2003* which established the Australian Heritage Council and introduced a National and Commonwealth Heritage List. The Commonwealth List is for properties which are managed or owned by the Australian Government, while the following criteria has been provided for determining whether a place is of national significance and suitable for inclusion on the National Heritage List:

- 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;*
- b) *the place has outstanding heritage value to the nation because of the place’s possession of uncommon, rare or endangered aspects of Australia’s natural or cultural history;*
- c) *the place has outstanding heritage value to the nation because of the place’s potential to yield information that will contribute to an understanding of Australia’s natural or cultural history;*
- d) *the place has outstanding heritage value to the nation because of the place’s importance in demonstrating the principal characteristics of:*
 - i) *A class of Australia’s natural or cultural places; or*
 - ii) *A class of Australia’s natural or cultural environments;*
- e) *the place has outstanding heritage value to the nation because of the place’s importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;*

- 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;*
- g) *the place has outstanding heritage value to the nation because of the place’s strong or special associations with a particular group for social, cultural or spiritual reasons;*
- h) *the place has outstanding heritage value to the nation because of the place’s special association with the life or works of a person, or group of persons, of importance in Australia’s natural or cultural history;*
- i) *the place has outstanding heritage value to the nation because of the place’s importance as part of indigenous tradition.*

The criteria for the National Heritage List is essentially the same as that for the Register of the National Estate established under the *Australian Heritage Commission Act (1975)*, with the exception of the addition of criteria i) and that the place is to have an ‘outstanding value to the nation’. The original criteria under the *Australian Heritage Commission Act 1975* did not make this requirement, and hence the Register of the National Estate is primarily composed of places which are often of state or even local significance. Unlike the Register of the National Estate, the National Heritage List is protected by the *Environment Protection and Biodiversity Conservation Act 1999*, meaning it is a criminal offence to take an action that has, will have, or is likely to have, a significant impact on the national heritage values of a national heritage place without the approval of the Australian Government Minister for the Environment and Heritage. The Register of the National Estate was closed in 2007 and is no longer a statutory document but is an archival record of cultural and Indigenous heritage places.

The Australian Cornish Mining Sites in Burra have already been identified as being of national significance and for this reason it has been included on the National Heritage List.

Other Heritage Values

Burra, including the mining and smelting sites, is also currently recognised on the South Australian Heritage Register, both as a State Heritage Area and through a large number of individually listed places. While there are some similarities between the values at the national and state level, there are also many differences in the nature, importance and impact of these on the history of South Australia. As this document is focused on the national values, no analysis or refinement of the state heritage values will be carried out in this context.

It is noted that the boundaries of the Burra State Heritage Area are those that have also been adopted to define the extent of the national heritage listing.



4.3. National Significance Review

While currently entered on the National Heritage List, the intention is to re-examine what values make it of significance, and hence to review how those values are reflected in the individual places which are identified as part of the listing.

The intention is therefore to review how the defined significance relates the national historic thematic framework, which is used to group the individual sites and hence to explore the threads of the Burra story that are represented by those places. The comparative rarity of the individual elements within both a type of place and an historic theme also deserves examination.

The National Heritage criteria and Statement of Significance will subsequently be reviewed, together with the relevance of the existing individual places mentioned in the National Heritage Values and whether there are any other places which should be considered for inclusion. Levels of significance will then be attributed in the Hierarchy of Significance. This in turn will assist in forming policy around the management of the individual places.

National Heritage Listing

The existing Summary Statement of Significance follows as per the Australian Heritage Database.¹⁷²

“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.”¹⁷³

The following places are specifically referenced in the Government Notices Gazette (Gazette - C2017G00516) published 9 May 2017, entitled “Inclusion of a Place in the National Heritage List - Australian Cornish Mining Sites: Burra and Moonta”.¹⁷⁴

Those specifically referenced at the mine site are the following:

- Former South Australian Mining Association Storeroom, Yard and Walls, Burra Mine Area (SAHR ([South Australian Heritage Number] Register] 10019)
- Peacock’s Chimney [Cornish], Burra Mine Area (SAHR 10020)
- Former Powder Magazine, Burra Mine Area (SAHR 10045)
- Former Haulage Engine Chimney [Welsh], Burra Mine Area (SAHR 10046)
- Former Crusher Chimney [Cornish], Burra Mine Area (SAHR 10047)
- Former South Australian Mining Association Storeman’s Dwelling, Burra Mine Area (SAHR 10049), Storeroom, Yard and Walls (SAHR 10019)
- Former Winding House (SAHR 10052)
- Former Morphett’s Pump House (SAHR 10053)
- Former Graves Pump House (SAHR 10054)
- Former Ore Sorting Floor, Burra Mine Area (SAHR 10055)
- Former Mine Manager’s Dwelling and Office (SAHR 10056)
- Peacock’s Chimney (SAHR 10020)
- Former Morphett’s Pump [Engine] House (SAHR 10053)
- Winding House (SAHR 10052)
- Graves Pump [Engine] House (SAHR 10054)
- Ore Sorting Floor (SAHR 10055)
- Engine/Crusher House (SAHR 10445)
- Burra Mine Historic Site (SAHR 10970)

Those specifically referenced associated with the Smelts site are the following:

- Former Burra Smeltsyard and Storehouse (SAHR 10024)
- Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins, Smelts Manager’s Residence and Office (SAHR 10989)
- Former Smelts Superintendent’s Dwelling and Wall (SAHR 10204)

Those specifically referenced other than associated with the Mine and Smelts sites are the following:

- Dwelling (sometime Masonic Hall, former Burra Primitive Methodist Church) (SAHR 10011)
- Office (former Burra Bible Christian Chapel) (SAHR 10013)
- St Mary’s Anglican Church (SAHR 10018)
- St Mary’s Anglican Church Hall (SAHR 10022)
- Former Bon Accord Mine Site (including Mine Buildings, Wall Sections and Slag Heap) (SAHR 10023)
- Dwelling built by the South Australian Mining Association (SAHR 10028)
- Dwelling built by the South Australian Mining Association (SAHR 10029)
- Dwelling built by the South Australian Mining Association (SAHR 10030)
- Dwelling built by the South Australian Mining Association (SAHR 10031)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10032)
- Attached Cottage (SAHR 10033)
- Attached Cottage (SAHR 10034)
- Attached Cottage (SAHR 10036)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10037)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10038)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10039)
- Attached Stone Cottage built for the South Australian Mining Association (SAHR 10040)
- Attached Stone Cottage built for the South Australian Mining Association (SAHR 10041)
- Former Miner’s Dugouts, Burra Creek (SAHR 10050)
- Dwellings (Paxton Square Cottages) (SAHR 10159)
- Former Burra Salvation Army Citadel (SAHR 10160)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10203)
- Hampton Township Precinct (SAHR 10359)
- Burra Town Hall (incorporating the original Miners’ and Mechanics’ Institute) (SAHR 10403)
- Burra Hotel (previously Miners Arms Hotel) (SAHR 10404)
- Dwelling (former Smelter’s Home Hotel) (SAHR 10419)
- Burra Cemetery (SAHR 10432)
- Timber Dwelling of the 1840s (SAHR 10434)
- 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)
- Attached Dwelling (‘Tiver’s Row’) (SAHR 10446)
- Dwelling (SAHR 10447)
- Former Dugout Sites, Burra Creek (SAHR 11187)



Identification of National Themes

The *Australian Historic Themes Framework*¹⁷⁵ is a framework for use in heritage assessment and management developed by the Australian Heritage Commission. The adoption of the *Australian Historic Themes Framework* is an established best practice process for the identification and categorisation of heritage places. The *Thematic Framework* comprises nine major themes which are:

1. Tracing the evolution of the Australian environment
2. Peopling Australia
3. Developing Local, Regional and National Economies
4. Building settlements, towns and cities
5. Working
6. Educating
7. Governing
8. Developing Australia's cultural life
9. Marking the phases of life

The Themes and Sub-themes are illustrated opposite.

1



TRACING THE EVOLUTION OF THE AUSTRALIAN ENVIRONMENT

The environment exists apart from being a construct of human consciousness. However, a thematic approach recognises the human factor in the natural environment, and how our understanding and appreciation of the environment has changed over time.

- 1.1 Tracing climatic and topographical change
- 1.2 Tracing the emergence of Australian plants and animals
- 1.3 Assessing scientifically diverse environments
- 1.4 Appreciating the natural wonders of Australia

2



PEOPLING AUSTRALIA

This theme group recognises the pre-colonial occupations of Indigenous people, as well as the ongoing history of human occupation from diverse areas.

- 2.1 Living as Australia's earliest inhabitants
- 2.2 Adapting to diverse environments
- 2.3 Coming to Australia as a punishment
- 2.4 Migrating
 - 2.4.1 Migrating to save or preserve a way of life
 - 2.4.2 Migrating to seek opportunity
 - 2.4.3 Migrating to escape oppression
 - 2.4.4 Migrating through organised colonisation
- 2.5 Changing the face of rural and urban Australia through migration
- 2.6 Promoting settlement
- 2.6.1 Fighting for land
 - 2.6.1.1 Resisting the advent of Europeans and their animals
 - 2.6.1.2 Displacing Indigenous people

3



DEVELOPING LOCAL, REGIONAL AND NATIONAL ECONOMIES

While Geoffrey Blainey conceived of Australian history as dominated by the 'tyranny of distance' this concept is alien to Indigenous Australians. Eighteenth and nineteenth century developments in technology made it possible to link the continent to distant markets, and the incentive for almost every expedition by the first European explorers was the search for valuable resources. Much subsequent Australian history has revolved around the search for a single one which to have regional economic development.

<ol style="list-style-type: none"> 3.1 Exploring the coastline 3.2 Constructing capital city economies 3.3 Surveying the continent <ol style="list-style-type: none"> 3.3.1 Looking for inland seas and waterways 3.3.2 Looking for overland stock routes 3.3.3 Prospecting for precious metals 3.3.4 Looking for land with agricultural potential 3.4 Utilising natural resources <ol style="list-style-type: none"> 3.4.1 Hunting 3.4.2 Fishing and whaling 3.4.3 Mining 3.4.4 Making forests into a valuable resource 3.5 Tapping natural energy sources 3.5.1 Grazing stock 3.5.2 Breeding animals 3.5.3 Developing agricultural industries 	<ol style="list-style-type: none"> 3.6 Building and maintaining railways 3.7 Building and maintaining roads 3.8 Getting fuel to engines 3.9 Moving goods and people by air 3.9.1 Farming for commercial profit 3.10 Integrating people into the cash economy <ol style="list-style-type: none"> 3.10.1 Assisting Indigenous people into the cash economy 3.10.2 Encouraging women into employment 3.10.3 Encouraging fringe and alternative businesses 3.11 Altering the environment <ol style="list-style-type: none"> 3.11.1 Regulating waterways 3.11.2 Reclaiming land 3.11.3 Irrigating land 3.11.4 Clearing vegetation 3.11.5 Establishing water supplies 3.12 Feeding people <ol style="list-style-type: none"> 3.12.1 Using Indigenous foodstuffs 3.12.2 Developing sources of fresh local produce 3.12.3 Importing foodstuffs 3.12.4 Preserving food and beverages 3.12.5 Retailing foods and beverages 3.13 Developing an Australian manufacturing capacity 3.14 Developing an Australian engineering and construction industry <ol style="list-style-type: none"> 3.14.1 Building to suit Australian conditions 3.14.2 Using Australian materials in construction 	<ol style="list-style-type: none"> 3.15 Developing economic links outside Australia 3.16 Struggling with remoteness, hardship and failure <ol style="list-style-type: none"> 3.16.1 Dealing with hazards and disasters 3.17 Investing devices 3.18 Financing Australia <ol style="list-style-type: none"> 3.18.1 Raising capital 3.18.2 Building and levelling 3.18.3 Raising against risk 3.18.4 Cooperating to raise capital (co-ops, building societies, etc.) 3.19 Marketing and retailing 3.20 Informing Australians <ol style="list-style-type: none"> 3.20.1 Making, printing and distributing newspapers 3.20.2 Book-reading 3.21 Entertaining for profit 3.22 Lodging people 3.23 Catering for tourists 3.24 Selling companionship and sexual services 3.25 Adorning Australians <ol style="list-style-type: none"> 3.25.1 Dressing up Australians 3.26 Providing health services <ol style="list-style-type: none"> 3.26.1 Providing medical and dental services 3.26.2 Providing hospital services 3.26.3 Developing alternative approaches to good health 3.26.4 Providing care for people with disabilities
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4



BUILDING SETTLEMENTS, TOWNS AND CITIES

Although many people came to Australia in search of personal gain, they realised the need to co-operate in the building of safe, pleasant urban environments. Australian urbanisation and suburbanisation have special characteristics which set them apart from similar phenomena elsewhere in the world.

- 4.1 Planning urban settlements
 - 4.1.1 Selecting township sites
 - 4.1.2 Making suburbs
 - 4.1.3 Learning to live with property boom and bust
 - 4.1.4 Creating capital cities
 - 4.1.5 Developing city centres
- 4.2 Supplying urban services (power, transport, fire prevention, roads, water, light and sewerage)
- 4.3 Developing institutions
- 4.4 Living with slums, outcasts and homelessness
- 4.5 Making settlements to serve rural Australia
- 4.6 Remembering significant phases in the development of settlements, towns and cities

5



WORKING

Although a lot of what we call work is related to the economy, much of it is not undertaken for profit. A great deal of the work done in the home is neither paid nor rewarded as part of the national economy. Some of the most interesting recent social history writers about Australia concern work and workplaces.

- 5.1 Working in harsh conditions
 - 5.1.1 Coping with unemployment
 - 5.1.2 Coping with dangerous jobs and workplaces
- 5.2 Organising workers and work places
- 5.3 Caring for workers' dependent children
- 5.4 Working in offices
- 5.5 Trying to make crime pay
- 5.6 Working in the home
- 5.7 Surviving as Indigenous people in a white-dominated economy
- 5.8 Working on the land

6



EDUCATING

Every society educates its young. While European education places a great emphasis on the formal schooling system, education encompasses much more.

- 6.1 Forming associations, libraries and institutes for self-education
- 6.2 Establishing schools
- 6.3 Training people for the workplace
- 6.4 Building a system of higher education
- 6.5 Educating people in remote places
- 6.6 Educating Indigenous people in two cultures

7



GOVERNING

This theme group is as much about self-government as it is about being governed. It includes all the business of politics, including hostility to acts of government.

- 7.1 Governing Australia as a province of the British Empire
- 7.2 Developing institutions of self-government and democracy
 - 7.2.1 Protesting
 - 7.2.2 Struggling for inclusion in the political process
 - 7.2.3 Working to promote civil liberties
 - 7.2.4 Forming political associations
- 7.3 Making City States
- 7.4 Federating Australia
- 7.5 Governing Australia's colonial possessions
- 7.6 Administering Australia
 - 7.6.1 Developing local government authorities
 - 7.6.2 Controlling entry of persons and things
 - 7.6.3 Policing Australia
 - 7.6.4 Dispensing justice
 - 7.6.5 Incarcerating people
 - 7.6.6 Providing services and welfare
 - 7.6.7 Enforcing discriminatory legislation
 - 7.6.8 Administering Indigenous Affairs
 - 7.6.9 Conserving Australian resources
 - 7.6.10 Conserving fragile environments
 - 7.6.11 Conserving ecologically valuable resources
 - 7.6.12 Conserving Australia's heritage
- 7.7 Defending Australia
 - 7.7.1 Providing for the common defence
 - 7.7.2 Preparing to face invasion
 - 7.7.3 Going to war
- 7.8 Establishing regional and local identity

8



DEVELOPING AUSTRALIA'S CULTURAL LIFE

Australians are more likely to express their sense of identity in terms of a way of life rather than allegiance to an abstract patriotic ideal. One of the achievements of this society has been the creation of a rich culture away from the workplace. While some of the activities encompassed in this theme are pursued for profit - how racing and cinema, for instance - their reasons for being lie in sheer enjoyment of spectators. While many people could not pursue careers in art, literature, science, entertainment or the church without being paid, these activities do not fit easily into the categories of economy or workplace.

<ol style="list-style-type: none"> 8.1 Organising recreation <ol style="list-style-type: none"> 8.1.1 Playing and watching organised sports 8.1.2 Betting 8.1.3 Developing public parks and gardens 8.1.4 Enjoying the natural environment 8.2 Going to the beach 8.3 Going on holiday <ol style="list-style-type: none"> 8.10.1 Making music 8.10.2 Creating visual arts 8.10.3 Creating literature 8.4 Eating and drinking 8.5 Forming associations <ol style="list-style-type: none"> 8.5.1 Preserving traditions and group memories 8.5.2 Helping other people 8.5.3 Associating for mutual aid 8.5.4 Forming common leisure interests 8.6 Worshipping <ol style="list-style-type: none"> 8.6.1 Worshipping together 8.6.2 Maintaining religious traditions and ceremonies 8.6.3 Founding Australian religious institutions 8.6.4 Making places for worship 8.6.5 Evangelising 8.6.6 Forming city missions 8.6.7 Running missions to Australia's Indigenous people 	<ol style="list-style-type: none"> 8.7 Honouring achievement 8.8 Remembering the fallen 8.9 Commemorating significant events <ol style="list-style-type: none"> 8.9.1 Remembering disasters 8.9.2 Remembering public spectacles 8.10 Pursuing excellence in the arts and sciences <ol style="list-style-type: none"> 8.10.1 Making music 8.10.2 Creating visual arts 8.10.3 Creating literature 8.10.4 Designing and building fine buildings 8.10.5 Advancing knowledge in science and technology 8.11 Making Australian folklore <ol style="list-style-type: none"> 8.11.1 Celebrating folk heroes 8.11.2 Myth making and story-telling 8.12 Living in and around Australian homes 8.13 Living in cities and suburbs 8.14 Living in the country and rural settlements 8.15 Being homeless 	<ol style="list-style-type: none"> 9.1 Bringing babies into the world <ol style="list-style-type: none"> 9.1.1 Providing maternity clinics and hospitals 9.1.2 Protecting mothers' and babies' health 9.2 Growing up <ol style="list-style-type: none"> 9.2.1 Being children 9.2.2 Joining youth organisations 9.2.3 Being teenagers 9.2.4 Courtship 9.3 Forming families and partnerships <ol style="list-style-type: none"> 9.3.1 Establishing partnerships 9.3.2 Bringing up children 9.4 Being an adult 9.5 Living outside a family/partnership 9.6 Growing old <ol style="list-style-type: none"> 9.6.1 Retiring 9.6.2 Looking after the infirm and the aged 9.7 Dying <ol style="list-style-type: none"> 9.7.1 Dealing with human remains 9.7.2 Mourning the dead 9.7.3 Remembering the dead
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Australian Historic Themes Framework

Source: 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.



After examining these themes and the associated sub-themes Australian Cornish Mining Sites: Burra specifically relates to the following themes:

2. Peopling Australia
 - 2.4 Migrating
3. Developing Local, Regional and National Economies
 - 3.4 Utilising natural resources
 - 3.6 Recruiting labour
 - 3.8 Moving goods and people
4. Building settlements, towns and cities
 - 4.5 Making settlements to serve rural Australia
5. Working
 - 5.1 Working in harsh conditions
 - 5.2 Organising workers and workplaces

Within these themes, there are sub-themes, and a commentary and representative places are shown below.

Theme	Sub-theme	Commentary	Representative Places
2.4 Migrating	2.4.2 Migrating to seek opportunity	<p>Cornish miners were recruited from the new Cornish immigrants to South Australia, and directly from Cornwall using free or assisted passage, bringing to South Australia their social customs.</p> <p>Welsh and German smelters migrated to establish the associated smelting works.</p>	<p>Housing (residences)</p> <p>Churches</p> <p>Dugouts</p> <p>Cemetery</p> <p>Miners and Mechanics Institute</p> <p>Freemasons Hall</p> <p>Hotels</p>
3.4 Utilising natural resources	3.4.3 Mining	<p>The richness of ore discovered at Burra and compositional similarity to those found in Cornwall allowed the miners of South Australia to follow traditional Cornish mining practice without the need for adaptation. This included engines directly imported from Cornwall and engine houses built to Cornish plans that now make up the distinctive Burra Mines landscape.</p> <p>Financing the mine and making wage payments</p>	<p>Mining Sites (Burra Mine site, Bon Accord mine site)</p> <p>Banks</p> <p>Smelter Site</p>
3.6 Recruiting labour		<p>The associated smelting works brought Welsh smelting technology to South Australia and enabled the Burra Mines to become one of Australia's most successful mines.</p>	

Theme	Sub-theme	Commentary	Representative Places
3.8 Moving goods and people	3.8.5 Moving goods and people on land	<p>Moving goods to and from Burra, including moving equipment to the mine and taking the ore to market was an arduous and difficult journey.</p>	<p>Bridges</p> <p>Jinker</p> <p>Smelter Yard Stables Complex</p>
4.5 Making settlements to serve rural Australia		<p>The private company township of Kooringa (1846) was Australia's first planned company town. Several other townships developed around the Burra Burra mine and by 1851 the combined number of inhabitants of 'The Burra' had grown to the seventh largest population centre in Australia, and Australia's largest inland town.</p>	<p>Town layouts</p> <p>Company housing</p> <p>Paxton Square housing</p> <p>Dugouts</p> <p>Hotels</p> <p>Police Station, Courthouse & Gaol</p> <p>Telegraph Station</p>
5.1 Working in harsh conditions	5.1.2 Coping with dangerous jobs and workplaces	<p>Although Burra Burra was a comparatively safe mine, there was always danger; rocks fell from the roofs, tunnels caved in, explosions caused disasters, and falls. At Burra there were 15 fatal accidents in 32 years of underground mining</p>	<p>Burra Mine site</p> <p>Mine Hospital</p> <p>Dugouts</p>
5.2 Organising workers and work places		<p>Mining practices were translated directly from Cornwall, including the Cornish system of tribute, tutwork and surface workers.</p>	<p>Burra Mine site</p>



4.4. Comparability/Rarity/Representation

The Burra Mine can be compared to a number of mine sites (excluding quarries) which exist in South Australia, Australia and internationally. These are summarised below.

Local Heritage Examples

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.¹⁷⁶

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

State Heritage Register Examples

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, State heritage listed Cornish influenced mines include:

Arsenic Labyrinth, Wheal Ellen Mine, Strathalbyn (SAHR 12773)

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.¹⁷⁷

Extant structures: above ground flue and labyrinth.

Blinman Mine & Mine Manager’s Cottage, Blinman (SAHR 13888)

Blinman Mine was established in 1862, following the discovery of copper in 1859. It operated until 1907.

Extant structures: main shaft (underground tours are currently held), slag heap, Mine Manager’s Cottage, Cornish ore concentrating remains such as buddle pits.¹⁷⁸

Chimney [Cornish], Preamimma Mine, Monarto (SAHR 10449)

Extant structures: chimney.

Engine House for Direct Acting (‘Bull’) Pumping Engine, North Rhine Mine (SAHR 12846) (Keyneton)

Extant structures: Ruins - Engine house.

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.¹⁷⁹

Former Harvey’s Pumping Station (Enginehouse), Kadina (SAHR 10125)

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.

Extant structures: Harveys (Cornish) Enginehouse (1875).

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.¹⁸⁰

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.¹⁸¹

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”.¹⁸²

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.¹⁸³

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”.¹⁸⁴ 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”.¹⁸⁵

Extant Mine structures: “Hughes” Pump House and flue, adjacent Ruins, Shaft and Paving.¹⁸⁶

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.¹⁸⁷

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).

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.¹⁸⁸

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.¹⁸⁹

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.

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”.¹⁹⁰

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.¹⁹¹

Other South Australian, State heritage listed mines include:

- Aclare Mine Historic Site, near Callington (SAHR 12371)
- Appealinna Mine Ruins & Miner’s Hut, Ikara-Flinders Ranges National Park (SAHR 12025)
- Chapel Hill Diggings, Echunga Goldfield (SAHR 10459)
- Chimney & Flue, Former Lone Hand Gold Mine (SAHR 12863)
- Copper King Copper & Ochre Mine, Leigh Creek (SAHR 13957)
- Copper Mine Chimney [Welsh], Charlton Run, Wirrabara (SAHR 10961)
- Enterprise Copper Mine & Manager’s Residence, near Williamstown (SAHR 12251)
- Former Alma and Victoria Mine Site and Structures, Waukaringa (SAHR 10316)
- Former Balhannah Copper/Bismuth/Gold Mine, including Boiler House, Engine House, Crusher House and Chimney (SAHR 12912)
- Former Victoria Gold Mine near Athelstone (SAHR 14693)
- Former Woodley Wines Winery (cellar building only) and adit and ventilation shaft of former Glen Osmond Mine (SAHR 13072)
- Grunthal Mine Historic Site and related structures near Verdun (SAHR 12906)
- Jupiter Creek Diggings, Echunga Goldfield (SAHR 10460)
- Kitticoola Mine near Palmer (SAHR 10835)
- Lady Alice Gold Mine Site, Para Wirra Conservation Park (SAHR 12782)
- Mongolata Gold Battery, remains of Cyanide Works, Eating House and Dugouts and former Byles’ Mine, Mongolata Goldfield (SAHR 11004)
- Paull’s Consolidated Mine near Leigh Creek (SAHR 13887)
- Sliding Rock Mine, Cadnia, Via Beltana (SAHR 13889)
- Talisker Silver Lead Mine, including remains of Shafts, Manager’s Residence, Store Rooms, Engine and Jigger House, Calciner, Winding Engine, Remains of Chimney and Smelt Furnace, Talisker Conservation Park near Cape Jervis (SAHR 12552)
- Tarcoola Goldfield, Government Battery and Township (SAHR 20767)



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)

Other Australian State Heritage Register examples

The Burra Mine can be compared to other Cornish mine sites which exist in Australia and are included on the various separate state heritage registers. These are summarised below.

Australian, State heritage listed Cornish influenced mines include:

New South Wales Heritage Register

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)

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.

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)

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.¹⁹²

Extant structures: Cornish Engine house (1865) (with metal bracing); Cornish Engine house roof (removed from building); 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 (with metal bracing); open pit lookout; part enginehouse boiler abutting the chimney; and garden of remembrance (exhumed Cadia Cemetery remains).¹⁹³

Note:
Tin Buddles at Pyes Creek, Johnstones Rd, via Torrington, NSW (Register of National Estate 19057) (Not State listed)

Extant structures: four buddles and infrastructure adjacent mine shaft.

Victorian Heritage Register

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.

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"¹⁹⁴ 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, Ormeo (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.

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".¹⁹⁵

Note: The following Victorian Heritage Inventory listing includes:

Cornistown 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".¹⁹⁶

Queensland Heritage Register

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)

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".¹⁹⁷

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.

Golden Gate Mining and town Complex, Croydon (645605)

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.¹⁹⁸

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.

Tyrconnel Mine and Battery (1876-1980s) (600687)

Extant Structures: living quarters, mine including Cornish boilers, battery, and cyanide works.

Western Australian Heritage Register

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)

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).¹⁹⁹ 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".²⁰⁰ The "Baddera boilers are the last known minesite 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".²⁰¹

Extant structures: Cornish boiler (1908).

Geraldine Mine (Geraldine Mine Site, Buildings and graveyard), Galena (Place no. 03455)

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.²⁰² It was the first commercial mine in Western Australia.

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

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

The Northern Territory Heritage Register is searchable by "Name" only. The term "Mine" was used in this field. This resulted in a number of 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

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.



National Heritage List Examples

The Burra Burra Mine can be compared to other Cornish mine sites which exist in Australia and are included on the National Heritage List. These are summarised below.

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”.²⁰³ 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”.²⁰⁴

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)”.²⁰⁵ 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”.²⁰⁶

[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”.²⁰⁷ 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”.²⁰⁸ The Goldfield also represents Cornish mining technology and structures include “Cornish ground flues” and the Cornish Enginehouse.²⁰⁹

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 (ie 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.”²¹⁰

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”.²¹¹

World Heritage List Examples

The Burra Burra Mine can be compared to Cornish influenced mine sites which exist internationally. They are summarised below.

Other International, World heritage listed Cornish / Cornish influenced mines include:

[Cornwall and West Devon Mining Landscape \(Ref- 1215\)](#)

This listing includes the following mines:

- 1215-001 St Just Mining District
- 1215-002 The Port of Hayle
- 1215-003 Tregonning and Gwinear Mining Districts(003i) with Trewavas (003ii)
- 1215-004 Wendron Mining District
- 1215-005 Camborne and Redruth Mining District(005i) with Wheal Peevor (005ii) and Portreath Harbour (005iii)
- 1215-006 Gwennap Mining District (006i) with Devoran and Perran (006ii) and Kennall Vale (006iii)
- 1215-007 St Agnes Mining District
- 1215-008 The Luxulyan Valley (008i) and Charlestown (008ii)
- 1215-009 Caradon Mining District
- 1215-010 Tamar Valley Mining District (010i) with Tavistock (010ii)

Other International Cornish influenced mines include:²¹²

[Mexico](#)

- 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”.²¹³

[North America](#)

- Grass Valley, California.
- Mineral Point, Wisconsin.
- Upper Peninsula of Michigan (known as the Copper Country).

[Spain](#)

- Linares, Andalucia (lead mine) (Cornish enginehouses and chimneys).

[South Africa](#)

- Kimberley (Diamond mine).
- Johannesburg (Gold mine).
- Cape Copper Mining Company, O’okiep (Copper mine with intact enginehouse and beam engine).

[Other regions include:](#)

- Wales
- Ireland
- Cumbria, England
- New Zealand (Pumping enginehouse, Kawau Island, North Island)



4.5. Application of criteria

The following examines the National criterion to establish and comment on both the Government Gazetted National Values and the Statement of Cultural Significance.

National Heritage Values

The already established National Heritage Values for Burra are outlined in the Government Notices Gazette (Gazette - C2017G00516) published 9 May 2017, entitled "Inclusion of a Place in the National Heritage List - Australian Cornish Mining Sites: Burra and Moonta".²¹⁴ These are described under criteria a) and f) which are identified as the basis for its cultural significance to the nation.

To test the validity of the already established values this document has reviewed the values based on the research carried out for this CMP against all of the criteria for inclusion in the National Heritage List. This established that while in general agreement with the established values some minor modification would be warranted. The suggested modifications are highlighted in yellow highlight, while the basis for these changes are outlined in the following supporting commentary. This review also established that some of the other criteria were found to apply to the Burra site.

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;

The following text is that provided in the Government Notices Gazette for inclusion of Burra in the National Heritage List. Suggested modifications are highlighted in yellow:

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, Redruth, 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 Morphet'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), Mine Hospital, Mine Assayer's Residence and Mine Bridge.

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 Morphet's 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 Smelteryard 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 Methodist Church (9 Upper Thames Street), the Paxton Square cottages (33), the former Burra Bible Christian Chapel (Kingston Street), the Redruth Wesleyan Church, 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), the National Bank of Australasia, the Bank of Australasia, the Burra Post and Telegraph Office, Tiver's Railway Store and Burra Town Hall (original Miners' and Mechanics' Institute). While the Cornish miners were mostly Methodist in faith, other religions were present in the town. 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. Law and order became important in the town as demonstrated by the Redruth Police Station, Cells and Stables, the Redruth Courthouse, and the Redruth Gaol.

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), Llwchwr (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.²¹⁵

Commentary

The above suggested modifications are comprised of either minor changes to better define the places or changes to the individual places specifically referenced, including both deletions of existing referenced places and the addition of other places not previously specifically referenced in the values statement. The reason for the changes associated with these places are outlined in the subsequent section.

Criterion (b) the place has outstanding heritage value to the nation because of the place's possession of uncommon, rare or endangered aspects of Australia's natural or cultural history;

In considering this criterion, the Guidelines for the National Heritage List²¹⁶ note:

"This criterion applies generally to places possessing uncommon, rare or endangered aspects of Australia's natural or cultural history where these aspects are of national significance to Australia.

Simple possession if uncommonness, rarity, or endangered aspects is insufficient. A good knowledge of the national context of particular uncommonness, rarity, or endangered aspects of Australia's natural or cultural history possessed by the place and the degree of the importance of this within Australia's natural or cultural history, is critical to an assessment of whether the place is of such significance that it is of 'outstanding heritage value to the nation'.

This criterion particularly applies to places which characterise past ways of life, custom, process, land use, function or design that were always few in number, or that are now few in their surviving number due to subsequent destruction. Places may include those with uncommon integrity in their national context".²¹⁷

Commentary

There are other examples of Cornish mines in Australia although few are as early, extensive or as important as those at Burra and Moonta. Nevertheless it is agreed that Criteria (b) does not apply.



Criterion (c) the place has outstanding heritage value to the nation because of the place's potential to yield information that will contribute to an understanding of Australia's natural or cultural history;

In considering this criterion, the Guidelines for the National Heritage List note:

“a place can be considered for its potential to yield information in terms of evidence from a number of possible sources of information at or associated with the place, including but not limited to oral traditions, records, collections, movable cultural heritage, archaeological resources, fossils, biological material, geological features, and other contents or fabric.”²¹⁸

Commentary

The archaeology of the mine, smelters and dugouts, is considered to have substantial potential to further reveal important information about early mining, smelting and living conditions. In particular it is noted that the overburden of the modern open cut located within the eastern approach to the mine has buried most of the early surface ore treatment areas, while it's is also likely that many areas of the early underground works remained undisturbed by the late twentieth century mining operations. Should these areas be uncovered, it is likely to reveal considerable information about early Cornish mining and treatment practices.

It is likely that Criteria (c) may apply if a further review is conducted.

Criterion (d) the place has outstanding heritage value to the nation because of the place's importance in demonstrating the principal characteristics of:

- I) A class of Australia's natural or cultural places; or**
- II) A class of Australia's natural or cultural environments;**

In considering this criterion, the Guidelines for the National Heritage List note:

“This criterion applies generally to places that represent all or the critical elements characteristic of a class or type, style or design of outstanding importance within Australian natural or cultural places or environments.”

“Criterion (d) has a focus on the outstanding, exemplary representativeness of the principal characteristics of the place. In considering a place for its demonstration of principal characteristics not all examples of a type of place (eg all architectural styles) will be listed. A high degree of representation of the sub-type (or its importance or typicality) within the national population of the type is a consideration here.”

The Indicators of Significance may include that:

“the place best represents the characteristics of its Class by virtue of its combinations of:

- d.1 Natural physical and biological attributes;*
- d.2 The range of variations associated with the Class;*
- d.3 The optimal development of the Class;*
- d.4 Demonstrating significant variations within the Class*
- d.5 A design or style that occurred during a particular period;*
- d.6 A particular industrial or technological process;*
- d.7 A particular way of life; or*
- d.8 A particular use or land use.*

Commentary

As a class of places, the Australian Cornish mining site in Burra may satisfy Criteria (d) in terms of its historic heritage significance. It demonstrates the principal characteristics of an Australian Cornish mine including the mine itself, the associated smelter, the company township and other later surrounding townships, which together illustrate the development of a Cornish mine in Australia in the mid to late nineteenth century. Copper mining was an important source of wealth and holds an important place in Australia's history. The Burra mine was a highly successful venture and became one of the world's most important copper mines. Thus, it could be considered as an optimal development of the class of place.

It presents important aspects of a Cornish mine specifically Cornish methods of working a mine and Cornish mining technology through not only the planning and layout of the mine but also the reconstructed buildings, substantial ruins, and archaeological sub-surface remains. The technological process of copper mining is evident in structures such as the engine houses, chimneys, and powder magazine. The evolution of the mining technology over the period is also represented by the later open-cut operations including the ore floor. Cornish operations are also evident through ancillary buildings such as the mine hospital, mine assayer's residence, offices and mine captain's residence. The smelter provides evidence of supporting industries which were necessary for the profitability of the Mine, and further adds to the mine's importance as a class of place.

The early settlement patterns of the mining townships are evident in the planning, street layout and buildings in the surrounding townships which developed alongside the Mine, in particular Australia's first planned company township of Kooringa (c.1845-1846). The way in which this settlement functioned is represented through its housing, religious, commercial and institutional buildings. The scale of this rural settlement, accommodating 5,000 people in 1851, is notable. The townships retain a high degree of integrity and authenticity which provides evidence of the history of the place.

The relationship between the demonstration of a technological process and way of life is particularly relevant, and sets this example, as a class of place, apart from other Australian Cornish mine sites. There are a small group of examples of other Australian Cornish mine sites but Burra is a larger scale example which has comparatively high integrity and authenticity. There are only two other Cornish mining sites which are currently on the National Heritage List (Moonta and Castlemaine). Thus, as a class of place, it may be identified as an outstanding example of a Cornish mine in Australia.

It is therefore the view that Criteria (d) does apply in respect of Burra.

Criterion (e) the place has outstanding heritage value to the nation because of the place's importance in exhibiting particular aesthetic characteristics valued by a community or cultural group;

In considering this criterion, the Guidelines for the National Heritage List note:

“The ascription of aesthetic value may be given to a place whether it is a natural or cultural place. In relation to natural places, it is human perception of the natural place which creates the aesthetic value.

Communities may be any group of people whose members share a locality, government, or cultural background. They can be locally based, regional, metropolitan or national groups, but should be a recognised community.”

Commentary

The Australian Cornish Mining Sites in Burra do not exhibit particular aesthetic characteristics valued by a group.

It is therefore agreed that Criteria (e) does not apply.

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

The following text is that provided in the Government Notices Gazette for inclusion of Burra in the National Heritage List. Suggested modifications are highlighted in yellow:

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 and 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).”²¹⁹

Commentary

Based on the research and assessment carried out for this document, this existing assessment is an accurate reflection of the significance of Burra's role in the Cornish mining influence in Australian mining. It should be noted however, that little evidence however has been discovered to support the inclusion of Charters Towers in the places based on the Cornish mining practices.





Criterion (g) the place has outstanding heritage value to the nation because of the place's strong or special associations with a particular group for social, cultural or spiritual reasons;

In considering this criterion, the Guidelines for the National Heritage List note:

“This criterion applies to places in the public consciousness for which a community or cultural group exhibits a strong or special attachment at the national level. The ascription of social value may be given to a place whether it is a natural or cultural place.

Communities may be any group of people whose members share a locality, government, or cultural background. They can be locally based, regional, metropolitan or national groups, but should be a recognised community. The place has to be important because of the community's attachment to the place.

The heritage value can include religious or spiritual places, mythological places, or places of important identity. Nationally recognised groups may include religious denominations, ethnic communities, societies, incorporated groups, or political groups.”

Commentary

The Burra Mine and townships, particularly Koorunga and Redruth, had a close association with the Cornish. The Mine employed many Cornish miners and their families emigrated with them specifically because of this mine. Cornish traditions and culture were embedded in the town. Although, Burra had a strong early association with the Cornish and some traditions continue today, such as the Cornish pasty in many of Burra's eateries, most of the Cornish population left after the decline and eventual closure of the mine.

The Cornish association with the Yorke Peninsula mines at Moonta and Kadina was longer than at Burra, with these mines employing more Cornish miners over a longer period and retaining a community with Cornish ancestry. Today, the Cornish Association of South Australia (CASA) has a Yorke Peninsula branch which meets in Moonta each month. The biennial “Kernewek Lowender” Copper Coast Cornish Festival is held in the towns of Moonta, Wallaroo and Kadina to celebrate and revive Cornish culture.²²⁰ The towns of the ‘Copper Triangle’, Moonta, Wallaroo and Kadina, are therefore considered to have a stronger ongoing association with this particular cultural group than Burra.

It is therefore agreed that Criteria (g) does not apply to Burra.

Criterion (h) the place has outstanding heritage value to the nation because of the place's special association with the life or works of a person, or group of persons, of importance in Australia's natural or cultural history;

In considering this criterion, the Guidelines for the National Heritage List note:

“This criterion applies generally to places in the first instance rather than people. The strength and nature of the association of the person or group of persons with the place, related to the particular and important contribution made by the person or group to Australia's natural or cultural history, is critical to identifying places of outstanding heritage value to the nation.”

Commentary

Although, the Burra Mine and townships were associated with many notable South Australians, including Henry Ayers and George Strickland Kingston, the place does not have a special association with a person or group which has importance in the nation's cultural history.

It is therefore agreed that Criterion (h) does not apply to Burra.

Criterion (i) the place has outstanding heritage value to the nation because of the place's importance as part of indigenous tradition.

In considering this criterion, the Guidelines for the National Heritage List note:

“This criterion applies generally to places that are important as part of Indigenous tradition. Indigenous tradition is defined in the Act (s.201(4)) as, ‘the body of traditions, observances, customs and beliefs of Indigenous persons generally or of a particular group of Indigenous persons’.”

Commentary

There are no known Aboriginal Sites within the Listed area. It is therefore agreed that Criterion (i) does not apply.

4.6. Proposed exclusions

The research carried out on the following places specifically mentioned in the existing National Heritage Values (Criteria (a)) have identified concerns with their inclusion as part of the National Heritage Listing. It is recommended that they are excluded from specific reference in the National Values, as indicated by the changes highlighted in the above review of Criteria a).

Former Burra Salvation Army Citadel (SAHR 10160)

Brief 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.²²¹ 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.²²² On Wednesday 11 February 1885, the foundation stone for the new barracks was laid by J. Dunstan, Mayor of Burra.²²³ A large barracks, known as the Burra Salvation Army Citadel, was constructed by local builders Sara and Dunstan, and opened on Wednesday 15 April 1885.²²⁴

Commentary

Burra's mining period of significance dates from 1845 to 1877. Although derived from Methodism, which had a long association on the Cornish community at Burra, the Salvation Army did not have a presence in the town during this period and only came to Burra after the mine had closed. It had no influence of their lives of the Cornish miners at Burra. In addition, the Citadel was constructed outside of this period of significance.

It is recommended that it is not included in the National Heritage Listing and be removed from specific reference in the National Heritage Values.

Stone Wall located on east side of Commercial and Ware Streets (SAHR 10435)

Brief 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).” 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 here 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.

Commentary

There is not enough evidence that this wall dates from the period of significance, and even if its construction can be demonstrated as being contemporary with this period, it is questionable that it can be demonstrated that it relates to the lives of the Cornish miners.

It is recommended that it is not included in the National Heritage Listing and be removed from specific reference in the National Heritage Values.

Stone Wall located on west side of Commercial Street (SAHR 10436)

Brief 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”. This information is incorrect, the wall is located opposite the wall on Commercial and Ware Streets (10435). It is not located near ‘The Paddock’.

Commentary

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. There is also not enough evidence that this wall dates from the period of significance, and even if its construction can be demonstrated as being contemporary with this period, it is questionable that it can be demonstrated that it relates to the lives of the Cornish miners.

It is recommended that it is not included in the National Heritage Listing and be removed from specific reference in the National Heritage Values.



St Mary’s Anglican Church (SAHR 10018)

Brief 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.²²⁵

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”.²²⁶

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.²²⁷ 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.²²⁸ The building also contains a stained glass window installed in 1895 which depicts the Burra Mine in the background of a religious scene.²²⁹ 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”.²³⁰ One of the Trustees of the Church was Captain Isaac Killicoat.²³¹ Killicoat was a Cornish mine manager who worked at the renowned Tresavean copper mine in Cornwall.²³² In c.1848-54, he was appointed Mine Agent at Burra for the English and Australian Copper Company (formerly the Patent Copper Company).²³³ Killicoat worked at the Burra Smelts and superintended the purchase of ore from the SAMA for twenty years.²³⁴

Commentary

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 after the period of significance from 1845 to 1877, 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. These connections are however tenuous and are considered insufficient to demonstrate an association with the National Heritage Values.

It is recommended that it is not included in the National Heritage Listing and be removed from specific reference in the National Heritage Values.

St Mary’s Anglican Church Hall (SAHR 10022)

Brief history

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.²³⁵

Commentary

The St Mary’s Church Hall does not date from the period of significance and is not closely related to the lives of the Cornish miners.

It is recommended that it is not included in the National Heritage Listing and be removed from specific reference in the National Heritage Values.

4.7. Proposed inclusions

The following places are not mentioned in the National Heritage Values but the research and assessment for this document has indicated that they deserve specific reference in the Values statement.

Mine Bridge (SAHR 10021)

Brief History

Completed in 1868, the single 15 feet wide stone arch bridge supporting a 24 foot roadway was built of stone from Hampton with the exception of the coping of Mintaro slate.²³⁶ It linked the townships of Kooringa and Redruth and “helped to channel the water produced by the copper mining operations, which entered Burra Creek via Mine Creek”.²³⁷ Designed by the Superintending Surveyor of the Central Roads Board, Aulay Macaulay CE, 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.²³⁸ It was built by Messrs Tiver and Woollcott.

Although the western parapet has been removed to allow for the widening of the roadway and a concrete culvert has been added to abut to the west side of the bridge, the east side of the bridge remains intact together with the stone vault.

Commentary

The Mine Bridge dates from the period of significance and closely relates to both the operations of the mine and the importance of transport to the mine and the community. It is recommended that it be included in the National Heritage Values.



Foreman’s/Mine Assayer’s Residence on Mine site

Brief History

This residence is located on the original mine site. On the 1852 mine site plan the residence is denoted as the “Foreman’s House”.²³⁹ On the 1867 mine site plan, the building is simply denoted as “dwelling” 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”.

The building was the residence of the mine assayer, William H Furniss. The mine assayer, assayed or analysed the concentrated ore in order to determine the quantity of copper in it and hence establish the price to be paid to the miners under the tribute system. Furniss was originally chief mine storekeeper and mine assayer, and later took over as mine accountant after William Challoner resigned in 1871 but Furness himself resigned in 1874.²⁴⁰ Earlier, in 1854, Matthew Furniss was also known to be an assayer.²⁴¹ Other important officers associated with the mine also resided on the mine site such as the mine captains, mine accountant, as well as the mine watchman.²⁴²

Although the building has been extended, initial investigations indicated that the early portion of the building is largely intact.

Commentary

The Mine Assayer’s Residence dates from the period of significance and closely relates to the operations of the mine. It is recommended that it be included in the National Heritage Values.



Mine Hospital

Brief history

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.²⁴³ In 1847, a suitable site was located and the building was completed in 1848. Although initially rented as a residence, in 1850 it reverted to its original intended use and run by the mine doctor, Dr Henry Chambers. It was unclear whether the building was subsequently extended, but the current location and form were identified on a c.1860-70 map of Kooringa, and an 1875 map of the township of Graham, the mine “Hospital” is clearly shown.²⁴⁴ The arrangement however was used as a model for those calling for a similar arrangement to be adopted at the Yorke Peninsula mines.²⁴⁵

There is only limited evidence about its operation as Burra was considered a safe mine during its years of operation, with only 15 fatal accidents in 32 years of operation.²⁴⁶ Ian Auhl noted that 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. Some children rummaging around in the deserted hospital in 1869, found the body of a newly-born infant under the floor-boards. ... It was hardly to be wondered that the isolated cottage hospital built on the side of a bare hill became known as ‘Bleak House’”.²⁴⁷ 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 1851.²⁴⁸

In 1871, it was again rented as a residence, but in 1875 the SAMA donated it to the community with the adjoining land for its conversion into a new general hospital for the public.²⁴⁹ Although this gift was initially accepted and alterations commenced, it was returned in exchanged for the purchase from the 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.²⁵⁰ 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.

Commentary

Constructed during the period of significance from 1845 to 1877, 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.

It is recommended that it be included in the National Heritage Values.

National Bank of Australasia (SAHR 10007)

Brief History

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. ... One visitor, hearing of the amount of specie stored by miners in their dug-outs, referred to the creek-banks as the ‘Savings bank’”.²⁵¹

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. These notes were accepted by local shopkeepers in exchange for goods. 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.²⁵²

It was not to be until April 1859 that the first bank was established at Burra. With such a large population of mine and smelter workers, it was the National Bank of Australasia that first saw the growing opportunity for business:

*Abraham Scott and his colleague John Neales had gone by coach to the copper mines of Burra and Kapunda, where they established the first South Australian branches. 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.*²⁵³

It was claimed that the:

*branch of the National Bank of Australasia may now be mentioned as 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 townsmen, 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”.*²⁵⁴

The new currency replaced the “orders” issued by both the mine and smelter to their workers for payment. The success of the bank in attracting business can be seen in the “National Australia Signature Book 1”, which 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 with over 860 signatures.²⁵⁵ Customers related to the mine included miners, teamsters, mine agents, and related to the smelts included Isaac Killicoat, others included Redruth builder, James Tiver.

On 16 July 1861, tenders were called for the erection of the new premises for the National Bank of Australasia at Kooringa.²⁵⁶ When completed in May 1862, it was described as “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”.²⁵⁷ Designed by Adelaide architect Edmund Wright, 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’”.²⁵⁸

Although the building has been extended, initial investigations indicated that the early portion of the building is largely intact.

Commentary

The National Bank of Australasia was the first bank in the townships, it was well patronised, improved money circulation, and countered fraudulent the 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 1877.²⁵⁹

It is recommended that it be included in the National Heritage Values.

Former Burra Post and Telegraph Office (SAHR 10017)

Brief History

The first mail run to Burra began in 1846 and the first post office was in an office at the mine. With the population reaching 5,000 in 1851, correspondence became crucial in Australia’s largest inland town. In addition, given that the colony of South Australia had only been settled in 1836, and Burra’s, and Adelaide’s, population was primarily new emigrants, there was no doubt a demand for corresponding via mail, home to England and other home countries.

This resulted in the construction of the town’s purpose-built Telegraph Station completed on 14 September 1860. It was designed by the Colonial Architect Edward Angus Hamilton, the two storey symmetrical building was constructed by Mr. Francis of Adelaide for £653. Alterations to allow for the co-location of the Post Office and Postmaster’s residence were completed in October 1861. It was from this building in 1862 that the explorer John McDouall Stuart sent a telegram to the Governor of South Australia reporting that he had successfully crossed the continent.²⁶⁰ In 1875 a single storey extension with arcaded verandah was made to the south side of the original building, while much of the original building was demolished in 1911 to create a new wing to the north mirroring the 1875 addition around the modified remains of the original two storey building.

Commentary

The former Burra Post and Telegraph Office played an important role in the township and was crucial for communication especially to Adelaide, and England. Although much of the 1860s building has been demolished, the extant section still allows for interpretation of this place’s significance.

It is recommended that it be included in the National Heritage Values.





Former Redruth Police Station, Cells and Stables (SAHR 10014)

Brief history

Shortly after the establishment of the Burra Mine, law and order became an important issue. In February 1846, Henry Ayers from the SAMA called for a Police Station due to the rapidly expanding population, related drinking offences, long opening hours at the town's hotels, and consequent fighting and disorderly conduct. To indicate the extent of numbers involved, later that year there were 400 miners working at the mine and 300 draymen travelling to the mines each day.²⁶¹ In April 1846, Captain Finnis, the Commissioner of Police travelled to Burra and approved the establishment of a police station for two mounted and two dismounted policemen.²⁶² Ayers temporarily housed the four constables in a rent-free cottage in Kooringa.

Although the SAMA agreed to lease land for a police station in Kooringa, 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 SAMA)".²⁶³ 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 at a cost of £385 by R.S. Breeze, a North Adelaide builder, and completed in mid-1847.²⁶⁴

In 1851, the police force included three constables and three mounted police for a population of 5,000, while in the same year the police station declared a gaol and was used as such until the new gaol was completed in 1856.²⁶⁵ In 1872-73, new cells, stables and a stable yard were added, while the original police station building was later demolished in 1878 and a new one was completed in the approximate position of the earlier building in 1879. The result of these changes that only part of the stables and the yard walls date from the 1847 construction phase.

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.

Commentary

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.

It is recommended that it be included in the National Heritage Values.

Former Redruth Courthouse (SAHR 10027)

Brief 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 Kangaroo Street which doubled as a schoolroom.²⁶⁶ The "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."²⁶⁷

Thus, "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."²⁶⁸

Due to the lack of land tenure in Kooringa together with the complexity involved with transporting offenders from this courthouse to the police station in Redruth, a new courthouse was completed in October 1857 for a cost of just under £800 on the government reserve adjacent to the station.²⁶⁹ This move reinforced the fear of many of the possible move of activity to the freehold sites in the northern townships and did nothing to correct the perceived impairment and unsightly character of Kooringa.²⁷⁰

From 1861 to 1877, 450 labourers, 33 Miners, 4 Mine agents, 2 Teamsters, 1 carter, 2 Copper smelts, 1 mining engineer, were gaoled after being convicted at the Redruth Courthouse emphasising the mining character of the community.²⁷¹ There were also many cases of a more minor nature which did not result in imprisonment, these often involving drunkenness, often combined with the use of abusive language.²⁷² 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.²⁷³ 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.²⁷⁴ Supplementing these official duties, the 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.²⁷⁵

The building is largely intact in its early configuration.

Commentary

The Redruth Courthouse was constructed within the period of significance 1845-1877 and was 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.

It is recommended that it be included in the National Heritage Values.



Former Redruth Gaol (SAHR 10042)

Brief history

From 1851, the existing police lockup at Redruth 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, with tenders called in December 1855.²⁷⁶ Eventually costing just under £3,200, it was completed in August 1856, and was the first gaol built outside of Adelaide, demonstrating the importance of the mine at Burra.²⁷⁷ The Gaol was built after the "previous year [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".²⁷⁸

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 1880.²⁷⁹ 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 the SAMA employed "men labourers" as their lowest paid, unskilled labour.²⁸⁰ 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. The gaol closed in 1894 emphasising the changing population and demographics of the region.

Although various changes have been made to the building, the early fabric is largely intact, and its form is highly legible.

Commentary

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. Its presence in the town and the that it was the first gaol outside of Adelaide emphasises the importance of Burra as one of Australia's early large inland population centres.

It is recommended that it be included in the National Heritage Values.



Redruth Wesleyan Church

Brief history

The Cornish brought Methodism to Burra. There were three main sects including the: Wesleyans, Bible Christians, and Primitive Methodists. The Wesleyans were the most numerous of the main religious groups, as demonstrated by the 1855 census, which recorded that the “greatest number of Wesleyans returned in any one district is 795, in the District of Burra”.²⁸¹

Built in 1847, the first church was the Kooringa Wesleyan Church. The Wesleyan's were particularly influential in the early days of Burra and consequently commanded huge numbers of people who attended their services. In c.1849, 400 people attended each of the three services at the Wesleyan Chapel.²⁸² The original church was demolished and replaced with the current building on the same site in 1914.

In 1852 construction commenced on a further Wesleyan Chapel in Redruth.²⁸³ This building had a 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 as was apparently in use by 1857.²⁸⁴ 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.²⁸⁵ The completed building, which internally was 42x24 feet and could seat 200, was opened on 20 September 1874.²⁸⁶

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.²⁸⁷ The importance of the Sunday School can be seen in the substantial adjoining building erected fifty years after the completion of the church in 1924.²⁸⁸

Commentary

The Wesleyans were a prominent group of Burra's townspeople. This Church represents this denomination and was constructed during the period of significance. One church from the main denominations has been selected to represent religion during the period. Therefore, it is recommended that it is included in the National Heritage Values.

4.8. Existing Summary Statement of Significance

The existing Summary Statement of Significance follows as per the Australian Heritage Database.²⁸⁹

“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 brought 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.”²⁹⁰

Commentary

The existing Summary Statement of Significance is well researched and written. It captures the pertinent information about the Place and its significance.

There is no reason to consider changes and it is recommended that it be retained in the current form.



4.9. Hierarchy of Significance

Given that the National Listing associated with Burra comprises around 50 individual Places, it is useful to rank these in order of Significance. This in turn, along with the Condition ranking, will enable Conservation Actions to be prioritised with the aim of investing in the most significant Places which are in the poorest condition.

The following Levels of Significance are based on those Alan Croker's *Respecting the vision: Sydney Opera House – a Conservation Management Plan*.²⁹¹

Level of Significance	Definition
A Exceptional significance	These elements are essential to the significance of the place. They play a crucial role in supporting this significance
B High significance	These elements are of high significance. They play an important but not necessarily crucial role in supporting the significance of the place.
C Moderate significance	These elements are of moderate significance and provide support to elements or functions of higher significance. They play a role in supporting the significance of the place, but may be inadequate in their current configuration or use.
D Low significance	These elements are of low significance. They play a minor role in supporting the significance of the place, or may have been compromised by later changes.
int Intrusive	This relates to an item or component that obscures, impedes, diminishes or otherwise damages the significance of an element or its component parts.

Authenticity and Integrity is defined as follows:

The following definitions have been drawn from the 'Operational Guidelines for the Implementation of the World Heritage Convention' 2013:

Authenticity	Is a measure of the honesty of a place as an authentic product of its history and of historical processes. Cultural heritage places may meet the conditions of authenticity if their cultural values are truthfully and credibly expressed through a variety of attributes such as form and design, materials and substance, traditions, techniques and management systems, location and setting, language and other forms of intangible heritage, spirit and feeling. Sources of information about these cultural values should also be credible and truthful.
Integrity	Is a measure of the wholeness and intactness of the place and its attributes. Examining the conditions of integrity, therefore, requires assessing the extent to which the property: <ul style="list-style-type: none"> (a) includes all elements necessary to express its Outstanding Universal Value; (b) is of adequate size to ensure the complete representation of the features and processes which convey the property's significance; (c) suffers from adverse effects of development and / or neglect.

4.10. Table of Places based on Significance

The following table illustrates the places according to their Level of Significance.



A - Exceptional Significance

Morphett's Winding House (SAHR 10052)

Comments

The only surviving Engine half house in SA.



Morphett's Engine house (SAHR 10053)

Comments

Reconstructed of the roof and interior floors occurred in 1986. Other extant Cornish Enginehouses in South Australia include: Hughes Enginehouse, Moonta Mine (1864), Harvey Enginehouse, Wallaroo Mine (1875), Richmans Enginehouse, Moonta Mine (1869), Worthing Enginehouse near Hallett Cove (1851), North Rhine Enginehouse, near Keyneton (1859).





Graves Enginehouse (SAHR 10054)

Comments

Other extant Cornish Enginehouses in South Australia include: Hughes Enginehouse, Moonta Mine (1864), Harvey Enginehouse, Wallaroo Mine (1875), Richmans Enginehouse, Moonta Mine (1869), Worthing Enginehouse near Hallett Cove (1851), North Rhine Enginehouse, near Keyneton (1859).



Cornish Crusher Chimney/Dressing Tower Complex (SAHR 10047)

Comments

Other South Australian extant Cornish chimneys include: Former Glen Osmond Smelting Works Chimney [Cornish] (SAHR 10528); Chimney [Cornish], former Kapunda Copper Mine (SAHR 10089); Chimney [Cornish], Preamimma Mine Area (SAHR 10449). Other mine chimney - Chimney and Flue, Former Lone Hand Gold Mine near Woodside (SAHR 12863).



Haulage Engine Chimney [Welsh] and Complex (SAHR 10046)

Comments

Other South Australian extant example - Copper Mine Chimney [Welsh], Charlton Run near Wirrabara (SAHR 10961).



Powder Magazine (SAHR 10045)

Comments

Repair and part reconstruction in 1976 by the National Trust. Other South Australian extant example - Former Powder Magazine, Bremer Mine Area, Callington (SAHR 10499).





Former Engine/Crusher House (SAHR 10445)



Ore Floor (SAHR 10055)



SAMA Storeroom (Part of SAMA Storeroom, Yard and Walls SAHR 10019)
SAMA Storeman's Dwelling (SAHR 10049)



Mine Offices (SAHR 10056)



Smelts Superintendent's Residence and Wall (SAHR 10204)





Burra Jinker (Object) (SAHR 10970)



Former Mine Assayer's Residence



Burra Mines Historic Site (SAHR 10970)



Former Burra Smelts Historic Site, including Smelts Bridge Abutments, Smelter Ruins, Smelter Furnace Ruins (SAHR 10989)

Comments
One of the earliest major smelters in SA, and Australia.



Smeltworks Stableyard and Storehouse (SAHR 10024)



Smelts Manager's Residence and Office (SAHR 10989) (Part of Former Burra Smelts Historic Site)a





Kooringa Bible Christian Chapel (SAHR 10013)

Comments

First Bible Christian Church in colony and perhaps in Australia.



Paxton Square Cottages (SAHR 10159)



6 Upper Thames Street (SAHR 10028)



**2-4 Upper Thames Street Cottages (SAHR 10040, 10041)
Built 1846-1847.**

Comments

Although very early, it is claimed that Kapunda's Mine Square Cottages built in 1845 and hence were Australia's first company housing.²⁹²



8 Upper Thames Street (SAHR 10029)



A - Exceptional Significance



10 Upper Thames Street (SAHR 10030)



12 Upper Thames Street (SAHR 10031)



16 Upper Thames Street Cottage (SAHR 10447)

B - High Significance



9 Truro Street (SAHR 10033)



11 Truro Street (SAHR 10036)



13 Truro Street (SAHR 10034)





Tiver's Row, 8 Truro Street (SAHR 10203)



Tiver's Row, 10 Truro Street (SAHR 10032)



Tiver's Row, 12 Truro Street (SAHR 10446)



Tiver's Row, 14 Truro Street (SAHR 10037)



Tiver's Row, 16 Truro Street (SAHR 10038)



Tiver's Row, 18 Truro Street (SAHR 10039)





Smelters Home Hotel (SAHR 10419)



Former Mine Hospital (Bleak House)

Comments
Integrity has been compromised and further analysis is required to determine how the building was used.



Peacocks Chimney (SAHR 10020)

Comments
Integrity and authenticity is affected due to Chimney being dismantled and rebuilt in 1972 in a different location; at the entrance of the mine.



Miners' Dugouts (SAHR 10050)

Comments
Integrity and authenticity is Low. 1925-"renovated". 1970 and 1974 dugouts rebuilt by Burra Council and the National Trust.

Construction of dugouts in SA varies. Andamooka semi dugouts (SAHR 13075 and 12663). Blinman dugout (SAHR 10296). Dugouts exist in opal mining town Coober Pedy c.1920 (SAHR 18213). Mongolata gold mining dugout near Burra (SAHR 11004) (now ruins).

USA - Nevada, "sod huts" in the American West, and Wisconsin "Badger Huts".²⁹³



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USA - Nevada, "sod huts" in the American West, and Wisconsin "Badger Huts".²⁹⁴



Former Dugout Sites (SAHR 11187)

Comments
Integrity and authenticity is Low with no surviving dugouts being evident.

Construction of dugouts in SA varies. Andamooka semi dugouts (SAHR 13075 and 12663). Blinman dugout (SAHR 10296). Dugouts exist in opal mining town Coober Pedy c.1920 (SAHR 18213). Mongolata gold mining dugout near Burra (SAHR 11004) (now ruins).

USA - Nevada, "sod huts" in the American West, and Wisconsin "Badger Huts".²⁹⁵





Mine Bridge (SAHR 10021)

Comments

Integrity has been impacted by later widening of the roadway and the undergrounding of the gully to the west side.



Kooronga Primitive Methodist Church (SAHR 10011)

Comments

Integrity and authenticity has been impacted as front façade dates from 1879.



Redruth Wesleyan Church

Comments

Integrity has been impacted by conversion into a residence.



National Bank of Australasia (SAHR 10007)



Burra Town Hall (SAHR 10403)

Comments

Major additions in 1874.





Burra Cemetery (SAHR 10432)

Comments

Integrity and authenticity is Low. 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.



Bon Accord Mine Site (SAHR 10023)



Burra Hotel (SAHR 10404)

Comments

Integrity and authenticity is Low as the Hotel was damaged by fire in 1878 and rebuilt in 1880. A second storey was added in 1912 and verandah in 1920.



Hampton (SAHR 10359)



1840s Timber Dwelling (SAHR 10434)



Burra Post and Telegraph Office (SAHR 10017)





Redruth Police Station, Cells and Stables (SAHR 10014)



Redruth Courthouse (SAHR 10027)



Redruth Gaol (SAHR 10042)

Burra Mines Historic Site (SAHR 10970) - Modern open cut overburden



Burra Mines Historic Site (SAHR 10970) - Modern water tank



Burra Creek - Caravan Park





5. Conservation Policy and Objectives



5.1. Introduction

The formulation of conservation policy helps to guide the management of the heritage places in Burra and the overall town form and townscape to ensure its future care, with the primary objective of retaining the place's cultural significance. It is intended that this occur in a way that takes account of the conservation issues associated with the place's setting and context and balance these against the practical requirements for the town's sustainable and ongoing use.

The assessment of cultural significance and revised National Values Statement contained in Chapter 4 forms the basis for the development of all conservation policy. Understanding the significance of the place helps to guide decision-making as it informs us why a place is significant and what elements contribute to that significance. For the purposes of this process, the primary objective underlying all conservation policy is that:

The Australian Cornish Mining Site: Burra, comprising the Burra State Heritage area, should be conserved to retain the cultural significance of Cornish mining history to South Australians, Australians and the international community.

Chapter Structure

This document initially provides general overarching principles which establish the basis for decision making, followed by those related to the heritage listing of the place, its use and the fabric overall, before establishing detailed policies relating to precincts in Burra. The recommended 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 site. The policies should be read in conjunction with the preceding explanation.

Policies have been drafted to contemplate compatible uses and new ideas for the future requirements of Burra. They provide detailed direction for the conservation and enhancement of heritage places and their contributory setting.

The following policies consider:

- Conservation of the cultural significance
- Town setting and form
- Future development
- Tourism
- Parameters for future change and innovation
- Statutory requirements
- Access, movement
- Interpretation and education

Comment on Current Policy

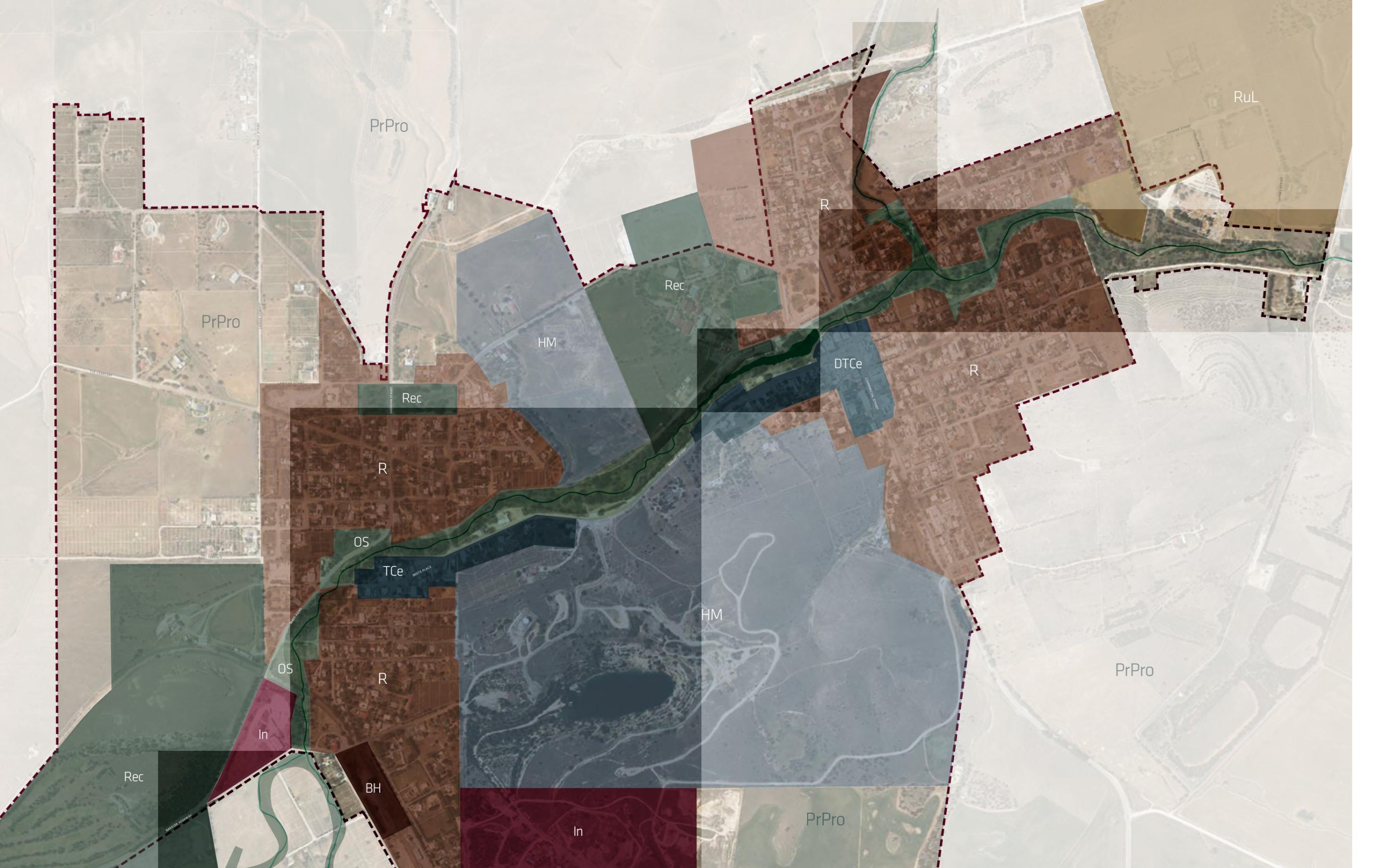
The Development Plan for the Regional Council of Goyder (Consolidated 24 November 2016) contains a series of Heritage Conservation Objectives and Principles of Development Control, and Heritage Places Objectives and Principles of Development Control which seek to guide and control future development 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 strongly depicts the evolution of Burra as a series of townships. Kooronga 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.

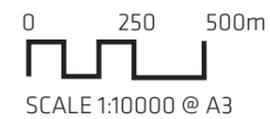
The zoning for the town of Burra is shown on the following page.

It is envisaged that the policy and guidelines written as part of this 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. In addition, the policies written in this CMP 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 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 Values Statement and the requirements of the *EPBC Act 1999*. This hierarchy is set out as a series of overarching town wide objectives that relate back to the primary objective, the policy considerations listed above, and the general principles as set out in 5.2 Overarching Policies. A subset of precinct policies that spatially respond to conservation and enhancement opportunities across Burra are then provided for detailed conservation management by geographic area.



Zoning



-  Burra Creek
-  Burra State Heritage Area Boundary
-  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



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 so as 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.

5.2. Overarching policies

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 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 decreased in value. The discussion and analysis in Chapter 4 Cultural Significance has shown there are places and precincts in 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.

Policy 5.1. Significance is the basis for future conservation and management

The statement of cultural significance included in this CMP should be the basis for future management and conservation of the Australian Cornish Mining Site: Burra.



Burra Charter & 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 contained in this chapter have been based on these principles, and they should form the basis of all future decision-making regarding 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 Burra are deserving of the highest standard of conservation practice and management.

Where specific issues are not covered within the following conservation policies, 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*.

Policy 5.2. 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 Burra are not diminished.

Policy 5.3. 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 5.4. Expert advice

Expert advice should be sought from those with an understanding of the ICOMOS Burra Charter.



Adoption

To maintain cultural significance and consistency with the principles of the *Burra Charter* it is recommended that 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 Heritage SA and nationally by the Department of the Environment and Energy.

Policy 5.5. Adoption of the CMP by Council

This CMP should be reviewed by the Regional Council of Goyder and officially adopted.

Policy 5.6. Adoption of the CMP by State and Commonwealth agencies

This CMP should be reviewed by Heritage SA and the Department of the Environment and Energy and officially endorsed.

Records

This CMP forms a depository of information about the history, condition and significance of 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.

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.

Policy 5.7. Records

The Regional Council of Goyder should maintain accurate and consolidated records associated with any works and maintenance associated with Burra.

Review

To ensure that this document remains relevant to the community's evolving perception of value and cultural significance, it is recommended that this CMP be reviewed every ten years. 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 5.8. Review of CMP

The statement of significance and associated conservation policy of this document should be reviewed every ten years, or sooner should major change occur in the interim.

Form

The form of the Burra Cornish mining sites includes the overall character of the area as well as the visual relationships of the individual elements within the broader landscape. Burra's character is derived from its valley setting surrounded by hills along the Burra Creek. The town form 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 highest significance to the National Values.

Policy 5.9. Burra's Sense of Place and the visual setting of the Burra Cornish mining sites

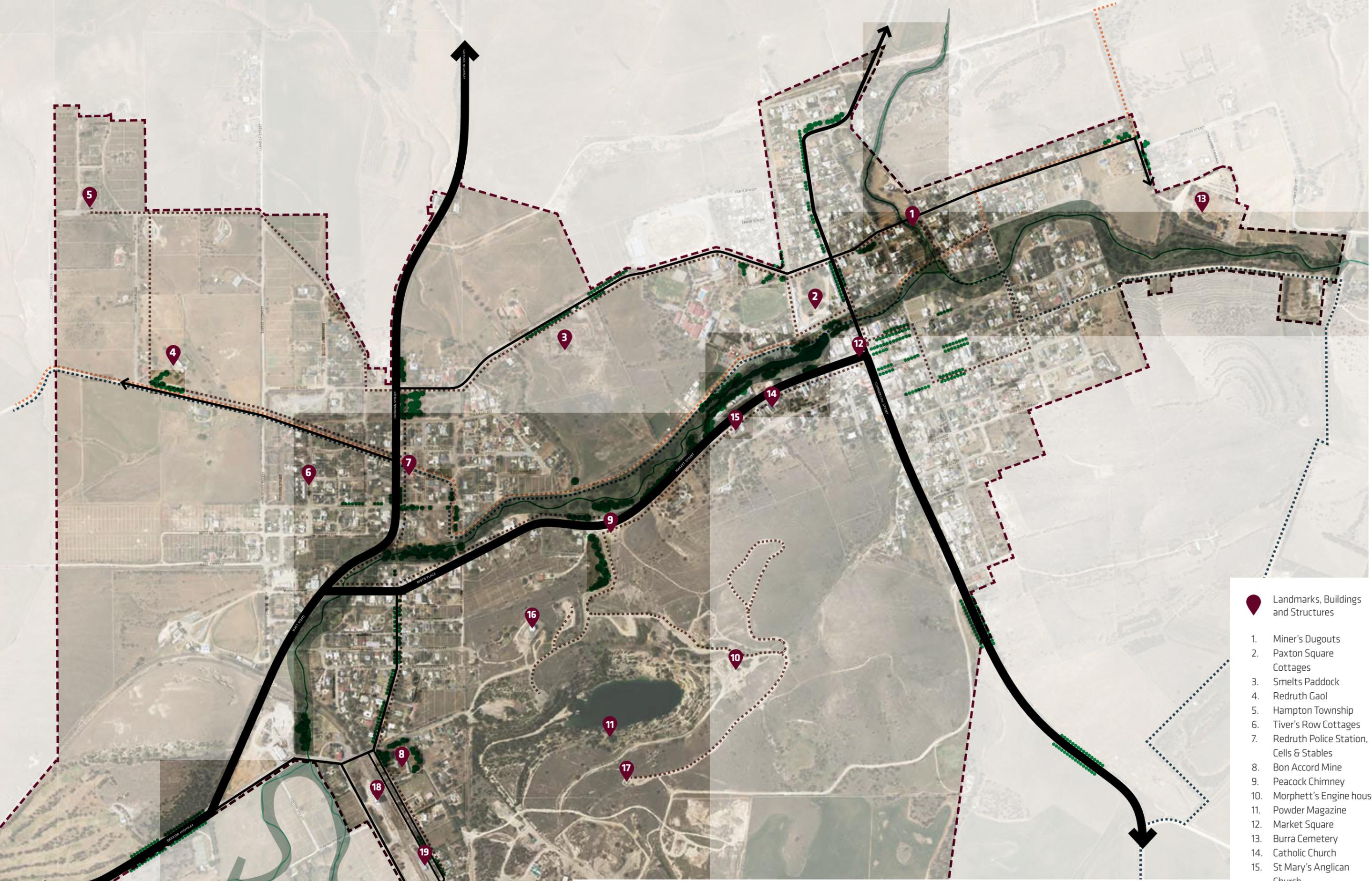
Future development should carefully consider the influence on Burra's visual landscape and the historic and spatial relationships of individual places of National value. Views to and from the Burra Mine site and Smelts site are of highest significance to the National Values.

The following town wide objectives relate to the entire town and its setting. They are intended to provide a framework to support the conservation and enhancement of heritage places relating to the Cornish mining influence in Burra and should be incorporated into the objectives in statutory development controls for the town.

Town Wide Objectives:

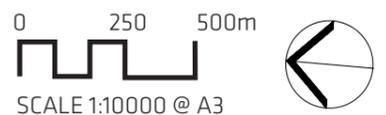
- Protect the town form of Burra as a series of interconnected villages
- Protect and enhance the Burra Creek as the central uniting element which links the villages and provides a recreational spine through Burra
- Reinforce Burra as a green valley town within a rural pastoral landscape
- Conserve the mine site and its contributory elements as the centrepiece of the historical significance of Burra.
- 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 heritage character and amenity within Burra through improvements to heritage places and their settings.
- Reinforce the unique streetscape typology where appropriate in the town.
- 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.



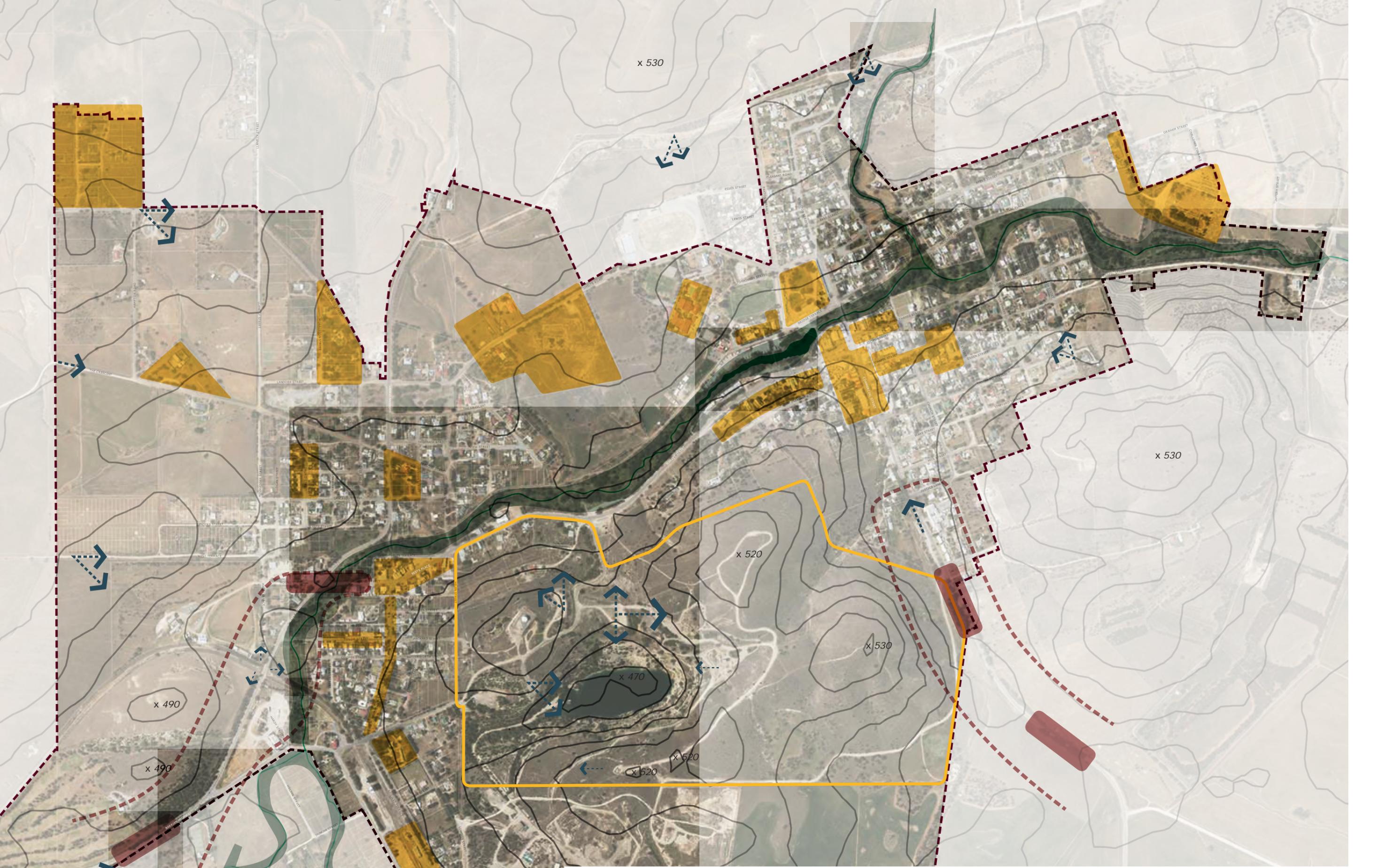
-  Landmarks, Buildings and Structures
- 1. Miner's Dugouts
- 2. Paxton Square Cottages
- 3. Smelts Paddock
- 4. Redruth Gaol
- 5. Hampton Township
- 6. Tiver's Row Cottages
- 7. Redruth Police Station, Cells & Stables
- 8. Bon Accord Mine
- 9. Peacock Chimney
- 10. Morphett's Engine house
- 11. Powder Magazine
- 12. Market Square
- 13. Burra Cemetery
- 14. Catholic Church
- 15. St Mary's Anglican Church
- 16. Water Tank
- 17. Former Powder Machine
- 18. Grain Silos
- 19. Train Station

Townscape



-  Major Vehicle Pathways
-  Burra State Heritage Area Boundary
-  Burra Creek

-  Heysen Walking Trail
-  Mawson Bike Trail
-  Johnny Green Trail
-  Important Tree Groupings



Town Form

0 250 500m
 SCALE 1:10000 @ A3



-  Contours at 10m spacings
-  Burra State Heritage Area Boundary
-  Burra Creek
-  Areas of Significance
-  Entry Zones
-  Entry Thresholds
-  Important Views



Conservation of built fabric

The surviving 1845-1877 fabric of the Australian Cornish Mining Sites: 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 5.10. Conservation of significant fabric

The significant fabric (1845-1877) of the Australian Cornish Mining Sites in Burra should be conserved and any adaptation and future development should respect the cultural significance of the places.

Levels of significance & impact upon policy

Levels of significance have been identified in this CMP (Refer Chapter 4: Cultural Significance). Generally, the greater the level of significance of the place and fabric identified; the more care needs to be taken in planning its future. The emphasis needs to be placed upon the retention and where appropriate the reinforcement of its significance.

Policy 5.11. Hierarchy of significance

The more significant the place and fabric, the more care needs to be taken in planning and executing any work which may affect it whether it be its fabric or setting.

Intrusive Items

Items that have an intrusive effect on the setting of the National Heritage Values have been identified in Chapter 4: Cultural Significance. These generally relate to inappropriate development that is incongruent with the natural and historic 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. Where possible, intrusive items should be removed. Where the item is necessary, such as the newly installed town water tank on the mine site, action may be deferred until renewal is needed. Options should be explored in this circumstance to screen the item to reduce its visual intrusion.

At an individual place scale, intrusive items have not been identified in this study. 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 5.12. Intrusive items

Intrusive items of fabric should be removed or modified.

Compatible Use & Future Requirements

The continuation of Burra as a functioning town attracting and keeping its population and a sustainable employment base is central to its conservation. Without this economic function the heritage places and overall fabric of Burra will likely suffer in the future.

Compatible uses are those that best permit the significance of the place to be retained and revealed, and ideally that use should be sufficiently sustainable to support the maintenance works necessary to ensure the longevity of Burra. 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 Burra, 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 of South Australian Heritage Register require development approval for any change of use.

Policy 5.13. Ongoing use

Ongoing use of places that comprise the Australian Cornish Mining Site: Burra should be encouraged and supported and take preference over new development.

Policy 5.14. Change of use

Futures uses of the places that comprise the Australian Cornish Mining Site: Burra should seek to minimise the effect of a change of use on the place's values and significant fabric.

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 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 to 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.

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 5.15. Cyclical maintenance

The condition of significant fabric (1845-1877) of the Australian Cornish Mining Sites: Burra should be conserved through programs of regular maintenance and corrective works.

Objectives:

- Prepare a maintenance plan for all places of National Value. The maintenance plan will describe maintenance activities, the regularity of activity and responsibility.

Monitoring

Regular monitoring and maintenance should be carried out on all heritage places within Burra in accordance with a maintenance schedule. This should be updated and amended over time to ensure it accurately reflects the regularity with which the work is required.

Policy 5.16. Regular monitoring

Regular monitoring and maintenance should be undertaken in accordance with the maintenance schedule.

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 5.17. Repairs to significance fabric

Repair of significant fabric (1845-1877) of the Australian Cornish Mining Sites in Burra should precede replacement of fabric.

Policy 5.18. Replacement of significance fabric

Repair of significant fabric (1845-1877) of the Australian Cornish Mining Sites in Burra involving reconstruction should closely match the form, dimension, material, quality and finish of the original.



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. Where possible this should be confined to areas and components of individual places identified as being of *low* significance although there may be scenarios where more significant fabric may require adaptation or removal.

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.
- Checking of 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 complex, 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.

Any works requiring part removal of any of the existing fabric will require statutory approvals. Refer to Chapter 6: Implementation for a description of the approvals process.

Policy 5.19. Adaptation of heritage places

Where possible confine major adaptations, alterations and additions to fabric of lesser significance.

Policy 5.20. 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, air conditioning and plumbing are necessary to maintain a use compatible with the place's significance and should be installed in a sympathetic manner. 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 through floors and within ceiling voids. 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. Carefully locate fittings to minimise the amount of conduit required. Minimise the number and size of conduits 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 in sub-floor, roof and wall cavities, but where this is not possible the use of discrete and carefully located risers and bulkheads should 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 solar panels where they are not visible. This is often easily achieved on roof planes facing away from the street or on additions and outbuildings located behind the building, and these options should be investigated and pursued to eliminate or reduce the potential visual impact.

Policy 5.21. Services

Provide wired services, plumbing and air conditioning, as required, to ensure that a compatible use of the place is maintained.

Policy 5.22. Services installation

Carefully installed wired and piped services should be provided as necessary to ensure the use of the place is maintained.

Policy 5.23. Services concealment

Service installations, including solar panels, wiring, piping and ducting should be concealed wherever possible.

Policy 5.24. Surface mounted service runs

Surface mounted wiring, piping and ducting should be avoided in high significance spaces.

Objectives

- No chasing will be acceptable to the external walls to high significance fabric.
- No chasing in high significance internal walls.
- Minimise surface mounted conduit where possible, by running services through floor and ceiling voids.
- Use simple contemporary switch plates which match the background colour in place of reproduction fittings.
- Avoid locating external fittings on the buildings and structures and instead these should where possible be free-standing.
- No window mounted air conditioning units are to be used.
- Any external air conditioning plant 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. The fire detection system 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 Council should implement discussions/training with the CFS to ensure that in such an event walls of buildings will be suitably treated.

Policy 5.25. Fire services installation

The structures of national value should be protected from fire to retain the significance of the place.

Objectives:

- Ensure that there is a fire detection system for heritage places.
- 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.
- Undertake regular maintenance to ensure that places are not at higher risk of fire.

Ruins

Ruins are recognised as a fundamental part of the history and significance of Burra. They are important relics of the past and demonstrate the history of the site; including the processes that led to the structure becoming a ruin. Although they may no longer have a functional use, ruins may be the only remaining evidence of an activity at the site.

Ruins: A guide to conservation and management (2013) recommends careful consideration of the significance of the place and analysis of the ruin's social, economic and environmental setting 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. Soft capping using grass and soil is widely used in colder climates¹ but little experimentation has yet occurred in Australia with the method. The ruins at Hampton (SHR 10359) could present an ideal location to explore and adaptation of this technique for a hot, dry climate.

Many of the structures across the Burra Mines Historic Site (10970) need urgent attention. Refer to Chapter 3: Description & Condition for a full record of sites assessed as ruins, or at risk. The Mine Offices (SHR 10056) and Crusher House (SHR 10445) are a good examples of ruins of exceptional value that are at risk of further collapse and loss of significance. Temporary structural stabilisation to such sites is an urgent priority followed by the development of a management strategy.

Policy 5.26. Ruin retention

All existing pre-1877 ruins of the Australian Cornish Mining Site at Burra should be retained and conserved.

Policy 5.27. Ruin management

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 pre-1877 ruins of exceptional and high national value.

Objectives:

- Undertake urgent works to stabilise the ruins identified as at risk in Chapter 3, such as the Mine Offices (SHR 10056) and Crusher House (SHR 10445).
- 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.
- 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

¹ Soft capping is described in more detail in Ashurst, John *Conservation of ruins*. Elsevier/Butterworth-Heinemann, Amsterdam ; London, 2007.



Archaeology

Burra is known to contain sub-surface remains of varying degrees of significance. In some areas such as the Burra Mines Historic Site (SHR 10970) and the Former Burra Smelts Historic Site (SHR14319), 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).

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 Burra. Work to identify the extent, condition and significance of archaeological deposits should be encouraged.

As discussed in Chapter 4: Cultural 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.

At the Smelts site, the walls, footings, depressions, floor and heaps which comprise the remains of the Burra smelting practices present a complete representation of a mid-nineteenth smelting works which is understood to have few parallels, if any, elsewhere in the world.² David Bannear's 1990 report made several recommendations with respect to their conservation. These should be actioned as a matter of priority.

In South Australia archaeological remains are protected by the *Heritage Places Act 1993*. Under the Heritage 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)

² The rarity of complete representations of smelting works is discussed in Bannear, D. *The Burra Smelting Works: A survey of its history and archaeology*, 1990.

- 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 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.

Policy 5.28. Archaeological management

The archaeological heritage of the Australian Cornish Mining Site at Burra should be conserved and managed.

Policy 5.29. Excavation

Excavation within the Burra 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.

Policy 5.30. Archaeology in Development Assessment

Assessment of development in the Burra State heritage area should consider the archaeological potential of the subject site and provision made for revising the development if findings of major significance are discovered during the works.

Policy 5.31. Mapping of archaeological sites

Discovery of archaeological deposits should be progressively mapped in a publicly accessible archive.

Objectives:

- Previous archaeological and conservation reports such as the 1990 archaeological survey of the former Burra Smelts Historic Site (SAHR No. 14319) and the Bannear Plan should be reviewed and the recommendations actioned.
- Archaeological management plans should be developed for key heritage places including the Burra Historic Mine Site (SAHR No. 10970) and the former Dugout sites in the Burra Creek (SAHR No. 14379) and its tributary (SAHR No. 10050).

Moveable Heritage and Collections

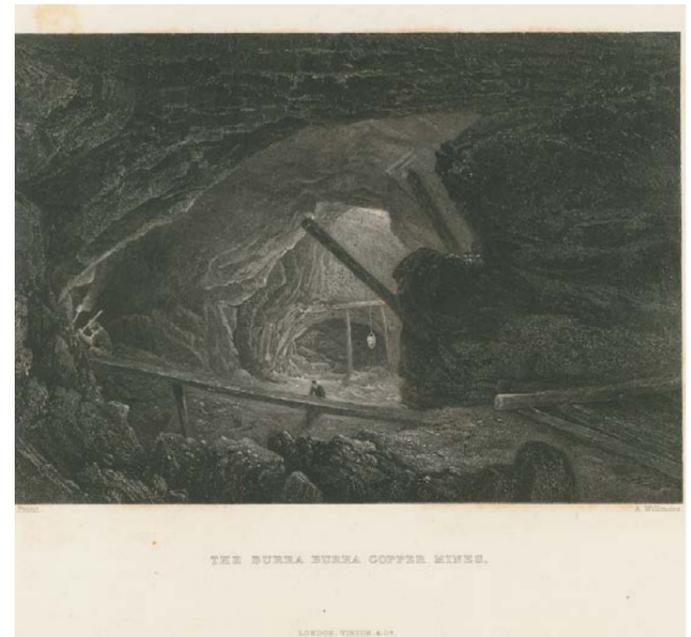
Moveable heritage items associated with pre-1877 mining in Burra form an essential part of the heritage values and understanding of the Cornish mining influence and technology. The Burra jinker was the first moveable object to be entered in the SA Heritage Register. This 10-metre long bullock drawn cart 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, and engine parts scattered across the Burra mine site and these form part of the setting of the mine. The National Trust holds a collection of mining equipment and smaller artefacts at the Bon Accord mine museum. The collection was not reviewed in the scope of this study.

Most items at the Burra mine 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 mine 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. Items held in museum collections should be progressively catalogued and assessed to understand their significance to the national values.

Policy 5.32. Moveable heritage

Moveable heritage items associated with the pre-1877 mining at Burra should be retained and conserved on site.



Underground workings

A legacy of the 1845-1851 underground mining phase at Burra is a grid of interconnected vertical shafts, horizontal levels and stopes (larger open areas produced by the extraction of ore), much of which will be flooded. 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. Many of these will be under water due to the open cut mine. Because of this, the extent of remaining form and fabric was not able to be inspected and the full extent is unknown. Other areas above the waterline are not safe to access. As a result, conservation action is not feasible.

The underground workings should be acknowledged as part of the fabric of the place and its heritage values. They should be managed as an archaeological resource according to 5.2.15 Archaeology above.

Policy 5.33. Underground workings

Underground workings associated with the pre-1877 mining at Burra should be retained.



5.3. Governance

National Heritage Register

Part of the process of this CMP has been to review the previously defined National Values Statement for Australian Cornish Mining Sites: Burra. The analysis has found that the place continues to meet one or more of the criteria of the *EPBC Act 1999* (Sections 324JG and 324JH), and as such the listing is supported.

As discussed earlier in Chapter 4: Cultural Significance, the research and analysis undertaken as part of this study has found some inconsistencies in the current Statement of National Value. It is recommended that the revised Statement of National Value developed for this document be integrated into the existing listing.

This revision is of importance if a World Listing of these sites in Burra is considered in the future. It is understood that this process is being considered by Council and State Government. It is recommended that further consideration of this is required upon the completion, approval and endorsement of this CMP to put Burra on the world stage along with other Cornish mining places across the world as an extension to the international Cornish mining tourism heritage sites.

Policy 5.34. National heritage listing

Australian Cornish Mining Sites - Burra should be retained in the National Heritage Register as a place of outstanding value to Australians.

Policy 5.35. Adoption of new Statement of National Value

The entry in the National Heritage Register should be amended to include the revised Statement of National Value as detailed earlier in this CMP.

Policy 5.36. World heritage listing

Australian Cornish Mining Sites - Burra should be assessed for World heritage listing as an extension of the Cornwall and West Devon Mining Landscape.

SA Heritage Places Act

State heritage protections are essential to retain Burra's national heritage value.

Policy 5.37. Burra State Heritage Area

The Burra State Heritage Area should be retained in the South Australian Heritage Register.

Development Act & 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 in Burra, it is the responsibility of the Regional Council of Goyder to ensure that the National Values are protected and enhanced.

The structure of the CMP is intended to assist and enable the future adoption and implementation of the policies as they can be added to the Regional Council of Development Plan in due course.

Policy 5.38. 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 them to be actioned.

Statutory Controls

The Burra State Heritage Area is included in the National Heritage List under the *EPBC Act* and the South Australian Heritage Register pursuant to the *Heritage Places Act 1993*.

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. More detail on the legislation that applies, and the approvals process is in Chapter 6: Implementation.

Policy 5.39. Compliance with legislation

The owners, asset managers and tenants of the nationally significant Cornish mining sites at Burra should comply with the relevant legislation that applies.



5.4. Promoting Future Sustainable Development

The Burra Cornish mining sites make a valuable contribution to the character and enjoyment of the town to the local community and visitors.

Policy 5.40. 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 Burra and benefit the community and visitors alike.

Objectives

- Development should occur sensitively within the villages of Burra to preserve the allotment plans of the town and not spread development to the surrounding hills.
- A hierarchical approach to development should be applied to sites based on their proximity to, and impact on heritage places.
- Adaptive reuse of heritage places is encouraged and preferred over the development of new sites.
- All State Heritage places should have a CMP created to assist with their conservation.
- More prescriptive guidance for development adjacent places of the highest significance should be created.
- Protect Burra Creek and limit development from occurring that blocks or privatises the use and visibility of this asset.
- Incongruous development adjacent the creek should be returned to reserve / public open space over time.
- All heritage places should continue to be protected from insensitive development encroachment and visual intrusion.



5.5. Tourism

Tourism is an important factor in the future economic sustainability of Burra, however it is proposed in this CMP that conservation objectives should take precedence over tourism objectives given the overall heritage value and potential economic and tourism potential of the World Heritage listing of Burra.

The Burra Cornish mining sites make an important contribution to the South Australian and Goyder Council area tourism industry. Burra's unique point of difference and experience for visitors has been noted in various studies looking at state and regional tourism. No official data for visitors to Burra is available however the Burra Visitor Information Centre records visitor data and estimates annual visitation at about 21,000 visitors per year with most visitors in the summer period³.

Many of the historic mining sites, and related places are owned by the Council or by the National Trust South Australia (Burra) and rely on both volunteers and income derived from visitation to support ongoing maintenance and re-investment in tourism infrastructure. It is the desire of these organisations to sustain and increase visitation to Burra and this is expressed through their investment in studies on the value of tourism to the local economy and strategic plans such as Regional Council of Goyder Tourism Strategic Plan 2017. This strategy describes the potential of Burra to deliver the 'hero experience' for the region.

In addition, Council have prepared the Goyder Master Plan 2018 – 2033, a strategic management plan to guide future direction for investment in the Council area. Heritage places in Burra feature prominently in this plan, along with many town wide initiatives that complement the policies in this CMP. Further analysis has been undertaken on this plan in Chapter 1: Introduction.

Further tourism development is accompanied by well documented risks to conservation, particularly to fragile sites. Such threats range from damage as a result of unsympathetic behaviour by visitors to visual clutter caused by car parking, signage and encroachment of visitor facilities. These risks should be acknowledged and assessed, and mitigation strategies enacted when changes are considered to a visitation site.

Policy 5.41. Tourism

To maintain investment in the conservation of heritage places of National Value. Heritage tourism to Burra should be promoted and supported. However, this should be done in accordance with the conservation policies of this CMP to retain the authenticity of the place and its setting.

Policy 5.42. Marketing

Tourism promotional materials for the region and Burra should enhance the public appreciation of the cultural value of the Australian Cornish Mining sites at Burra.

Policy 5.43. Facilities

Provide adequate facilities for visitor use at publicly accessible heritage sites.

Objectives

- Protect, enhance and upgrade tourism facilities and infrastructure at the Mine site as the centrepiece for tourism culture at Burra
- Leverage mining heritage as a point of difference between Burra and Clare to enhance travel between the two regional centres.
- Provide more interpretive information on all heritage places within Burra to increase community awareness and educate tourists of the importance of these sites.
- Provide better infrastructure for walking and cycling to heritage places, and throughout the town generally for residents and tourists.
- Provide a more coordinated suite of signage to aid wayfinding and interpretation throughout the town.
- Increase the tourist offerings and experiences along Burra Creek
- Generally, improve the quality and experience of heritage places in Burra that contribute to the mining history of the town.

GOYDER MASTER PLAN 2018 – 2033

"a strategic management plan" document



5.6. Interpretation

Accessibility, Signage and Wayfinding

In review of the 1978 Lester Firth and Murton Pty Ltd study, town wide accessibility patterns have not changed significantly since 1978. The obvious change is the removal of the rail bridge and closure of the railway line to Adelaide. This places increased reliance on the road as the only transport option to Adelaide and north to Broken Hill. It seems that the junction with the Barrier Highway and the Goyder Highway may have been reconfigured at the same, or at a similar time to provide a bypass east towards the Riverland. This has resulted in a new road alignment taking through traffic around the eastern bank of the Burra Creek and reconnecting to Ludgvan Street and the Barrier Highway.

The northern gateway is now represented by the road bridge over the Burra Creek at the junction of the Barrier Highway with the Goyder Highway. There is opportunity to upgrade this bridge to make it more of a gateway feature and provide suitable access for pedestrians and cyclists through the town.

The southern gateway 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. Physical signage at both the northern and southern gateways do exist but their position, size and messaging need improvement.

There is tremendous opportunity to provide new and upgraded infrastructure for cycling and walking in Burra. The presence of both the Heysen Walking Trail and the Mawson Walking Trail are noted and both are well sign posted. In addition, the Johnny Green Trail (formerly the Burra Heritage Trail) provides an excellent way to visit and link together a collection of heritage places in a coordinated way with a visitor pass key system.

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 a state of disrepair. There is 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.

Policy 5.44. Town Walking and Cycling Strategy

Develop a walking and cycling strategy for Burra to encourage walking and cycling throughout the town

Policy 5.45. Town Signage Strategy

Develop signage strategy for the town to increase wayfinding to heritage places

Policy 5.46. Interpretation Strategy

Develop an interpretation strategy for individual places that is consistent across Burra. Consider digital experiences as part of the strategy to increase uptake from younger generations

Publications

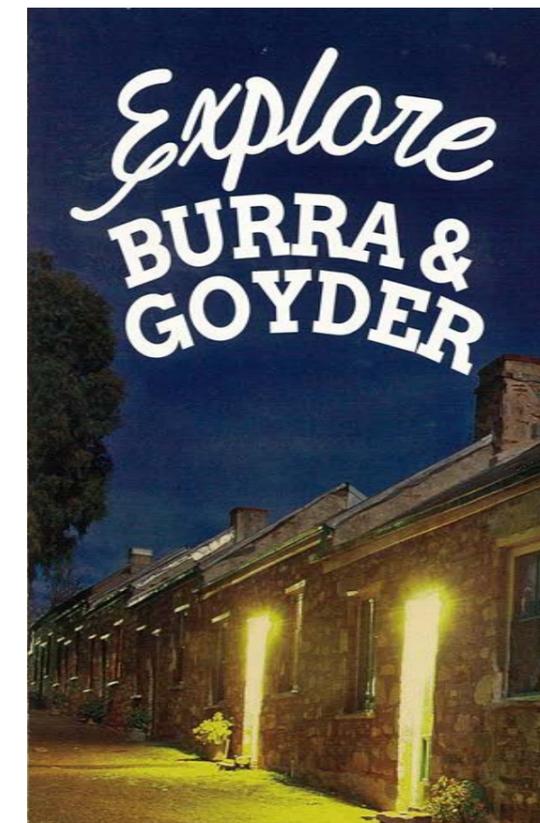
There is an array of current publications which help to promote the Cornish mining heritage significance of Burra. A valuable list exists in the bibliography of this CMP.

Various brochures exist about the mining history of Burra which generally have only passing reference to Cornish mining influences. It is recommended that when new publications are developed or existing publications which discuss the Cornish mining influence and significance are re-published, the most recent information collected as part of this CMP should be incorporated.

This CMP has highlighted tourism promotional material opportunities in support of enhancing the public appreciation of the cultural value of the Cornish mining sites at Burra. This is discussed in Section 5.5 Tourism.

Policy 5.47. New or Updated Publications

New or updated publications about Burra should include the most recent information about the significance of the Cornish mining influence on the development of the town to enhance public appreciation of the cultural value of the Cornish mining sites at Burra.





Online / Digital

Numerous online resources are available to assist with the interpretation of Cornish mining sites, and more broadly the heritage significance of the town of Burra, including the Burra History Group website, the SA Government Department for Environment and Water – Heritage website, and the National Trust website.

It is suggested that these websites are updated to reflect the National listing of Cornish mining sites in Burra 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 Burra, and to help explain its significance to the South Australian, Australian and international community.

Policy 5.48. New Online / Digital Resources

New or updated online / digital resources should reflect the national listing of Cornish mining sites in Burra and should link or reference this CMP.

In addition it is suggested to utilise new technologies to showcase the importance of mining history at Burra in a non-traditional and innovative way that will broaden the appeal to younger generations and increase the offerings to tourists to benefit the economy.

Policy 5.49. Interpretation and new technologies

Opportunities should be explored with the development of new technologies to generate new understanding and interpretation of Cornish mining systems and lost fabric.

Objectives

- Benchmark Burra internationally against other heritage towns to investigate new innovative opportunities.
- Investigate new technologies for digital immersive and interactive (virtual reality) opportunities to re-create heritage places that have been demolished or have deteriorated over time.
- Consider building a digital geocached 3D model of the town and the mine to showcase the development of Burra over time.
- Investigate existing mobile phone applications that can be utilised / adapted now to help expand the offering and build the demand for more heritage based digital data in Burra.
- Expand the existing Burra Passport system for a broader audience and more interactivity.
- Develop Burra as a centre for trade training in heritage building works.

5.7. 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 the CMP occurs.

They 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 in the future.



Precincts

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 plan for the township of Kooringa and is of high significance 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 fine quality early residential cottages and detached homesteads 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 and rehabilitation 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.

Objectives:

- Kingston's original settlement 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.
- Continue conservation works on all heritage places and market the recent works at Paxton Square Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP for conservation and future compatible interpretive uses.
- 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.



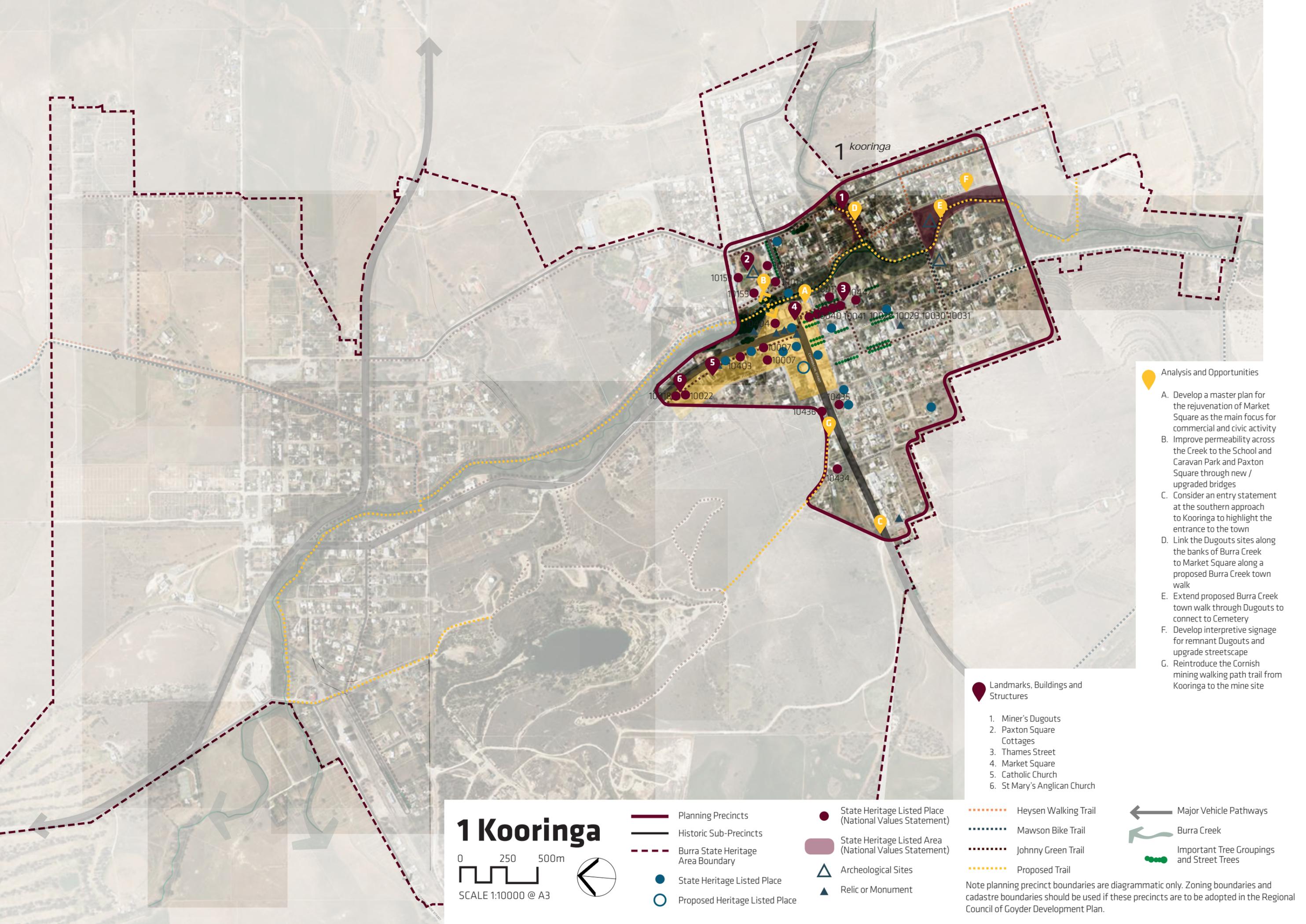
Entry portal into Kooringa



Current Town entry signage



Commercial Street looking east - important view of town form



1 Kooringa

0 250 500m
SCALE 1:10000 @ A3



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- △ Archeological Sites
- ▲ Relic or Monument

- Landmarks, Buildings and Structures
- 1. Miner's Dugouts
- 2. Paxton Square Cottages
- 3. Thames Street
- 4. Market Square
- 5. Catholic Church
- 6. St Mary's Anglican Church
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

- Major Vehicle Pathways
- ← Burra Creek
- Important Tree Groupings and Street Trees

- Analysis and 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

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



Cemetery Area

The cemetery precinct is located to the south of Kooringa and consists of the current cemetery site (1850 onwards) on the east of Burra Creek and the original Kooringa cemetery (1845-1850) located on the western side of Burra Creek. The original Kooringa cemetery was abandoned as it was prone to flooding from the gully which runs through it to Burra Creek and there were reports of human remains being uncovered. Both sites provide a valuable resource for people 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 conducted by McDougall & Vines in 1991. The Conservation Policies and Recommendations from this report are still valid and in need of implementation.

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.

Objectives

- The 1991 Conservation Plan by McDougall & Vines should be updated, endorsed and the recommendations actioned
- Designate both cemeteries as places of archaeological significance under the *Heritage Places Act 1993* to further protect them and to enable funding for further conservation and interpretation works.
- 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



Original Kooringa Cemetery Interpretive Signage



Original Kooringa Cemetery - head stones



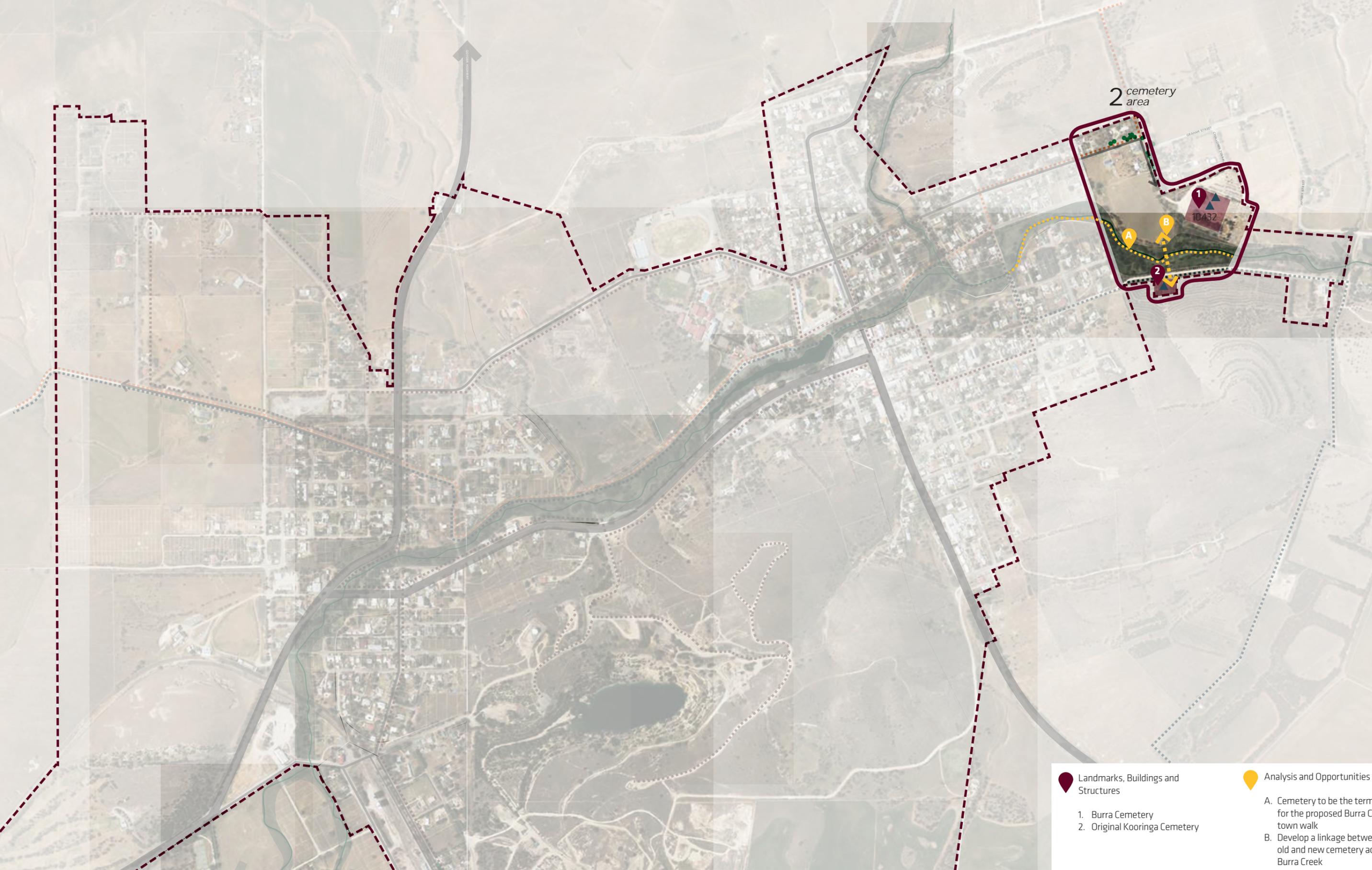
Current Cemetery - cleared headstones



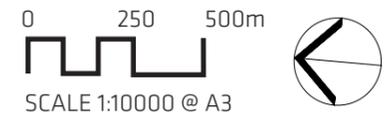
Current Cemetery - noted conservation work on the stone wall surrounding the cemetery



Current Cemetery - original headstones in a state of decay



2 Cemetery area



- Planning Precincts
- Historic Sub-Precincts
- - - Burra State Heritage Area Boundary
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- △ Archeological Sites
- ▲ Relic or Monument
- State Heritage Listed Place
- Proposed Heritage Listed Place

- Landmarks, Buildings and Structures
- Analysis and Opportunities
- - - Heysen Walking Trail
- - - Mawson Bike Trail
- - - Johnny Green Trail
- - - Proposed Trail
- ← Major Vehicle Pathways
- ← Burra Creek
- Important Tree Groupings and Street Trees

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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 enhancement, conservation and rehabilitation of heritage listed places within this precinct.

Objectives

- Reinststate 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.
- Continue conservation works on all heritage places and market the recent works Paxton Square Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP including policies for conservation and future compatible interpretive uses.



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.

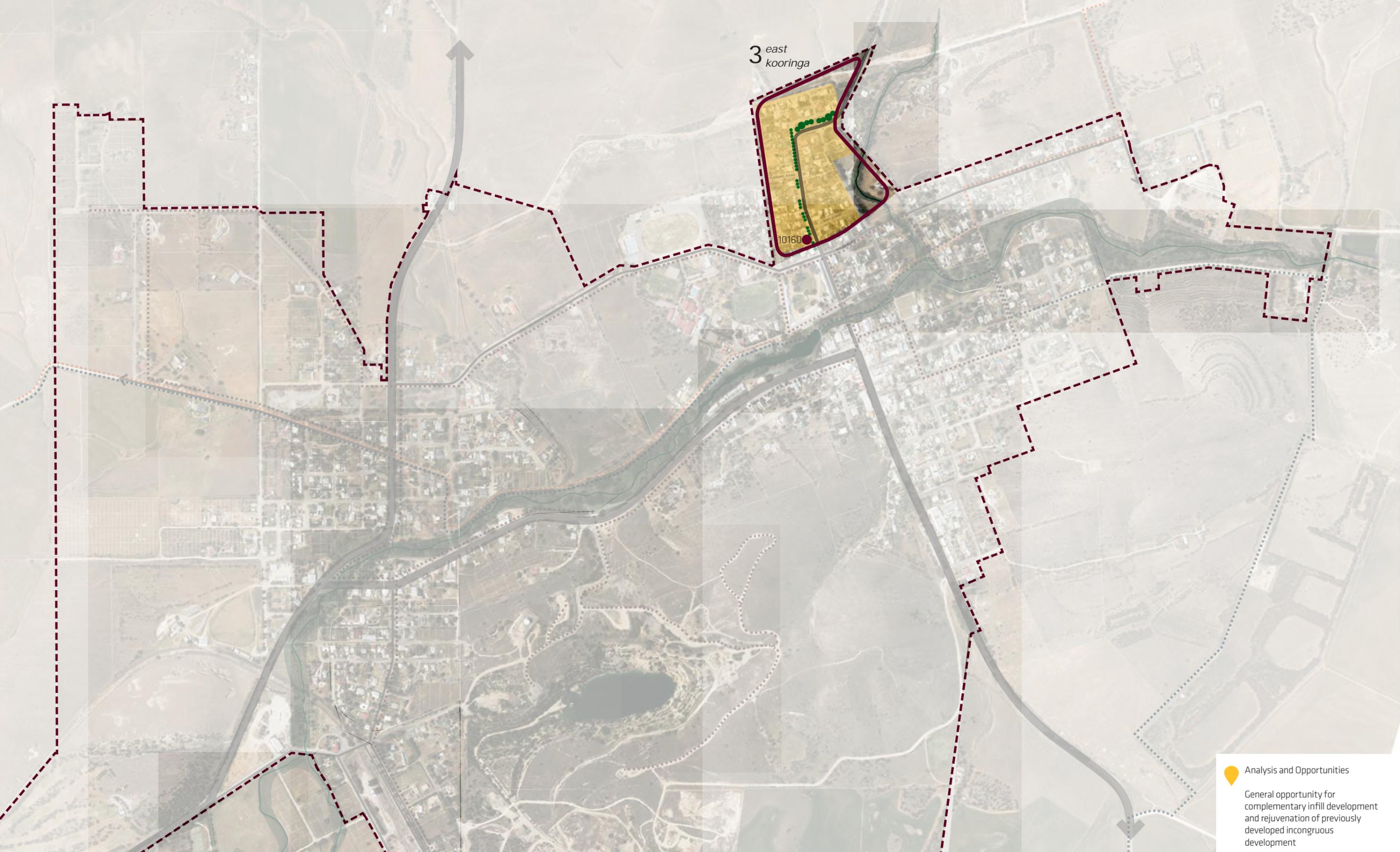
Future Desired Character

This precinct shall 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 and rehabilitation of heritage listed places.

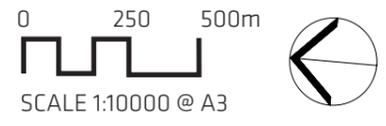
The caravan park does make a significant economic and social contribution to the town and rather than relocating it, the extent of the park could be reduced to enable public access to the Burra Creek frontage. The caravan park could then extend further north along Bridge Terrace, or over Bridge Terrace to the eastern side.

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 and market the recent works at Paxton Square Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.

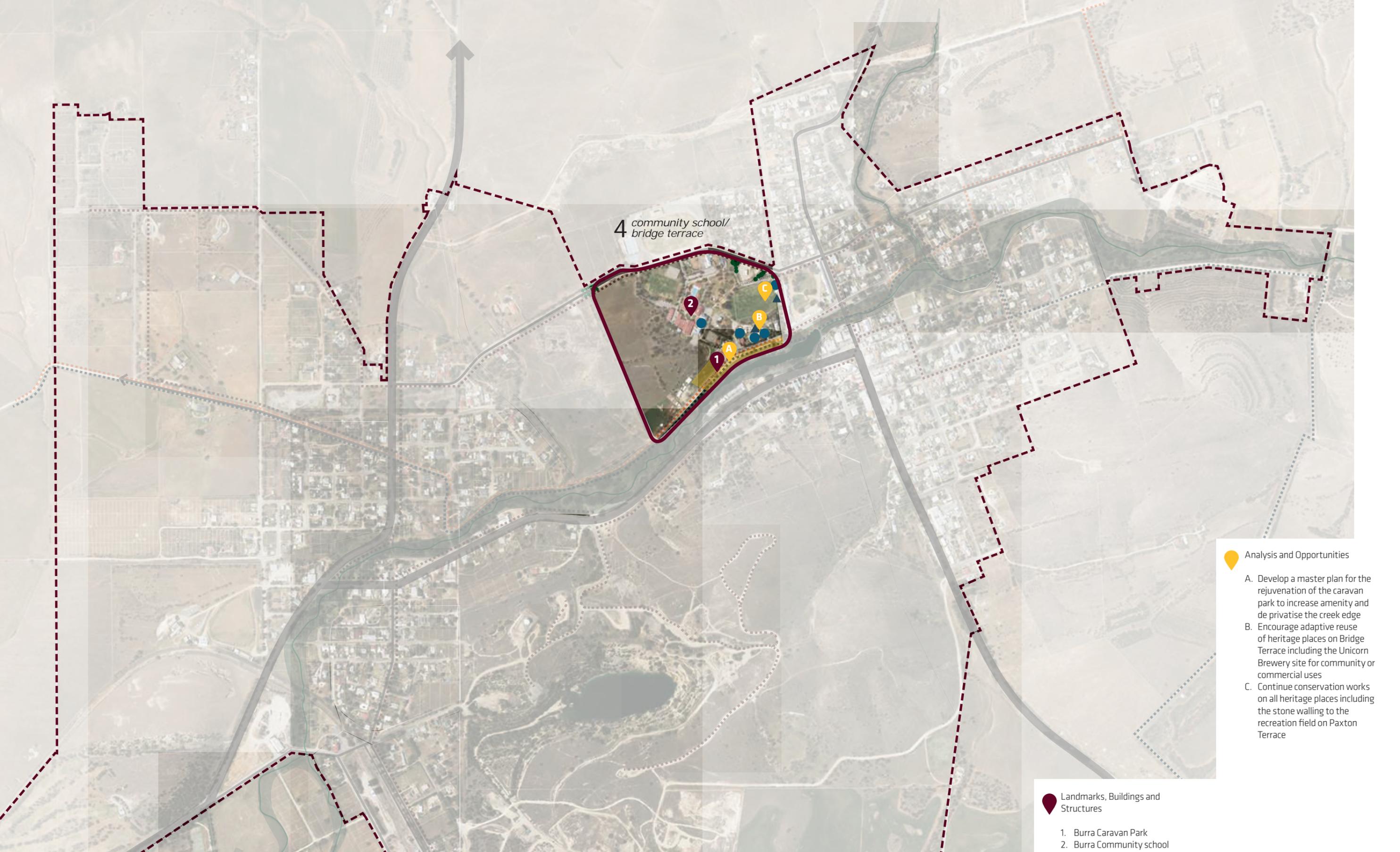


3 East Kooringa



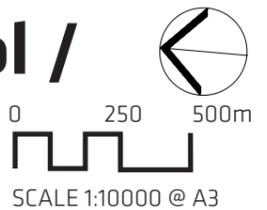
- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- Relic or Monument
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail
- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees
- Analysis and Opportunities
- General opportunity for complementary infill development and rejuvenation of previously developed incongruous development

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



4 community school /
bridge terrace

4 Community school / Bridge Terrace



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- ▲ Archeological Sites
- ▲ Relic or Monument

- Landmarks, Buildings and Structures
- 1. Burra Caravan Park
- 2. Burra Community school
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

- Major Vehicle Pathways
- ~ Burra Creek
- Important Tree Groupings and Street Trees

- Analysis and 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

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



Smelts Area

The Smelts precinct sits opposite the mine site and in-between the two townships of Kooronga 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 Smelts historic site remains as an archaeological place 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 Smelts yard and stone house along with the surrounding former stables are of particular significance but require urgent conservation works due to their state of decay and risk of collapse.

The Smelts area boundary has been adjusted for this CMP to incorporate the subdivision of Graham in the north east corner of the site. This realignment brings the boundary back to the original SAMA Section 1 boundary, and the area contains many residences associated with the Smelting operations including the Smelts Manager's Residence and Office.

Future Desired Character

This precinct is highly important in showcasing the historical significance of Cornish mining practices in South Australia. It has the potential to become a site of national archaeological significance with careful planning and curation.

Objectives

- Designate the Smelts area a place of archaeological significance under the *Heritage Places Act 1993* to further protect the site and to enable funding for conservation works.
- Prioritise a strategic master planning process for the Smelts area to realise its full potential as a site of national archaeological significance relating to Cornish mining interpretation in South Australia, and for broader tourism possibilities.
- Undertake a Conservation Management Plan for the Smelts area to prioritise conservation activities at heritage places at risk of decay and collapse.
- Reinstate the former Smelts site boundary (prior to the subdivision of Graham in the north west corner of the site).
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP including the Smelts yard and stone house and surrounding former stables for conservation and future compatible interpretive uses
- Develop a coordinated interpretation strategy for this precinct.



Smelt's Site - barren and exposed landscape



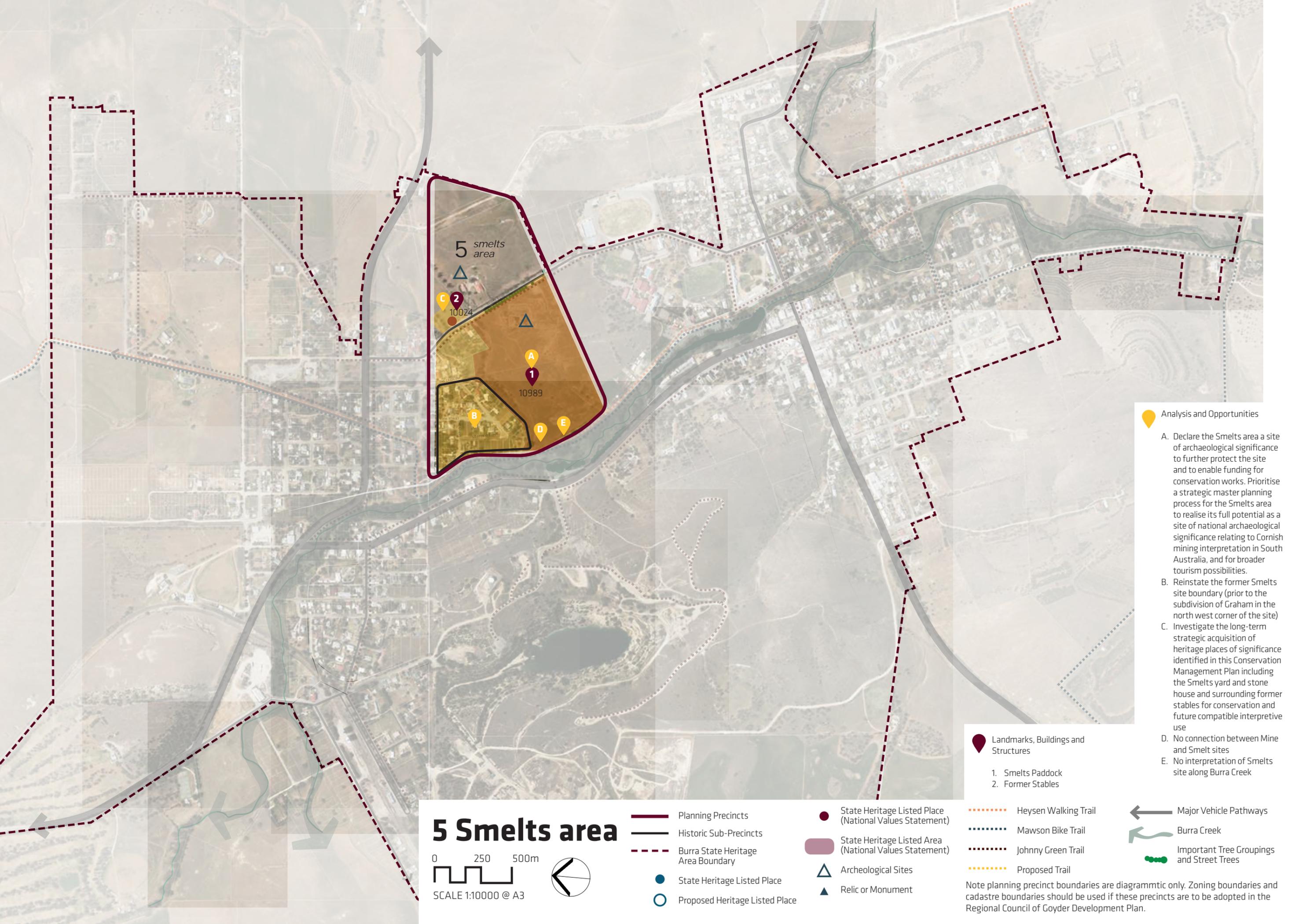
The Smelt's yard and store house and the surrounding former stables are of particular significance



Smelt's Site - barren and exposed landscape

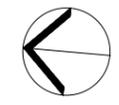


The Smelt's yard and store house and the surrounding former stables are of particular significance



5 Smelts area

0 250 500m
SCALE 1:10000 @ A3



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- Relic or Monument

- Landmarks, Buildings and Structures
- 1. Smelts Paddock
- 2. Former Stables
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees

Analysis and Opportunities

- A. Declare the Smelts area a site of archaeological significance to further protect the site and to enable funding for conservation works. Prioritise a strategic master planning process for the Smelts area to realise its full potential as a site of national archaeological significance relating to Cornish mining interpretation in South Australia, and for broader tourism possibilities.
- B. Reinstate the former Smelts site boundary (prior to the subdivision of Graham in the north west corner of the site)
- 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

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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 typical of Cornish architecture.

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 contribute to understanding the lifestyle and culture 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 Cornish style architecture. 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 and rehabilitation 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.

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.
- Reinstatement of 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 and market the recent works at Tivers Row Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP including policies for conservation and future compatible interpretive uses.
- 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.



Tivers Row Cottages



Example of good conservation and restoration work



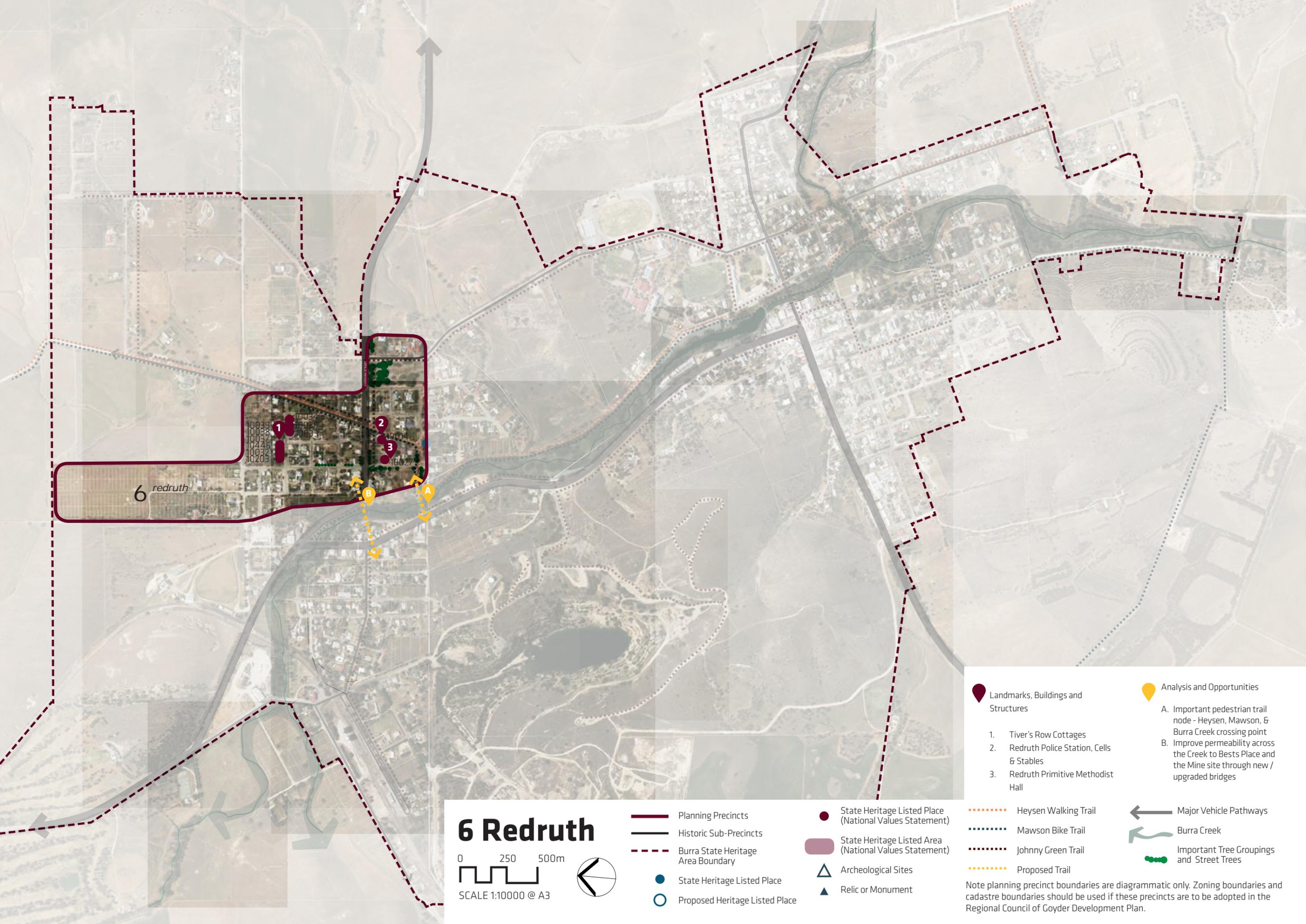
Redruth Streetscape



Example of good infill development which incorporates a hip roof form and integrated verandah structure



Example of poor infill development



6 Redruth

0 250 500m
SCALE 1:10000 @ A3



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place

- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- ▲ Relic or Monument

- Landmarks, Buildings and Structures
- Analysis and Opportunities
- 1. Tiver's Row Cottages
- 2. Redruth Police Station, Cells & Stables
- 3. Redruth Primitive Methodist Hall
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail
- ← Major Vehicle Pathways
- ← Burra Creek
- Important Tree Groupings and Street Trees
- 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

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



Llwchyr

Llwchyr is located north east 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.

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.
- Continue conservation works on all heritage places, in particular the stone walls, and market the recent works at Tivers Row Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- 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 heritage materials and authentic construction techniques to rebuild 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.

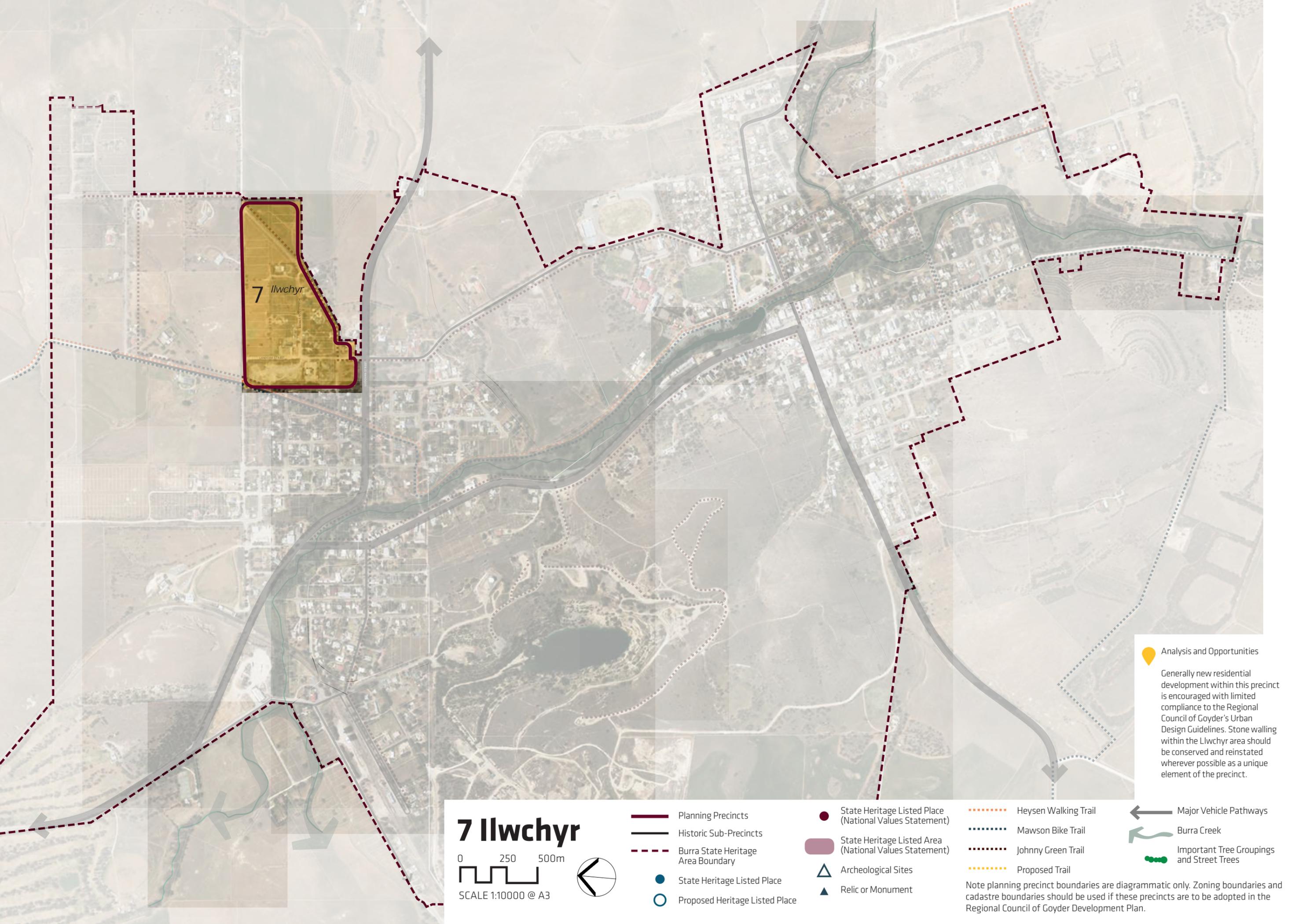
Future Desired Character

Hampton needs to be preserved as an intact township of historic and archaeological significance relating to the Cornish mining influence at Burra. There is opportunity to capitalise on visitation and interpretation at Hampton given its location as part of the Johnny Green Trail.

Hampton could serve as a place for trade training in heritage building works based on the restoration of Jacka House which is seen as an exemplary benchmark for heritage conservation and interpretation.

Objectives

- Designate Hampton a place of archaeological significance under the *Heritage Places Act 1993* to further protect the site and to enable funding for conservation works.
- Undertake a Conservation Management Plan for Hampton to prioritise conservation activities at heritage places at risk of decay and collapse.
- Amend zoning to Historic Mining to protect the site and heritage places within it.
- Develop a coordinated interpretation strategy for this precinct.



7 Ilwchyr

Analysis and Opportunities

Generally new residential development within this precinct is encouraged with limited compliance to the Regional Council of Goyder's Urban Design Guidelines. Stone walling within the Ilwchyr area should be conserved and reinstated wherever possible as a unique element of the precinct.

7 Ilwchyr

0 250 500m
SCALE 1:10000 @ A3



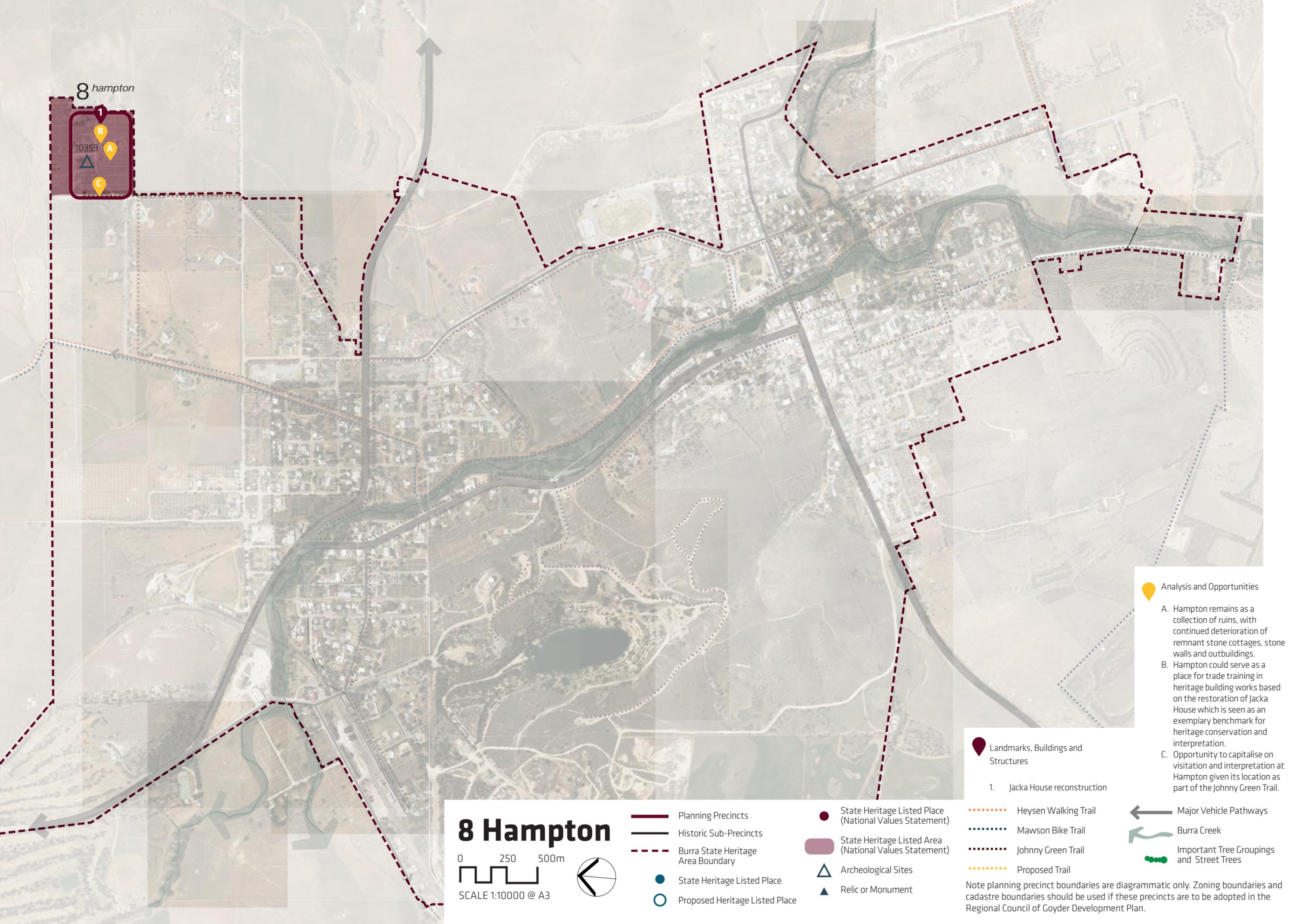
- | | | | |
|------------------------------------|---|----------------------|---|
| Planning Precincts | State Heritage Listed Place (National Values Statement) | Heysen Walking Trail | Major Vehicle Pathways |
| Historic Sub-Precincts | State Heritage Listed Area (National Values Statement) | Mawson Bike Trail | Burra Creek |
| Burra State Heritage Area Boundary | Archeological Sites | Johnny Green Trail | Important Tree Groupings and Street Trees |
| State Heritage Listed Place | Relic or Monument | Proposed Trail | |
| Proposed Heritage Listed Place | | | |

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.

8 hampton

10359

A B C



8 Hampton



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- Relic or Monument
- State Heritage Listed Place
- Proposed Heritage Listed Place

- Landmarks, Buildings and Structures
- 1. Jacka House reconstruction
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees

- Analysis and 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 restoration 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.

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



Gaol

The Gaol is located north of the township of Redruth on Tregony Street and was the first gaol to be built outside of Adelaide in 1856. It is a site of thematic value (making settlements to serve Australia); 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 containing abundant interpretive information and displays about the gaol and its role afterwards as a girl's reformatory, then as a performance space and movie set for Breaker Morant during the 1970's and 1980's.

Future Desired Character

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.

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.





9 gaol

1

10042

A

Landmarks, Buildings and Structures

1. Redruth Gaol

Analysis and 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

Heysen Walking Trail

Mawson Bike Trail

Johnny Green Trail

Proposed Trail

Major Vehicle Pathways

Burra Creek

Important Tree Groupings and Street Trees

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.

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- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- State Heritage Listed Place
- Proposed Heritage Listed Place
- Archeological Sites
- Relic or Monument
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail
- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees



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 on site that are of archaeological significance. 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 Captains Cottage has had recent conservation and adaptation works undertaken to transform it into a bed and breakfast, 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, and since then the importance of this place has diminished. 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. This work is ongoing and at the time of writing this report conservation work is underway on the re-creation 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 conservation interpretation and adaptive reuse work to increase the quality of the offering to tourists. This should be the focus of all 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.

Objectives

- 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.
- Undertake a Conservation Management Plan for the Bon Accord Mine site to prioritise conservation activities at heritage places at risk of further deterioration.
- 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.
- 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

0 250 500m



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-  Planning Precincts
-  Historic Sub-Precincts
-  Burra State Heritage Area Boundary
-  State Heritage Listed Place
-  Proposed Heritage Listed Place
-  State Heritage Listed Place (National Values Statement)
-  State Heritage Listed Area (National Values Statement)
-  Landmarks, Buildings and Structures
-  Archeological Sites
-  Relic or Monument
-  Heysen Trail
-  Mawson Trail
-  Johnny Green Trail
-  Proposed Trail
-  Major Vehicle Pathways
-  Burra Creek
-  Important Tree Groupings and Street Trees
-  Analysis and Opportunities

1. Bon Accord Mine
2. Bon Accord Hotel
3. Railway Station

- 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.

10 rail/Bon Accord area

10023

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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 there is evidence of former shops along Morehead Street which are referenced in the Lester Firth and Murton Pty Ltd study in 1978, from 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 in Morehead Street which is the primary route back into the town centre.

The area is characterised by a number of good quality of remaining terrace and detached cottages and dwellings some of which have been upgraded and turned into bed and breakfast accommodation which is supported.

Future Desired Character

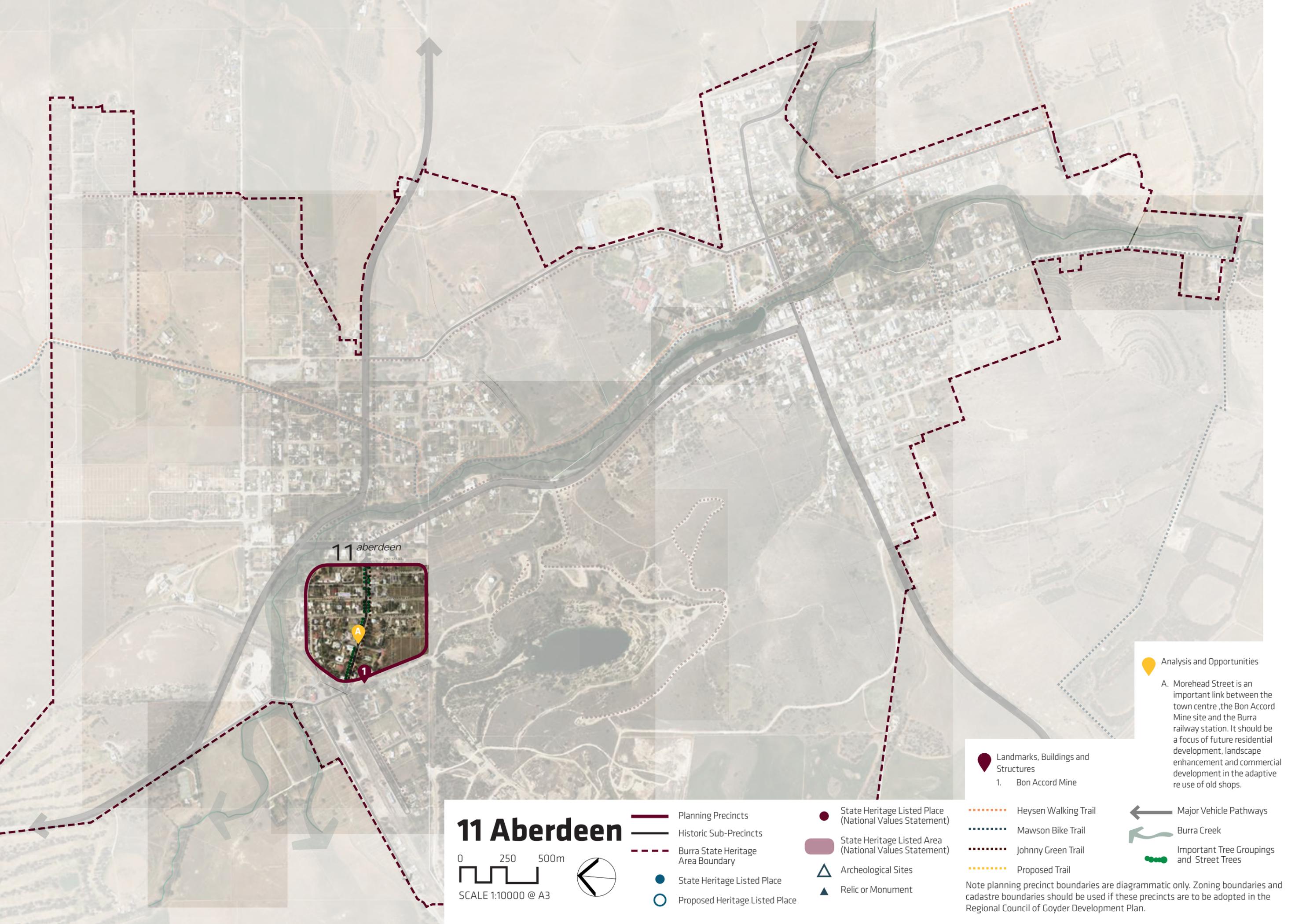
The amenity and character of Aberdeen should be protected and reinforced limiting development primarily to residential use and landscape enhancement, with further conservation and rehabilitation of heritage listed places. New development in this precinct should strictly comply with the Regional Council 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.

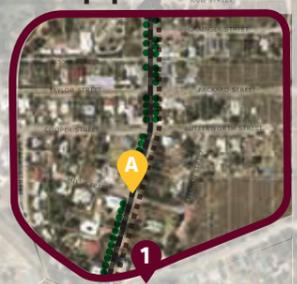
Objectives

- 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.
- Continue conservation works on all heritage places and market the recent works at Tivers Row Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- 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

0 250 500m
SCALE 1:10000 @ A3



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- △ Archeological Sites
- ▲ Relic or Monument

- Landmarks, Buildings and Structures
- 1. Bon Accord Mine
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail

- ← Major Vehicle Pathways
- ← Burra Creek
- Important Tree Groupings and Street Trees

● Analysis and Opportunities

A. Morehead Street is an important link between the town centre, 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.

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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 on Best Place.

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 significant 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 heritage architecture of these buildings, do not present well to the street and are incongruous with the precinct.

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.

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.
- Continue conservation works on all heritage places and market the recent works at Paxton Square Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- 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.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP for conservation and future compatible interpretive uses.
- 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.



Former road bridge linking Redruth to Bests Place



Sara's (Tivers Corner)



12 Bests place

0 250 500m
SCALE 1:10000 @ A3



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- △ Archeological Sites
- ▲ Relic or Monument

- Landmarks, Buildings and Structures
- 1. Morehead Street bridge over Burra Creek
- 2. Royal Exchange Hotel
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail
- ← Major Vehicle Pathways
- ← Burra Creek
- Important Tree Groupings and Street Trees

Analysis and 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.

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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. The mine site has its own State Heritage boundary, and within it many other State Heritage places are listed.

Due to the later open cut operations the physical landscape of the site has been altered and has artificially created an overburden hill with good views across the town.

Recently a large water tank has been placed on the overburden hill within the Mine site that is visible from within the Mine site and across Burra. This is an intrusive form of development which compromises the visual amenity of the Mine site and the town.

Future Desired Character

The Mine site and its contributory elements need to be preserved as the centrepiece of the historical significance of Cornish mining practices in the South Australia. It has the potential to become a site of international significance with careful planning and curation.

Additionally, the Mine site has the capacity to become an international tourist attraction with careful conservation and curation. Along with the mining focus, there is opportunity for broader tourism opportunities in the unique open cut site.

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. Future intrusive development in Burra will have an adverse effect on the visual amenity and historic character of the town and may pose a risk to any further heritage listings, and therefore any funding sources. It is recommended to paint the tank in a neutral colour and plant tall growing trees and shrubs around the tank to screen it from view as a priority. A longer-term action could be to relocate the tank to a less sensitive site or put the tank underground on the same site.

Objectives

- Prioritise a strategic master planning process for the Mine site to realise its full potential as the centrepiece for Cornish mining interpretation in South Australia, and for broader tourism opportunities possible in the open cut mine area.
- Undertake a Conservation Management Plan for the Mine site to prioritise conservation activities at heritage places at risk of decay and collapse.
- Designate the Mine site a place of archaeological significance under the *Heritage Places Act 1993* to further protect it and to enable funding for further conservation and interpretation works.
- 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.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP including the Mine Hospital and the Foreman's / Mine Assayers Residence, former SAMA Storeman's Dwelling (SAHR No. 10049), former SAMA Storeroom, Yard and Walls (SAHR No. 10019) and the Smelters Home Hotel (SAHR NO. 10419) for conservation and future compatible interpretive uses.
- Prepare a long-term strategy for the removal of the open cut overburden to unearth and showcase buried mine infrastructure such as the Buddle Pits and Ore Floor and return the geographic townscape back to a "pre-open cut" state.
- Discourage any new mining activities on the mine site unless it can demonstrate protection of the heritage places listed.
- Screen incongruous and intrusive development from visibility using landscaping and trees in accordance with the Regional Council of Goyder's Urban Design Guidelines.
- Develop a coordinated interpretation strategy for this precinct.



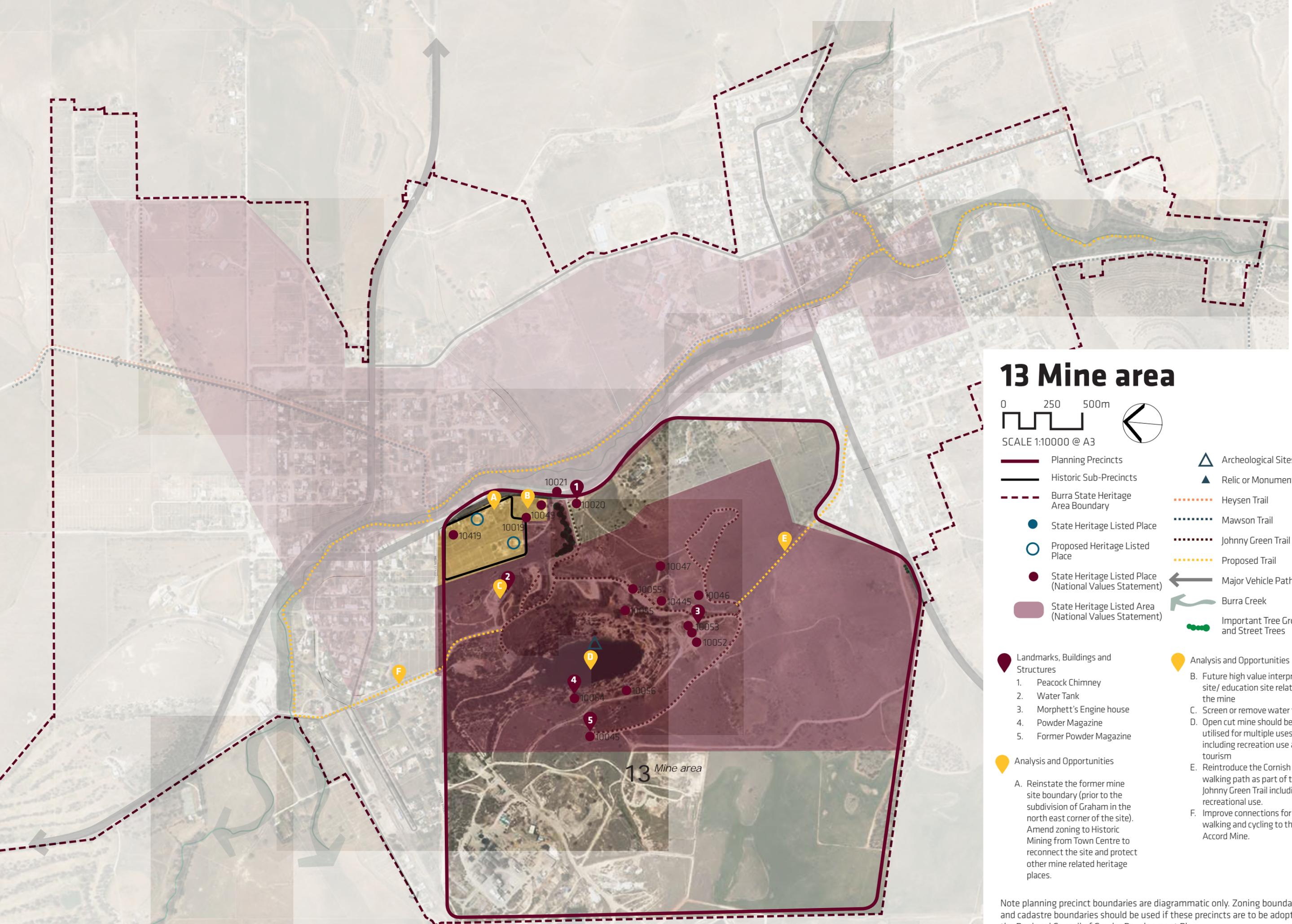
Former Mine Assayer's Residence



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

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- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- Relic or Monument
- Heysen Trail
- Mawson Trail
- Johnny Green Trail
- Proposed Trail
- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees

- Landmarks, Buildings and Structures
 1. Peacock Chimney
 2. Water Tank
 3. Morphett's Engine house
 4. Powder Magazine
 5. Former Powder Magazine
- Analysis and Opportunities
 - A. Reinststate 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.

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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 many artefacts relating to the Cornish mining history including the Dugouts, and former bridge abutments linking the Smelter site to the Mine site.

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 cottage garden 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 old 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 interpretive work done to repair and enhance the offering to the community and to tourists.

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 tourists 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 other cultural information) as a supporting and complementary element to the Mine site and Smelter site in particular, but also to the Dugouts and to other artefacts 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 and rehabilitation 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.

Objectives

- Prioritise a strategic master planning process for the Burra Creek based on previous work undertaken (Woods Bagot Landscape Concept Plan and EBS Ecology Revegetation Action Plan) to realise its full potential as the centrepiece of the town's community recreation and open space system providing interpretive information on the Cornish mining history of the town, and for broader community and tourism opportunities.
- Designate Burra Creek (Open Space Zone) a place of archaeological significance under *Heritage Places Act 1993* to further protect the Dugouts, the collapsed dugouts west of Mitchell Flat Road and other archaeological artefacts to enable funding for conservation works.
- Prioritise conservation activities at heritage places at risk of decay and collapse- 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 the 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.



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



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.



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.



Public art offerings are a good way of activating Burra Creek and providing points of interest which celebrate the cultural history of the town.



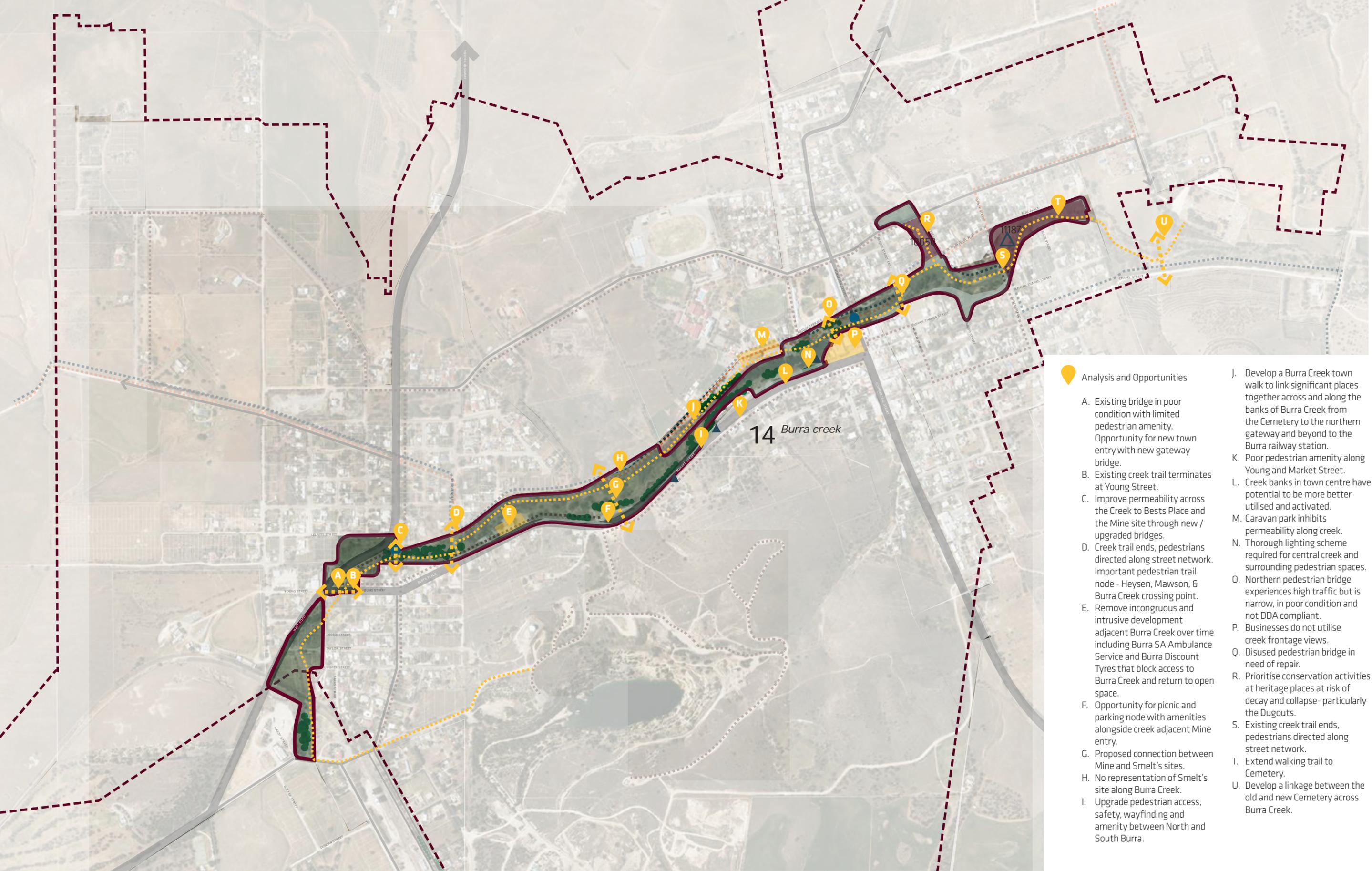
The highly manicured cottage garden south of the Commercial Street bridge has a high amenity value and is popular with visitors and the community.



The playground and picnic / park area between Paxton Square and Market Square has a high amenity value and is popular with visitors and the community.



Some good interpretive signs exist, however the quality varies



14 Burra creek

- Analysis and 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 activities 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



- Planning Precincts
- Historic Sub-Precincts
- Burra State Heritage Area Boundary
- State Heritage Listed Place
- Proposed Heritage Listed Place
- State Heritage Listed Place (National Values Statement)
- State Heritage Listed Area (National Values Statement)
- Archeological Sites
- Relic or Monument
- Heysen Walking Trail
- Mawson Bike Trail
- Johnny Green Trail
- Proposed Trail
- Major Vehicle Pathways
- Burra Creek
- Important Tree Groupings and Street Trees

Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



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.

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.



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



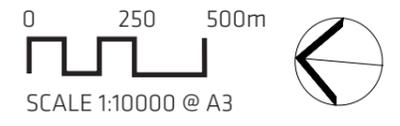
The bridge over Burra Creek could be an iconic entry statement into the town



15 north gateway

- Analysis and Opportunities**
- A. The embankment where the former rail bridge over the Barrier Highway ran is still evident. This was classed as the town gateway in the 1978 Lester Firth and Murton Pty Ltd study.
 - B. Consider an entry statement to highlight the northern entrance to the town.
 - C. 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.

15 North gateway



- Planning Precincts
 - State Heritage Listed Place (National Values Statement)
 - Heysen Walking Trail
 - Major Vehicle Pathways
 - Historic Sub-Precincts
 - State Heritage Listed Area (National Values Statement)
 - Mawson Bike Trail
 - Burra Creek
 - Burra State Heritage Area Boundary
 - Archeological Sites
 - Johnny Green Trail
 - Important Tree Groupings and Street Trees
 - State Heritage Listed Place
 - Relic or Monument
 - Proposed Trail
 - Proposed Heritage Listed Place
- Note planning precinct boundaries are diagrammatic only. Zoning boundaries and cadastre boundaries should be used if these precincts are to be adopted in the Regional Council of Goyder Development Plan.



6. Implementation

6.1. Future Management

Conserve and Manage Heritage Values

The current day to day management of Burra lies with the Regional Council of Goyder. This custodianship should continue as Council staff and Elected Members are local citizens who are part of the community who have a vested interest in the future success of the town.

Those involved in the management of 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 of the place. It is therefore recommended that the Regional Council of Goyder minimise this risk through the development and application of suitable protocols or strategies. This might involve the appointment of a staff member to be responsible for the heritage management of the town or for all staff to undertake training to ensure the protocols around heritage and the structure of this CMP are suitably understood and proactively implemented.

Policy 6.1 Active management

The Regional Council of Goyder should develop and implement a management system for decisions which might impact on the heritage value of Burra.





Future Development Assessment Procedure

The Town of Burra is governed by the Planning Development and Infrastructure Act 2016, and the Regional Council of Goyder Development Plan (Consolidated 24 November 2016) administered by the Council. In addition, Burra is listed on the South Australian Heritage Register and hence development associated with Burra is currently subject to the SA Heritage Places Act 1993.

The current development assessment procedure involves assessment by the Regional Council of Goyder against the Development Plan, 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. A development application should have regard to the requirements of the Zone in which the development is located as outlined within the Development Plan, with specific works guided by the relevant conservation policy contained in the Development Plan. The Minister (through Heritage SA) will be responsible for preparing a report, and Council must have regard to any recommendations of the Minister in granting (or refusing) approval. If Council rejects the Minister's advice, the approving authority is the State Commission Assessment Panel (SCAP).

It should be noted that the South Australian State Government's Planning Reform process is underway at the time of writing this CMP, and it is uncertain what impact this process will have on development application processes in Burra in the future. However, we understand that the State Government is moving towards an online digital process, whereby the use of aerial photography and GIS based mapping will be more common. The mapping undertaken for this CMP will be a valuable and updateable resource to assist with future development assessment procedures.

More coordination is required at State Government level, particularly inter departmental coordination between service authorities such as Department for Environment and Water (DEW) and Department of Planning Transport and Infrastructure (DPTI) with SA Heritage. Concentration is required on contextual impact, particularly visual intrusiveness. The water tank built on the Burra Mine site is an unfortunate example of development that should not have proceeded in that location or should have been undertaken in a more sensitive way. The presence of this water tank impacts on the viewsheds into and throughout the Mine site, and from entrances into the Town itself. More insensitive development of this nature will damage the world heritage listing opportunities of places within the Town.

Several guidelines are published by government agencies advising on the assessment of potential heritage impacts when planning works. These should be updated to include recognition of the national significance of Burra.

Above this, the inclusion of any place on the National Heritage List requires a separate assessment process to that identified at a State level. Under the Commonwealth EPBC Act 1999, approval needs to be sought from the Australian Government Environment Minister for any proposed action likely to have a significant impact on the qualities of the place which are protected by the Act. The definition of what actions might be considered significant is listed in the glossary of the EPBC Act 1999, but are open to interpretation, and there is a risk that an action considered by the owner of the place not to be significant could subsequently be deemed significant by the Minister. There are considerable penalties for taking a significant action without approval.

In acknowledging this potential problem, the Act was amended in 2007 to streamline the assessment process, allowing applicants more prompt advice if a proposed action requires approval. This requires the completion of an online referral form describing the proposed action which is forwarded to the Environmental Assessment Branch of the Department of the Environment and Energy, and is then subject to a 10 day public comment period and a subsequent decision on whether the proposed action will require approval, all made within 20 business days.

Further information is available online to assist with the environmental assessment and approvals process:

<https://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process>

In some States the Federal Environment Minister delegates the approval powers to the State Minister through a bilateral conservation agreement, in which case works undertaken in accordance with a CMP accredited by the Federal Environment Minister do not need referral to the Federal Environment Minister for a decision but can be assessed through the State approval process. No such agreement currently exists between the Federal and South Australian governments, however there are numerous precedents including the Conservation Agreement between the Commonwealth and New South Wales State government for the protection and conservation of the World Heritage Values and National Heritage Values of the Australian Convict Sites, Old Government House and Domain, Parramatta New South Wales.

Policy 6.2 Delegation to the State Government

A delegation process between State and Federal Government, whereby the State has delegated powers to provide approval of development applications relating to Nationally listed heritage places should be investigated and established for consistency and to streamline development approvals.

6.2. Funding Opportunities

The Regional Council of Goyder is responsible for the general management and maintenance of the town, except for State Heritage owned and National Trust owned properties. Maintenance and capital works funding for works associated with the town is managed as a part of the Council's annual budget.

The funding for future work should consider the prioritised maintenance, conservation and longer-term management of the place.

Allowance should be made in future budgets for:

- Cyclic maintenance of existing owned heritage places – repainting, cleaning gutters etc.
- Conservation works – of existing owned heritage places - 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 places without a plan in place.
- Master plans for larger precincts – Smelter Site, Mine Site, Burra Creek etc.
- Future acquisitions of other places of significance identified in this CMP.

Policy 6.3 Prioritisation of funding

The prioritised capital and maintenance works recommended by this CMP should form the basis of a works programme.

Policy 6.4 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, there is a shift towards a tourism focus in support of cultural heritage and opportunities at both a State and Federal level are available.

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 for Environment and Water (State Government)

In 2019 Heritage SA is joining with the tourism industry and heritage experts to develop a Heritage Tourism Strategy for South Australia. Tourism operators, regional communities, heritage property owners and managers, Local Government, Traditional Owners, heritage and history organisations, and those with an interest in developing heritage tourism in South Australia will soon be invited to participate in opportunities to help shape the strategy.

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 \$5.7million 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.

Australia ICOMOS

Australia ICOMOS (International Council on Monuments and Sites) is a non-government, not-for-profit organisation of cultural heritage professionals formed as a national committee of ICOMOS in 1976. Australia ICOMOS acts as a national and international link between public authorities, institutions and individuals involved in the study and conservation of all places of cultural significance. Nationally, Australia ICOMOS regularly lobbies government on national heritage issues such as funding, legislation, site protection, listing and protocol.

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 6.5 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 Burra.

6.3. Priority Actions

The following provides an outline of the work recommended based on the principles established within Chapter 5: Conservation Policy and Guidelines, and the nature of works described in Chapter 3: Description and Condition.

Work can be divided into three priorities, namely:

Priority A - Work to be completed in the next two years.

- Immediate maintenance or stabilisation work required to improve the heritage value of the place.
- Immediate strategy / planning / design work required to establish a framework for funding, procurement and delivery to improve the heritage value 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.
- Strategy / planning / design work required to establish a framework for funding, procurement and delivery to improve the heritage value 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.
- Strategy / planning / design work required to establish a framework for funding, procurement and delivery to improve the heritage value of the place.

Town Wide Priorities

The following town wide priorities are recommended.

Priority A

- Develop a walking and cycling strategy for the town to encourage walking and cycling opportunities.
- Develop a signage strategy for the town to increase wayfinding through Burra.
- Continue conservation works on all heritage places and market the recent works at Paxton Square Cottages as an exemplary form of conservation and enhancement of a Nationally listed heritage place.
- Identify current market trends and research 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 Burra.
- Consider entry statements at the southern and northern approaches into Burra to better highlight the entrances to the town.
- Develop strategy for Burra to be a base for training in conservational based skills, building upon the existing association created by the Burra Charter.

Priority B

- 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.
- Investigate opportunities for inclusion of Mine and Smelter sites as part of existing world heritage listing for Cornish Mine sites.

Priority C

- Reinstate the street typology cross section with street trees in all streets where possible.
- Investigate the long-term strategic acquisition of heritage places of significance identified in this CMP for conservation and future compatible interpretive uses.





Precinct Wide Priorities

The following precinct wide priorities are recommended.

Priority A

- Prioritise a strategic master planning process for the mine site to realise its full potential as the centrepiece for Cornish mining interpretation in South Australia, and for broader tourism opportunities possible in the open cut mine area.
- Undertake a CMP for the mine site to prioritise conservation activities at heritage places at risk of decay and collapse.
- Redefine the former mine site 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 site and protect other mine related heritage places.
- Undertake a CMP for the Smelts area to prioritise conservation activities at heritage places at risk of decay and collapse.
- Designate the Smelts area a site of archaeological significance under *Heritage Places Act 1993* to further protect the site and to enable funding for conservation works.
- Prioritise a strategic master planning process for the Smelts area to realise its full potential as a site of national archaeological significance relating to Cornish mining and Welsh smelting technology interpretation in South Australia, and for broader tourism possibilities.
- Redefine the former Smelts site boundary in the SA State Heritage Register.
- Undertake a strategic master planning process for the Burra Creek based on previous work undertaken (Woods Bagot Landscape Concept Plan and EBS Ecology Revegetation Action Plan) to realise its full potential as the centrepiece of the town's community recreation and open space system providing interpretive information on the Cornish mining history of the town and its importance in the early life of the community (i.e. "Creek Street"), and for broader community and tourism opportunities.
- Designate Burra Creek (Open Space Zone) a site of archaeological significance under the *Heritage Places Act 1993* to further protect the Dugouts, the collapsed dugouts west of Mitchell Flat Road and other archaeological artefacts.

Priority B

- Designate Hampton a site of archaeological significance under the *Heritage Places Act 1993* to further protect the site and to enable funding for conservation works.
- Update the CMP for Hampton to prioritise conservation activities at heritage places at risk of decay and collapse.
- Amend zoning to Historic Mining to protect the site and heritage places within Hampton.
- 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.
- Provide interpretive information at significant archaeological sites along the Burra Creek including the collapsed Dugouts west of Mitchell Flat Road.

Priority C

- For the Mine site, 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 geography back to a "pre-open cut" state.
- 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 the creek and return it to open space.

Site Specific Place Priorities

The following site-specific priorities are recommended.

Priority A

- Immediately stabilise ruins identified in Chapter 3: Description and Condition as at risk of collapse, specifically:
 - Mine Offices (SAHR 10056)
 - Smelts Stableyard and Storehouse (SAHR 10024)
 - Former Engine/Crusher House (SAHR 10045)

The work should be immediately followed by the development of a conservation strategy for each of these places that addresses their long term management.

- In relation to the water tank on the Mine site, screen incongruous and intrusive development from visibility using landscaping and trees in accordance with the Regional Council of Goyder's Urban Design Guidelines.
- 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.
- 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.
- Develop an interpretation strategy for individual places that is consistent across Burra. Consider digital experiences as part of the strategy to increase uptake from younger generations.
- The management recommendations contained in the 1990 archaeological survey of the former Burra Smelts Historical site (SAHR 14314) are enacted and the Bannear Plan reviewed and updated.
- An archaeological management plan is developed for the Burra Historic Mine site (SAHR 10970) and the former Dugout sites in the Burra Creek (SAHR 14379) and its tributary (SAHR 10050).

Priority B

- Designate the current cemetery and former Kooringa cemetery sites of archaeological significance under the *Heritage Places Act 1993* to further protect them and to enable funding for further conservation and interpretation works.
- Provide interpretive signage at the current cemetery.
- 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.
- 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.



Priority C

- Update and endorse the 1991 Burra Cemetery Conservation Plan by McDougall & Vines and action recommendations
- Undertake a Conservation Management Plan for the Bon Accord Mine site to prioritise conservation activities at heritage places at risk of further deterioration.
- Relocate the water tank on the Mine site to a less sensitive site or put the tank underground on the same site
- 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
- Investigate longer term strategic tourism opportunities for the Gaol based on previous achievements
- 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 and 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 influence on the development of Burra. These places include:
 - The Mine Hospital
 - Foreman's / Mine Assayers Residence
 - Former SAMA Store Room, Yard and Walls (SAHR No. 10019)
 - Former Burra Smeltsyard and Storehouse (SAHR No. 10024)
 - Smelters Home Hotel (SAHR 10419)
 - SAMA Storeman's Dwelling (SAHR No. 10049)
 - 11 Truro Street Residence (SAHR No. 10036)
 - 13 Truro Street Residence (SAHR No. 10034)



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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



Appendix B - Community Engagement



Attendees at Community Information Evening

Name	Email
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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 C - Significant Places Survey Sheets





Appendix D - Bibliography



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