



NON-INDIGENOUS CULTURAL HERITAGE REPORT



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Big Vein South Gold Project

Historic Heritage Assessment

Written for Strategic Minerals Corporation Pty Ltd

Everick Heritage Pty Ltd



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Cover Photo:

Undated photo of Woolgar Goldfield miners (Lynley 2016).



EVERICK HERITAGE PTY LTD

ABN: 78 102 206 682

Head Office: Level 9, Matisse Tower

110 Mary Street Brisbane 4000

T: 07 3211 4478

E: info@everick.com.au

www.everick.com.au

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This report was prepared and written by Everick Heritage archaeologist, Emily Smith with assistance from archaeologists Sullivan Haywood and Eilis Brien. GIS mapping was undertaken by GIS Consultant Joshua Jones. This report was reviewed by Shaun Adams. Consultation with the Client was conducted by Emily Smith.

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Definitions

The following definitions apply to the terms used in this report:

AHC Act means *Australian Heritage Council Act 2003*.

AHC means Australian Heritage Council.

Artefact means “any moveable object that has been used, modified or manufactured by humans” (Thomas 1998:69).

Big Vein South (BVS) Gold project means the project.

BVS Pit means Big Vein South Pit.

CIL means Carbon In-Leach.

Client means Hansen Environmental Consulting.

Consultant means qualified archaeological staff of Everick Heritage Pty Ltd.

Cultural Heritage Feature or **Feature** means cultural heritage individual items, components, or elements within a site.

DES means the Queensland Department of Environment and Science.

Disturbance site means the proposed disturbance footprint within the project site, as shown in Figure 1.

DNRME means the Queensland Department of Natural Resources, Mines and Energy.

EAR means Environmental Assessment Report.

EPBC means the *Environment Protection and Biodiversity Conservation Act 1999*.

Everick Heritage means Everick Heritage Pty Ltd.

HEC means Hansen Environmental Consulting.

HHA means Historic Heritage Assessment.

ICOMOS means International Council of Monuments and Sites.

LGA means Local Government Area.

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Mtpa means million tonnes per annum.

NTAQ means National Trust of Australia (Queensland).

PL Act means Pastoral Leases Act 1869.

Project Activities means all construction and operational works associated with the project.

Project means works proposed within the project site.

Project site means the land designated for the mine lease as outlined in Figure 1.

Proponent means Strategic Minerals Corporation Pty Ltd.

QH Act means the *Queensland Heritage Act 1992*.

QHC means the Queensland Heritage Council.

QHR means Queensland Heritage Register.

QSA means Queensland State Archives.

RNE means Register of the National Estate.

ROM means Run of Mine.

Site refers to a cultural heritage site and means “any place where material evidence exists about the human past...it usually refers to a concentration of such evidence” (Thomas 1998:95).

UCLO Act means *Unoccupied Crown Lands Occupation Act 1860*.

UNESCO means United Nations Education, Scientific and Cultural Organisation.

WRD means Waste Rock Dumps.

1. Introduction

Everick Heritage Pty Ltd was commissioned by Strategic Minerals Corporation to complete a Historic Heritage Assessment as part of the Environmental Assessment Report (EAR) for the Big Vein South Gold project (the project).

The project involves the construction and operation of an open cut gold mine on a greenfield site in North Queensland. The project site covers an area of approximately 2,281 ha and is located approximately 100 km north of Richmond and 380 km west of Townsville (Figure 1).

Open cut mining will be conducted using excavators and trucks. Gold ore will be processed on site to produce gold dore (solid bars containing gold alloy). The mine's peak production rate will be up to 1.95 million tonnes per annum (Mtpa) of run of mine (ROM) gold ore, yielding up to approximately 100,000 ounces of gold dore per annum. The mine life will be approximately 11 years.

The following mining and ore processing activities will be undertaken as part of the project.

- Develop three open cut pits, as follows.
 - The main Big Vein South Pit (BVS Pit) located in the centre of the project site (Figure 2). Waste rock from this pit will be hauled by truck and stored in the Central and Southern Waste Rock Dumps (WRDs).
 - Two small satellite pits, BV1 Pit and BV2 Pit, located in the northern part of the project site (Figure 2). Waste rock from these pits will be stored in the Northern WRD.
- Transporting mined ore in haul trucks from the open cut pits to the ROM area ore stockpiles located near the mine processing facilities at the southern end of the project site (Figure 2).
- Processing ore from the BV1 and BV2 Pits in the first 2 years of mining using Heap Leach Pads and gold elution. Processing ore mined from the BVS Pit in an on-site Carbon In-Leach (CIL) Plant from Year 3 onwards. The heap leaching process will generate spent heap leach residues. These residues will be reprocessed in the CIL Plant over the life of the mine. The CIL Plant will generate wet tailings and dewatered tailings. Wet tailings will be pumped to a Tailings Storage Cell. Dewatered tailings will be stored with waste rock in the Central and Southern WRDs.
- Transporting dore bars from the site via plane to a refinery.

The majority of the mine infrastructure will be located at the southern end of the project site (Figure 1 and 2). Key mine infrastructure will include ore processing facilities, workshop, warehouse, administration buildings, haul roads and access roads, vehicle servicing, refuelling and wash down facilities, fuel storage facilities, diesel and solar power station, water supply and water management infrastructure. Workforce accommodation and a private airstrip will also be located at the southern end of the project site.

1.1. Scope of Assessment

The study area of this assessment was restricted to the project site boundary and to a 5 km buffer surrounding the site to capture the regional non-indigenous heritage values.

1.2. Assessment Methodology

The approach used for this assessment was to undertake a desktop review of the project site. The purpose of the desktop review was to identify the historic themes for the region and to explore the history of any places of non-indigenous cultural interest within the project site.

The desktop review included a:

- legislative review;
- review of the environmental context;
- search of the applicable heritage registers;
- review of historic aerial photography;
- review of published literature and archival records for information on the heritage values within the region and the project site;
- review of published reports relevant to the site and surrounds;
- review of historical themes for the region;
- statement of significance of any heritage sites or features of potential importance;
- impact assessment on any relevant heritage sites or features; and
- management measures to mitigate risk to heritage.

Table 1 summarises the desktop registers consulted for this assessment. In addition, this assessment also reviews the historic significance of any sites or features identified within the desktop review (Significance Assessment – Section 4) and assesses the potential impacts of the construction and operation of the project to any/all significant cultural heritage materials (Impact Assessment – Section 5).

Table 1: Cultural heritage registers consulted for this assessment

Register	Established/Maintained By
World Heritage List	United Nations Education, Scientific and Cultural Organisation (UNESCO)

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Commonwealth Heritage List (Australian Heritage Database)	Established under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act) Maintained by Department of Climate Change, Energy, Environment and Water (DCCEEW)
National Heritage List	Established under the EPBC Act Maintained by DCCEEW
Register of the National Estate (RNE)	Established under EPBC Act and the <i>Australian Heritage Council Act 2003</i> (AHC Act) No longer active. Access to the archived RNE is available via the Australian Heritage Database
Queensland Heritage Register (QHR)	Established by the <i>Queensland Heritage Act 1992</i> (QH Act) Maintained by Department of Environment and Science (DES) (heritage branch)
National Trust of Australia (Queensland) (NTAQ) Heritage Register	Maintained by Queensland Branch of the National Trust of Australia
Queensland WWII Historic Places	Maintained by DES (heritage branch)
Local Heritage Registers	Richmond Shire Council Planning Scheme

Note: Table 1 does not include the full list of published literature and reports, and archival records available to the authors.

1.3. Assumptions and Limitations

The following is a desktop assessment of non-indigenous cultural heritage values and as such has relied heavily upon the heritage registers, archival research, and literature review.

Previous studies of the Woolgar region have identified the loss of historical records by Mine Warden offices, Queensland Mines Department, Queensland State Archives (QSA), and a fire in 1921 that destroyed the Richmond Shire's municipal buildings and all relevant community records (Taylor 2013:220). In addition, any relevant historical Crown Lands documents were not viewed as part of this assessment due to COVID-19 restraints at QSA. However, due to the lack of primary sources retained at QSA, it is considered likely that any information that is still available would not have differed significantly or altered the results and discussion of this report.

In addition, there is no legal requirement under the *Environment Protection and Biodiversity Conservation Act 1999* or *Queensland Heritage Act 1992* to make archaeological research in Queensland publicly

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available. Consequently, it is acknowledged that there may be potential gaps in the available records, and that some knowledge of sites and features of significance may not be available. Therefore, there is the potential for previously unrecorded or unknown items to be identified within the project site. Management measures are provided in Section 6 to address any such heritage concerns.

2. Legislative and Planning Context

2.1. Environment Protection & Biodiversity Conservation Act 1999

In relation to non-indigenous cultural heritage, the EPBC Act is the principle legislation concerning heritage places of national and world significance. Actions that are likely to significantly impact on those areas are prohibited, without approval from the Federal Minister for the Environment under the EPBC Act. The objectives of the EPBC Act relevant to cultural heritage are to:

- provide for the protection of the environment, especially matters of National Environmental Significance;
- provide a streamlined national environmental assessment and approval process;
- enhance the protection and management of important natural and cultural places; and
- promote environmentally sustainable development through the conservation and ecologically sustainable use of natural resources.

Certain actions require assessment, and approval under the EPBC Act. This includes actions which may have an impact on World Heritage Properties or National Heritage Places and may include both historic and Indigenous cultural heritage items.

The EPBC Act can only be triggered if:

- the project site is owned or managed by the Commonwealth and has archaeological features of heritage significance; or
- archaeological features contained within the project site are of exceptional National heritage significance.

The EPBC Act oversees the Australian Heritage Council (AHC), the advisory body responsible for the assessment of places for inclusion on the Commonwealth Heritage List (places owned or managed by the Commonwealth) and the National Heritage List (places of exceptional value to the nation). Searches of such registers were conducted as part of this study.

2.2. Australian Heritage Council Act 2003

The AHC Act established the AHC as the principal advisory body to the Australian Government for heritage matters, particularly in relation to administering heritage lists under the EPBC Act. The AHC Act gives power to the AHC to administer the Commonwealth Heritage List, National Heritage List, and the

Register of the National Estate (RNE). The AHC maintains an online searchable database of registered places considered of national significance.

2.3. Queensland Heritage Act 1992

The QH Act is the principle legislation controlling actions on items or places of State heritage significance. The purpose of the QH Act is *'to provide for the conservation of Queensland's cultural heritage for the benefit of the community and future generations'* (Section 2.1). The primary protection for places of state heritage significance is provided through nomination and registration for entry on the Queensland Heritage Register (QHR). Once places or artefacts are on the register, the Queensland Heritage Council (QHC) has a range of decision-making powers over development applications that have the potential to impact those places or artefacts.

The criteria for entry in the State heritage register can be applied to artefacts to establish cultural heritage significance. Cultural heritage significance must be determined by an appropriately qualified person, i.e., an archaeologist.

The criteria for measuring the significance of an object or place under Section 35 (as listed above) has provided the foundation of the significance assessment under Section 4 of this report.

Places of heritage significance may not be listed on the QHR but are known to landowners or to members of the public. Places can be nominated for inclusion on the QHR at any time, and pending development, may prompt such nominations. For this reason, mitigation measures are recommended to help identify previously unreported sites in project site.

As soon as a site is nominated for inclusion on the QHR, the Minister may issue a stop order to protect from damage any place (entered on the Register or not) considered to be of cultural heritage significance. A stop work order will operate for up to 40 business days until the place has been assessed and further decisions have been made (Section 154 of the QH Act).

The identification of all cultural heritage sites cannot be guaranteed prior to development. This is especially the case with non-visible archaeological remains that may be unearthed during construction works. Should any potentially significant features or sites be identified during this assessment or subsequently during the construction or operation of the project, the Proponent must comply with Part 9 of the QH Act.

2.4. Local Government Requirements

Under Part 11 of the QH Act, local governments are required to identify places within their local government areas (LGAs) that are of cultural heritage significance. Places of cultural heritage significance

are kept in a local heritage register, generally included in the local government agency's planning scheme. The local government agency's planning scheme which is relevant to the project site is the Richmond Shire Council Planning Scheme.

2.5. Best Practice: ICOMOS Burra Charter

The Australian International Council on Monuments and Sites (ICOMOS) is the peak body of professionals working in heritage conservation. ICOMOS has adopted the *Burra Charter* (2003) which describes acceptable standards for the assessment and management of features of cultural heritage significance in Australia. The central principle of the *Burra Charter* is that assessment of the significance of any potential heritage feature/s must be made independent of any management decisions. While it has no statutory effect on Queensland or Commonwealth Law, the *Burra Charter* has been adopted by the QHC as a best practice guide to assessing and managing heritage features, and has directed the development of heritage legislation, heritage practice, and heritage place management in Australia and overseas.

Cultural significance, as defined by the *Burra Charter*, means all types of places of cultural significance, including natural, Aboriginal and historic places. The *Burra Charter* states that places of cultural significance must be conserved for present and future generations, in accordance with the principles of inter-generational equity (Australia ICOMOS Burra Charter 2013: 1).

The *Burra Charter* uses four terms to identify different aspects of cultural significance; they are (in alphabetical order) aesthetic, historic, scientific and social. Each of these terms may have tangible or intangible aspects, and the *Burra Charter* views both aspects as equally important.

Aesthetic Values are the sensory and perceptual experience of a place which can include concepts of beauty and formal aesthetic ideals.

Historic Values relate to all aspects of history which means this value can underlie other values. A place may have historic value through its involvement in historic events, phases, movement or activity and can be linked to art, architecture, science, spirituality and society.

Scientific Value relates to the ability of the place to reveal more about an aspect of the past through examination or investigation of the place. This includes archaeological techniques. The scientific value usually depends on the importance of the information or data generated by further research and its rarity, quality or representativeness.

Social Value refers to the associations that a place has for a particular community or cultural group and the social or cultural meanings that it holds for them. Important places could include local markers or symbols, community identity or community associations.

In assessing a feature's significance, it requires not just an assessment of the feature itself, but its setting (Article 8), location (Article 9) and an understanding of how it may be linked to any related other related features (Article 11). This should all be documented in a written statement on the item's significance. Once significance has been established, the *Burra Charter* process provides for acceptable standards on the conservation, preservation, maintenance, change, restoration, reconstruction and/or alteration of the feature/s based on this significance.

A common theme of all the principle tenets of the *Burra Charter* involves engaging with those parties that hold knowledge of any of the values described above.

The *Burra Charter* advises that the process for undertaking works in an area identified as culturally significant should:

1. understand the significance;
2. assess the cultural significance;
3. develop a statement of cultural significance;
4. identify all factors and issues relating to the significance;
5. develop a policy managing cultural significance;
6. prepare a management plan;
7. implement the management plan; and
8. periodically review the management plan.

As the primary manual for assessing cultural heritage significance, the *Burra Charter* has been followed in this assessment. A flow chart outlining the *Burra Charter* process is contained in Appendix A of this report.

2.6. Best Practice: Additional Register Searches

While not governed by any legal act or body, the following additional registers were consulted as part of this desktop assessment. Firstly, the World Heritage List provides a database for the identification, protection, and preservation of natural and cultural heritage around the world considered to be of outstanding value to humanity, and is established and maintained by UNESCO. Secondly, the RNE was previously established under the EPBC Act, but is no longer active and is considered a non-statutory

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register. In addition, the NTAQ heritage register, maintained by the Queensland Branch of the National Trust of Australia, provides recognition of Queensland heritage sites as a non-statutory register. Lastly, the Queensland WWII Historic Places website maintained by DES offers a combined written history with imagery and cartography in a digital space to increase relevance and context. A search of these non-statutory registers was conducted as part of this assessment to ensure all registered heritage sites and features, past and present, have been identified.

3. Cultural Heritage Desktop Assessment

3.1. Environmental Context

The project site is located approximately 100 km north of Richmond, within the Richmond Shire, Queensland, and is approximately 380 km west of Townsville. It is bordered by the Woolgar River in the north-west. The project site is located within two large grazing properties: the northern part of the project site is within Middle Park and the central/southern parts of the project site are within Mt Norman. There are three homesteads within the vicinity of the project site:

- Barnes' House located approximately 3 km north-east of the project site;
- Middle Park Homestead located approximately 1.1 km north-west of the project site; and
- Mt Norman Homestead located approximately 8.4 km south-west of the project site.

The Peterfield Airstrip is located to the east of the southern end of the project site.

The local topography transitions from elevated rocky plateaus and ridgelines in the east of the project site to the flatter, low-lying Woolgar River in the west of the project site. The land has previously been used for grazing and small scale historical gold mining, concentrated in the northern section of the mine lease.

3.2. Heritage Register Search Results

A search was undertaken of the following heritage registers to identify any listings of historic cultural heritage within or immediately surrounding the project site. Table 2 provides an overview of the search results per each register that was examined.

No historic cultural heritage sites or features were identified within or within 5 km of the project site.

Table 2: Heritage register search results

Register	Access Date	Outcome	
		Within project site	Within 5 km of project
World Heritage List	17 Jan 2022	No sites or features	No sites or features
Commonwealth Heritage List (Australian Heritage Database), including the RNE	17 Jan 2022	No sites or features	No sites or features
National Heritage List	17 Jan 2022	No sites or features	No sites or features
QHR	17 Jan 2022	No sites or features	No sites or features
NTAQHeritage Register	17 Jan 2022	No sites or features	No sites or features
Queensland WWII Historic Places	17 Jan 2022	No sites or features	No sites or features

Richmond Shire Council Planning Scheme	17 Jan 2022	No sites or features	No sites or features
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3.3. Historic Aerial Photography

The oldest available historic aerial photographs dating from 1967 were reviewed to determine the level of past ground disturbance, scale of any preceding mining operations, and to identify any historic sites or features that may still exist within the project site (Appendix B).

The imagery from 1967 displays that the majority of the project site is comprised of sparsely vegetated lowlands adjacent to watercourses, with no evidence of any manmade structures. The eastern extent of the project site contains more diverse and heavily vegetated topography, but likewise there is no apparent infrastructure or previous mining enterprises identifiable. In this mountainous region there are some areas of clearing, however, it is unclear whether this is anthropogenic or the result of natural processes such as erosion.

3.4. Archival Research

This section is based on accounts in journals of early European explorers and settlers in the region, historical Crown Lands documents retained at the QSA, historical reports retained at the State Library of Queensland and published online, and various historical literature relevant to the area.

3.4.1. Early Regional Exploration and Settlement

The earliest recorded European exploration of the Richmond district occurred in 1861 when William Landsborough and Fredrick Walker set off on two separate expeditions in search of the early explorers Burke and Wills. Burke and Wills had attempted to find an overland route from Victoria to the Gulf of Carpentaria and, unfortunately, died during their return journey. In an attempt to find the early explorers, William Landsborough and Fredrick Walker headed south from the Gulf of Carpentaria and north-west from Rockhampton, respectively (Figure 9 and Figure 1) (Denaro et al. 2001:5; National Museum Australia 2021; Taylor 2013:61,36-51; Walker 1861:36-51).

On 30-31 October 1861, Walker's party camped alongside a river locally known as the Weelgar. The name "Weelgar" eventually became "Woolgar" and was the first recorded exploration within close proximity of the project site. The earliest maps available show the river as the Woolgar River (Denaro et al. 2001:5; Taylor 2013:61,36-51; Walker 1861:36-51) (Appendix C). While camping along the Woolgar River, the relief party was involved in a small conflict with the local Indigenous group which resulted in the injury and death of several Indigenous peoples (Taylor 2013:61,36-51; The Courier

1862:3; Walker 1861:36-51). Conflict between European explorers and settlers, and local Indigenous group/s was common throughout Queensland in the mid-19th century, and there are many similar accounts of contestation, injury, and death (see De Satge 1901; Leichhardt 1847; Murray 1860; Murray 1862; Reynolds 1967).

As with other early Queensland explorers during the 1840s – 1860s, the relief expeditions of Landsborough and Walker stimulated the interest of pastoralists and early settlers in Northern and Central Queensland. Particularly after hearing the favourable impressions of the Bowen Basin area during the 1850s, the Crown was encouraged to open up land for settlers in the region. It was not long after, when the *Unoccupied Crown Lands Occupation Act 1860* (UCLO Act) and the *Pastoral Leases Act 1869* (PL Act) came into effect and graziers were able to legally take up the wastelands of the unsettled Districts. These properties were known as runs and described as “a large area of land rented for a fixed period of time from the Crown for pastoral purposes” (QSA (n.d.)). It was also during this time that the Townsville Settlement was established, and the first pastoral occupations at Cloncurry, Hughenden, Winton, and Richmond were taken up. In particular, Hughenden was a prosperous pastoral area fed by the Flinders River and Jardine Valley. By 1882, Hughenden had a courthouse, two hotels, stores, a hospital, a post office, school, and Jockey Club (Centre for the Government of Queensland 2018a; Centre for the Government of Queensland 2018c; Centre for the Government of Queensland 2018d; Centre for the Government of Queensland 2018e; Centre for the Government of Queensland 2018f).

3.4.2. Mining Industry

The discovery of gold, coal, and other resources in Queensland throughout the 1860s and 70s was a primary feature in Australia’s economic landscape (Mate 2014; Wegner 2009). Alongside the separation of New South Wales and Queensland in 1859-60, and the establishment of the UCLO and PL Acts, the start of prospecting and mining led to the formation of European settlement within regional Queensland (Mate 2014; Wegner 2009).

Gold was discovered at Cloncurry and on the upper Cape River in 1867. Prospecting in the region also resulted in further discoveries at Ravenswood in 1868, Broughton in 1871, and at Charters Towers in 1872 (Centre for the Government of Queensland 2018b; Centre for the Government of Queensland 2018e). Within the Cloncurry region, iron and copper ore were also found, leading to the development of a semi-permanent mining community by the 1870s (Centre for the Government of Queensland 2018a). In addition, the gold rush at Charters Towers during the 1870s saw the town become a major mining and business centre as miners arrived from Bowen and Townsville. By 1890, Charters Towers was Queensland’s second largest town (Centre for the Government of Queensland 2018b).

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More locally to the project site, gold was discovered in the headwaters of the Woolgar River and its tributaries in 1879. In association, Richmond became an important transit point for coaches ferrying miners north to Woolgar and became an established township by 1882. Within 10 years, Richmond included three hotels, a school, three stores, a baker, butcher, two blacksmiths, and a saddler (Centre for the Government of Queensland 2018d). Further, Townsville itself profited from the region's mining and pastoral occupation, being the port of entry for commodities, and several Townsville merchants opened branch stores at the gold fields (Centre for the Government of Queensland 2018e).

The growing interest in the northern goldfields led to the construction and operation of the Great Northern Railway, which now connects Townsville to Mount Isa. The discovery of gold at Ravenswood and Charters Towers prompted the need for a faster and cheaper method of transporting goods across the range to the coast, and the projected rail line was approved by parliament in 1877 (Board of Professional Engineers 2022). The approval of the railway was well timed, as the 1880s were the boom years for rail construction throughout Australia. The Griffith Government believed opening railways was a guaranteed way for the success of farming and settlement communities (Queensland Rail n.d.). In Queensland specifically, the Queensland Government planned for the construction of several major mining railways from ports to mining fields, including the Northern Railway, Central Railway (Rockhampton to Longreach 1880), and Southern Railway (Brisbane to Charleville) (Queensland Rail n.d.) (Figure 12). Early archival maps show the construction of the Northern Railway between Townsville and Charters Towers by 1883, to Hughenden by 1896, and a branch line to Winton by 1900 (Figure 13). It wasn't until 1929 when the first train arrived at Mount Isa and the construction of the railway was finalised (Board of Professional Engineers 2022).

3.4.3. The Woolgar Goldfield

The Woolgar Goldfield, at its full expanse, covers an estimated 23,000 hectares (230 sq. kilometres) surrounding the Woolgar River. While the general area of the Woolgar Goldfield may, at first glance, seem large, it is comparatively small when viewed as part of the cluster around the Gregory Range (compare Etheridge, Oaks, Gilbert, and Croydon Goldfields in Figure 2). As the goldfield was initially worked by individual miners instead of under a single corporation or company, four main mining camps were established. These include Upper Camp, Top Camp, Middle Camp, and Lower Camp. Lower Camp is the closest to the project site (refer Figure 4; Figure 5; Figure 14; Figure 15).

Miners did not undertake a single large-scale operation, but rather many small, shallow workings. It is estimated over 100 mining places of interest comprise the Woolgar Goldfield, including abandoned mine workings, historical camps or towns, and stamper battery sites (Figure 14). Due to the size and scale of the Woolgar Goldfield, which expands beyond the boundary of the project site, detailed analysis for each place is not possible or within the scope of this assessment. Consequently, only the places that

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are previously known and may be impacted by the construction and operation of the project are discussed in Section 4. The following discussion details the overarching history of the Woolgar Goldfield generally, to provide context for the project site.

The Woolgar Goldfield was first identified in 1879 when gold was discovered in the headwaters of the Woolgar River and its tributaries. It was first officially reported in *The Queenslander* (13th December 1879), stating that the gold had been discovered and there were some 50 alluvial miners working its lower reaches (Taylor 2013:65). While it was not confirmed who discovered the Woolgar Goldfield, two parties claimed the honour of first finding payable gold in the area. The initial claim had been made to the Minister of Mines, dated 17th January 1880, by Joseph Lynch, Charles Rodgers, William Beckham, and P.C. Purcell; whereas the second claim comprised a Mr. McBurn, Rodgers, and Durham (Authurs 1995; Denaro et al. 2001:35-7; Taylor 2013:66).

During the following year (1880), the Woolgar Goldfield became a feature of the Queensland media and a gold rush at Woolgar began (Taylor 2013:65). As the promise of success at the Woolgar Goldfield spread in the news, the goldfield drew disappointed miners from Cape River, Charters Towers, Croydon, Etheridge (Georgetown), Gilberton, Palmer and Hodgkinson goldfields, and even as far as Victoria and Western Australia. It is estimated the population at the time fluctuated between 200-600 miners that comprised both European and Chinese descent (Denaro et al. 2001:35-7, 40; Taylor 2013:65, 102-3).

The widespread influx of individual miners (instead of enterprises) to the prospective goldfield has led Bolton (1972:61-2 in Taylor 2013) to call the Woolgar the last of the nomadic rushes in eastern Australia. This was particularly during a time when better financed corporations, companies, and organisations were more suited to handle the complex ores being mined at deeper levels (Taylor 2013:102-3).

To service such a shifting and widespread community, a (temporary) township was established on the eastern bank of the Woolgar River, across the river from Middle Park Homestead (within proximity to but outside the project site) (Figure 4; Figure 5). During the early years (1880-1882), Woolgar included four licenced market gardeners, two stores, three butchers, and a post office (QSA MWO 14B X3 in Taylor 2013). The township was officially surveyed in January 1887 (Denaro et al. 2001:40; Taylor 2013:65-66). By 1890, the township also included a blacksmith, mill owner/s, carrier and carter (driver of horse-drawn vehicles to transport goods), and a hotel (Pughs 1890).

As with many other places in Queensland during the late 19th Century, the increase in European settlers led to the rise in conflicts between settlers and local Indigenous populations. While there are several accounts of station owners welcoming Aboriginal peoples as station hands upon their cattle stations, there are also negative stories of interaction between settlers and local Aboriginal people (De Satge 1901; Reynolds 1976). At Woolgar in particular, several of the residents had signed a petition requesting

two detachments of the Queensland Native Mounted Police (who were within proximity of the goldfield in response to a separate request) to disperse the “large number of Aborigines camped here” (Lynley 2016). On 14 September 1881, Sub-Inspector Henry Kaye (from Cloncurry), Sub-Inspector William Nichols (from Oaks Park), and two others had set out to scatter the local Aboriginals within proximity of the town. During the event, Sub-Inspector Kaye was fatally speared. His commemorative headstone still stands on the western bank of the Woolgar River within the grounds of Middle Park Station (outside of the project site) – he was buried elsewhere (Taylor 2013:70-71,217; Wills 2016) (Figure 4; Figure 5). There are no known graves or headstones within the project site.

While many travelled to the Woolgar Goldfield in 1880-81 in hopes of mining their fortune, the Woolgar gold rush was short-lived. Mining in remote Queensland was subject to several basic constraints including extreme weather patterns, lack of decent and cost-efficient transportation, undersupply of equipment and technologies, abandonment of sites as news of a more promising location circulated (particularly during the nomadic period of gold rushes), and (most significantly) when ore bearing lodes pinch out and the cost of mining outweighs its returns (Taylor 2013). The Woolgar Goldfield experienced all these challenges. In comparison, mining at Charters Towers was very profitable for many decades because it was connected via the Northern Railway, and well established and well-funded (Centre for the Government of Queensland 2018b). Consequently, a high proportion of the Woolgar Goldfield had moved on by early 1881 as the free gold diminished, and other goldfields were better connected and offered greater return on investment (Taylor 2013:65).

For the remaining 50-60 years that the Woolgar Goldfield was mined, the population barely peaked 150 at any one year (Figure 3). During this time, WWI and WWII began and ended, and the Great Depression impacted employment and income. It has previously been identified within Denaro et al. (2001) and Taylor (2013) that the Woolgar Goldfield witnessed a minor revival during the Great Depression, a result of the need for revenue and the extension of the Prospectors Unemployment Relief Scheme administered by the Queensland Government Department of Mines. The Relief Scheme entitled miners to a weekly relief ration allowance that, when added to their winnings, provided a reasonable income (after Anonymous 1931a, 1931b in Taylor 2013:124).

It was during this time (early 1900s), that the Mowbray Gold Mining Company saw value in installing a Wilfley table at the Mowbray battery site (outside the project site) (Figure 15). As the Mowbray Mine began to reach deeper levels, the Berdan pans used in the ore/gold separation process were not effective in grinding the refractory ores and could not produce enough clean gold surfaces to facilitate the separation process. The Wilfley table had established a favourable reputation in a number of other North Queensland mills during the turn of the century (such as at Mount Leyshon and Donnybrook mine at Ravenswood), and the Mowbray Gold Mining Company purchased and installed the technology in hopes to improve its recovery process. Interestingly, this technology was not installed at Charters Towers until

after 1917, some 16 years after other Northern Queensland goldfields (including Woolgar) adopted the Wilfley table (Taylor 2013:110-112).

While the inclusion of the Wilfley table at Woolgar Goldfield may have resulted in the reported surge in gold recoveries from Woolgar during the early 1900s, this “revival period” was far from impressive on a regional, state, or national level. Throughout the whole duration of operations at Woolgar, the official annual reported gold winnings are barely worth mentioning. Denaro et al. (2001:21) has estimated a total of 979.94 kg (converts to 31,505.8 troy ounces) of gold being produced by Woolgar Goldfield for its whole of life (1879-1980). This is likely to be an underestimate of the total value mined at Woolgar due to gold not being reported (Denaro et al. 2001; Taylor 2013). This estimated total equates to less than 0.005% of the troy ounces reported for the Charters Towers and Cape region solely in 1872 (Bernays 1919; Taylor 2013) (Figure 16)¹. As a result, the Woolgar Goldfield have historically been a “small man’s field” and were a disappointment for many (Taylor 2013:260).

For a greater detailed history of the Woolgar Goldfield, refer to Denaro et al.’s *Mining history of the Woolgar Goldfield, North Queensland* (2001) on behalf of the Department of Natural Resources and Mines, Queensland, and Taylor’s *Woolgar Goldfield’s Industrial Archaeology of Capitalism 1879-1939* (2015) submitted for the degree of Doctor of Philosophy of the Australian National University. Appendix D below provides a summary of the Woolgar Goldfield history, as provided by Denaro et al. 2001.

3.4.4. The Project Site History

As previously stated, the Woolgar Goldfield covers a large area surrounding the project site, comprised of over 100 historic places of interest, and the project site incorporates approximately 47 known abandoned mine workings. Of these, 13 are located within the proposed disturbance footprint and does not include the associated Woolgar township, mine camps, or stamper battery sites.

The names, where available, of the 47 places of interest are provided in Table 3, which also presents the planned level of disturbance. The location of the sites within the project site is displayed in Figure 4 and Figure 5. See also Figure 14 and Figure 15 for the historic mapping of the Woolgar Goldfield and relevant sites.

Two previous surveys (2001 and 2004-05) of the Woolgar Goldfield have identified some of the sites and features located within the project site (Denaro et al. 2001 and Taylor 2013, respectively). It should

¹ Woolgar’s reported winnings (1879-1980) = 31,506 troy ounces (Denaro et al. 2001:21); Charters Towers and Cape region reported winnings (1872) = 6,622,261 troy ounces (Bernays 1919).

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be noted that extreme weather over the years at Woolgar has resulted in washouts and land erosion resulting in the potential for artefacts to have been repositioned by drought and flooding of the Woolgar River. Further, removal of equipment from abandoned mine workings (either for use elsewhere or of a custodial nature) can result in misinterpretation of places and even the loss of the location altogether (Taylor 2013). Unfortunately, only detailed descriptions of two of the 47 sites have been published within Taylor (2013). One is located within the project site, that being Mowbray Mine. However, this site is located outside the proposed disturbance footprint. A summary of Mowbray's description is provided under Section 3.4.4.1. Denaro et al. (2001) have also provided a summary of the known features identified within the project site during their survey. These results have been incorporated into Table 3 below. Management measures for the residual heritage areas within the project site are provided in Section 6.

Table 3: Abandoned historic mine workings within project site

Site/Feature	Within the Proposed Disturbance Footprint (Y/N)	Denaro et al. 2001 Description
A1	Y	Remains of stone forge
Albion	N	Remains of stone forge
Aurora	N	Remains of stone forge
Authur's Shear	Y	Not described
Baby Grand	N	Remains of hotel and shed at Baby Grand mine
Beatrice	N	Not described
Big Reef	Y	Remains of stone forge
Big Vein #2	Y	Not described
Big Vein South	Y	Not described
Brilliant	N	Remains of stone forge. Hand-stoned retaining wall at shaft
Caledonia	Y	Not described
Chance	N	Not described
City of Exeter	N	Not described
Eaglets	Y	Remains of stone forge
Exeter Change	N	Not described
Federal	Y	Remains of stone forge
Homeward Bound	N	Not described
Ironclad	N	Not described
John Bright	N	Remains of stone forge. Hand-stoned retaining wall at shaft
John Bull	N	Hand-stoned walls of old explosives magazine
Just in Time	N	Remains of stone forge
Kingfisher	N	Not described
Live Yankee	Y	Not described
May Day	N	Not described
Mowbray	N	Remains of stone forge (x3). Hand-stoned retaining wall at shaft (x2). Main shaft, ruins of engine house, forge, winding drum (Further notes below)

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Site/Feature	Within the Proposed Disturbance Footprint (Y/N)	Denaro et al. 2001 Description
Mowbray NE Prospect / Who'd Have Thought It	N	Not described
Mystery	N	Remains of stone fireplace
New Moon	N	Not described
North Star	N	Not described
Piccaninny	N	Not described
Ruby	N	Remains of stone forge
Spinifex	N	Not described
Try Again	N	Not described
Unnamed 387082	Y	Not described
Unnamed 388082	N	Not described
Unnamed 390082	N	Not described
Unnamed 395079	N	Not described
Unnamed 398078	Y	Not described
Unnamed 400076	Y	Not described
Unnamed 402080	Y	Not described
Unnamed 402090	N	Not described
Unnamed 403090	N	Not described
Unnamed 403091	N	Remains of stone forge. Hand-stoned retaining wall at shaft
Unnamed 404093	N	Not described
Unnamed 404094	N	Not described
Yellow Jacket	N	Not described
Zenith	N	Not described

3.4.4.1. Mowbray

Mowbray Mine is located within a cluster of abandoned mine workings in the northern section of the project site and less than 2 km from the Woolgar River (Figure 7). It is not located within the proposed disturbance footprint. An old, unsealed track heading north-south links Mowbray Mine to the associated batteries along the Woolgar River to the north and to the township to the west. According to Denaro et al. (2001) and Taylor (2013), Mowbray Mine was one of the oldest, and one of the two deepest and most profitable mine workings across the whole Woolgar Goldfield (the other being Perseverance located between Middle and Top Camps, outside the project site). Denaro et al. (2001:91) suggest Mowbray was mined between 1882 and 1935.

A previous inspection of Mowbray undertaken by Taylor (2013) identified several historic mining features, including mullock heaps², collapsed shafts, earthen loading ramp, drystone walls and forges, building foundations, and winding gear (Figure 6). As identified during the previous survey, the mullocks were

² Macquarie Dictionary (2022) defines mullock heap as a mound of loose stones left over from gold mining operations. Refer Figure 17 for example from Woolgar Goldfield.

neatly stacked around the collapsed shafts, indicating the mine was one of the oldest in the field, and the earthen loading ramp on the eastern extremes of the mine area suggested a second skimming took place (Taylor 2013:7,115). In addition, Taylor (2013) proposes that the two prominent low drystone walls or foundations to the approaches to the main shafts mullock dumps were remains of a building's foundation, which housed the steam powered double winding and pump gear that was installed in 1899 (Appendix E). Prior to the shaft reaching the deeper level of 80 m, horse-powered whims were used at Mowbray from 1884. The resulting mullock heaps surrounding the various mine shafts and a series of drystone retaining walls within the mullock heaps could be seen as some form of platform for the winding gear. Part of this, a double winding drum, was discarded between the base of the mullocks and the shed foundations (Taylor 2013:118) (Appendix E).

Further, Taylor (2013) suggested that the remains of three drystone forges were strategically placed to allow the associated miners to re-sharpen their tools without having to traverse far from Mowbray Mine. It was noted that the forge east of the main shafts mullocks alongside the supported building foundation is the only one showing signs of having been used. The clinker and metal fragments on the surface of the forge's earthen core would seem to be of contemporary nature. Whereas the other two forge remnants, one alongside the shallow diggings to the south and the third to the west of Mowbray's main shaft, would seem unused (Taylor 2013:117) (Appendix E).

According to the results from Taylor 2013, the Mowbray Mine is archaeologically the most informative mine working site of the Woolgar and future intensive mining program/s would mean "losing the oldest and only clear archaeology of reef mining that spans the existence of Woolgar" (Taylor 2013:7, 214).

3.5. Historical Regional Themes

The AHC has produced a set of Historical Themes relevant to Australia that provide a historical context, within which the heritage values of a place can be examined (Australian Heritage Commission 2001). A number of themes are relevant to the region surrounding the project site. These include migration, mining infrastructure, and economic development. The themes are summarised in Table 4.

Table 4: Australian Heritage Commission (2001) historical themes for the region surrounding the project site

National Theme Groups	National and State Sub Themes	Local Themes/Application
2. Peopling Australia	2.4.5 Changing the face of rural and urban Australia through migration	Both Chinese and European workers populated the early goldfields
	3.6.2 Displacing Indigenous people	Use of native police at Woolgar to disperse the Aboriginal population.

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3. Developing local, regional and national economies	3.3 Surveying the continent	Exploration and settlement: William Landsborough and Fredrick Walker
	3.3.3 Prospecting for precious metals	Early gold prospecting at Woolgar
	3.4 Utilising natural resources	
	3.4.3 Mining	
4. Building Settlements, Towns and Cities	3.16 Struggling with remoteness, hardship failure	The difficulties of the Woolgar Goldfield due to remote conditions
	4.1 Planning urban settlements	Township of Woolgar
	4.1.1 Selecting township sites	

4. Significance Assessment

4.1. General Principles of this Assessment

In accordance with the *Burra Charter*, the assessment of historic heritage significance is made independent of any practical management considerations of the place or artefact. Likewise, the *Burra Charter* guides the significance assessment for the project and the criteria for entry onto the QH Act list (if applicable). As per Section 35 of the QH Act, the criteria used in assessing site or feature significance are as follows:

- a) the place is important in demonstrating the evolution or pattern of Queensland's (or local) history.
- b) the place demonstrates rare, uncommon or endangered aspects of Queensland's (or local) cultural heritage.
- c) the place has potential to yield information that will contribute to an understanding of Queensland's (or local) history.
- d) the place is important in demonstrating the principal characteristics of a particular class of cultural places.
- e) the place is important because of its aesthetic significance.
- f) the place is important in demonstrating a high degree of creative or technical achievement at a particular period.
- g) the place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons; or
- h) the place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's (or local) history.

A site or feature need only be significant in one of these criteria to be considered of heritage significance. In addition, a place may be entered in the QHR as an archaeological place if the place:

- is not a state heritage place; or
- has potential to contain an archaeological artefact that is an important source of information about Queensland's history.

It should be noted that this assessment does not adopt terms such as 'low', 'moderate' or 'high' as an indicator of the level of significance of a place. The place has been assessed as either reaching the threshold for local heritage significance or it has not.

All heritage places identified in the desktop research have been assessed against the above heritage criteria for potential world, national, state, and local heritage significance. Statements of heritage

significance (Section 4.2) and Heritage Impact (Section 5) have been provided for all sites that have been assessed as being of potential or actual local heritage significance.

4.2. Statement of Significance: Specific Features

Having regard to the review of the heritage registers, the historic aerials, archival research, and literature review, there are multiple heritage places of potential significance within the project site. These places of potential heritage significance include the Mowbray site, and 46 other abandoned mine workings associated with the Woolgar Goldfield. As there is very limited information relating to the 46 other abandoned mine workings within the project site, these have been grouped together within the heritage significance assessment.

A summary of the statement of significance for the potential heritage places is outlined in Table 5. A detailed assessment of significance for each of the potential heritage places is provided in Section 4.2.1 and 4.2.2.

Table 5: Heritage significance of sites within the project site

Within the Proposed Disturbance Footprint (Y/N)	Place Name	Description/Type	Heritage Significance	Registered
N	Mowbray	Remains of stone forge (x3), hand-built stone retaining wall at shaft (x2), main shaft, ruins of engine house, forge, winding drum	Potential Local Heritage Significance	Not currently registered
13 of the 46 identified sites are within the proposed disturbance footprint	46 other historic mine workings within the project site	Stone forge (x11), remains of a hotel and shed, hand-built stone retaining wall at shaft (x3), remains of stone fireplace, remains of hand-built stone explosives magazine, undescribed locations (x32)	Some heritage features may reach the threshold for being of local heritage significance	Not currently registered

4.2.1. Mowbray

The following statement of significance for the Mowbray site assumes that the features recorded by Denaro (2001) and Taylor (2013) are still located within the project site. In summary, the Mowbray site is of potential Local Heritage Significance.

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Table 6: Mowbray Site Statement of Significance

Criterion	QH Act Criteria	Meets Criteria (Y/N)	Details/Notes
A	The place is important in demonstrating the evolution or pattern of Queensland's (or local) history.	Potential (Local)	The Mowbray site is one of the oldest and deepest at the Woolgar Goldfield. It represents common mining practices within the region and throughout Queensland generally. On the evidence available, it does not appear to be an exceptional example within the region (refer to other abandoned mine workings nearby (Figure 2)), but likely has sufficient intact features does demonstrate the evolution of local gold mining.
B	The place demonstrates rare, uncommon or endangered aspects of Queensland's (or local) cultural heritage.	N	The features that comprise the Mowbray site represent common aspects of mining within the region and Queensland's cultural heritage. It does not represent rare, uncommon, or endangered aspects of state or local heritage.
C	The place has potential to yield information that will contribute to an understanding of Queensland's (or local) history.	Potential (local)	On the evidence available, the Mowbray site is not an exceptional example of early mining activities within the region. However, it may hold new information about mining within the local region.
D	The place is important in demonstrating the principal characteristics of a particular class of cultural places.	N	The Mowbray site represents common aspects of local cultural heritage and is not an exceptional example of mining techniques.
E	The place is important because of its aesthetic significance.	N	The Mowbray site does not contain any aesthetic significance.
F	The place is important in demonstrating a high degree of creative or technical achievement at a particular period.	N	The Mowbray site represents common aspects of mining within the Woolgar Goldfield, regionally, and within Queensland generally. It is not an exceptional example of creative or technical achievement.
G	The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	N	The Mowbray site is unlikely to contain a strong special association with community or cultural group for social, cultural, or spiritual reasons.
H	The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's (or local) history.	N	The Mowbray site does not have a special association with the life of a particular person, group, or organisation of importance in Queensland's (or local) history.

4.2.2. 46 Historic Mine Workings Within the Project Site

Forty-six other abandoned mine workings at Woolgar Goldfield are located within the project site (refer Table 3). Due to a lack of contemporary ground survey and historical data, it is not possible to determine the significance of each individual site at this time. The following statement of significance assumes that the sites and features recorded by Denaro (2001) and Taylor (2013) remain. It is recommended that a site inspection be conducted to complete the following significance assessment (refer Section 6). In summary, some of the heritage features at the 46 abandoned mine workings may reach the threshold for being of local heritage significance.

Table 7: 46 Historic Mine Workings Within Project Site Statement of Significance

Criterion	QH Act Criteria	Meets Criteria (Y/N)	Details/Notes
A	The place is important in demonstrating the evolution or pattern of Queensland's (or local) history.	Potential (local)	While Woolgar Goldfield represents over 100 years of mining activity, it represents common mining practices within the region and is not an exceptional example (refer to other abandoned mine workings nearby (Figure 2).
B	The place demonstrates rare, uncommon or endangered aspects of Queensland's (or local) cultural heritage.	N	It is unlikely the 46 abandoned mine workings within the project site represent rare, uncommon, or endangered aspects of state or local heritage.
C	The place has potential to yield information that will contribute to an understanding of Queensland's (or local) history.	Potential (local)	The 46 abandoned mine workings are unlikely to be an exceptional example of early mining activities within the region. However, they may hold information about mining within the local region.
D	The place is important in demonstrating the principal characteristics of a particular class of cultural places.	N	The Woolgar Goldfield represents common aspects of regional cultural heritage and is not an exceptional example of mining techniques.
E	The place is important because of its aesthetic significance.	N	It is unlikely the 46 abandoned mine workings located within the project site contain any aesthetic significance.
F	The place is important in demonstrating a high degree of creative or technical achievement at a particular period.	N	It is unlikely the 46 abandoned mine workings located within the project site represent rare or uncommon aspects of mining within the region and within Queensland generally. It is unlikely the sites are exceptional examples of creative or technical achievement.
G	The place has a strong or special association with a particular community or cultural group for social, cultural or spiritual reasons.	N	It is unlikely the mining infrastructure at the 46 abandoned mine workings within the project site have a strong special association with community or cultural group for social, cultural or spiritual reasons.

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H	The place has a special association with the life or work of a particular person, group or organisation of importance in Queensland's (or local) history.	N	The Woolgar Goldfield in general does not have a special association with the life of a particular person, group, or organisation of importance. It is unlikely the 46 abandoned mine workings located within the project site have a special association with any person, group, or organisation of importance with Queensland's (or local) history.

5. Impact Assessment

The desktop assessment noted that 47 known abandoned mine workings are located within the project site. It is expected the 47 abandoned mine workings within the project site only have limited potential for local cultural heritage significance. Thirteen of the known abandoned sites are located within the proposed project disturbance footprint. Table 3 lists the 47 abandoned mine workings within the project site and whether they are within the project's proposed disturbance footprint. Table 8 outlines the predicted impacts on the known historic mine workings located within the project disturbance footprint, described in Section 4.2.

Table 8: Predicted impacts upon identified cultural heritage sites within project site proposed disturbance footprint

Place Name	Heritage Significance	Impact Assessment
13 known abandoned mine workings and associated structures	Some mining infrastructure may meet the threshold of local heritage significance	Impact: the project activities will result in the disturbance and/or removal of any remnant heritage features associated with the historic abandoned mine workings. Recommendations: a field inspection of the 13 places should be undertaken to determine the current condition and significance (if any) of these sites prior to disturbance. Further management measures may also be considered dependent on the findings of the field inspections.

There is some possibility that significant heritage items, which have not been identified as part of this assessment, may exist within the project site. Cautionary mitigation measures are outlined in Section 6 that allow for the identification and protection of such items/sites, if found.

It is highly unlikely the planned project activities shall indirectly impact upon heritage sites or features outside the project site or proposed disturbance footprint.

6. Management Measures

It is recommended that the following management strategies be implemented for the project.

- Inspection and recording of the 13 known abandoned mine workings within the project disturbance footprint (as described in Section 5).
- Staff inductions.
- Find strategy.

These management strategies are discussed in the following sections.

Recommendation 1: Assessment of 13 Known Historic Mine Workings Within Proposed Disturbance Footprint

The desktop assessment noted that 47 known historic mine workings are located within the project site. Thirteen of the known historic sites are located within areas of planned disturbance. The 13 sites within the disturbance area have limited-to-no recorded details available for review. As such, not all of the known sites have been assessed for their heritage significance.

It is recommended a site inspection be undertaken to identify and document the condition and features of the 13 sites within the project site disturbance footprint. The purpose of the survey should be to determine if any of the known sites has further potential to contain any archaeological significance that are an important source of information about Queensland's history, in accordance with the QHA Criteria.

Additional management recommendations may be required to address historic significance based on the results of the site inspection.

Recommendation 2: Staff Inductions

The General Manager and all staff or contractors of the Proponent who will be responsible for undertaking initial clearance and ground-breaking activities will be informed of their obligations under Section 89 of the QH Act to report to the DES any archaeological items that may constitute an important source of information about an aspect of Queensland's history. The Finds Strategy will be implemented if any potential heritage items are identified.

Recommendation 3: Finds Strategy

In the event that any staff or contractors of the Proponent suspect that they have uncovered an archaeological object that may constitute a non-Aboriginal important source of information about an aspect of national or state history, the following measures will apply:

- a) disturbance of any areas immediately surrounding the Find will cease immediately;
- b) if it is considered that the Find is at risk of being inadvertently damaged by construction activities, a temporary fence will be erected around the Find;
- c) DES will be notified;
- d) a suitably qualified archaeologist will be engaged to inspect the Find and determine its significance; and
- e) should the Find be of state significance, appropriate mitigation strategies will be developed in consultation with appropriate DES officers.

Recommendation 4: Archaeological Standards

In the event that archaeological monitoring or excavations are required as a result of implementing the Find Strategy (Strategy 4), the standards outlined in the DES Guidelines Archaeological Investigations (DES, 2013) will be applied (or any version of the DES guidelines that may supersede this document).

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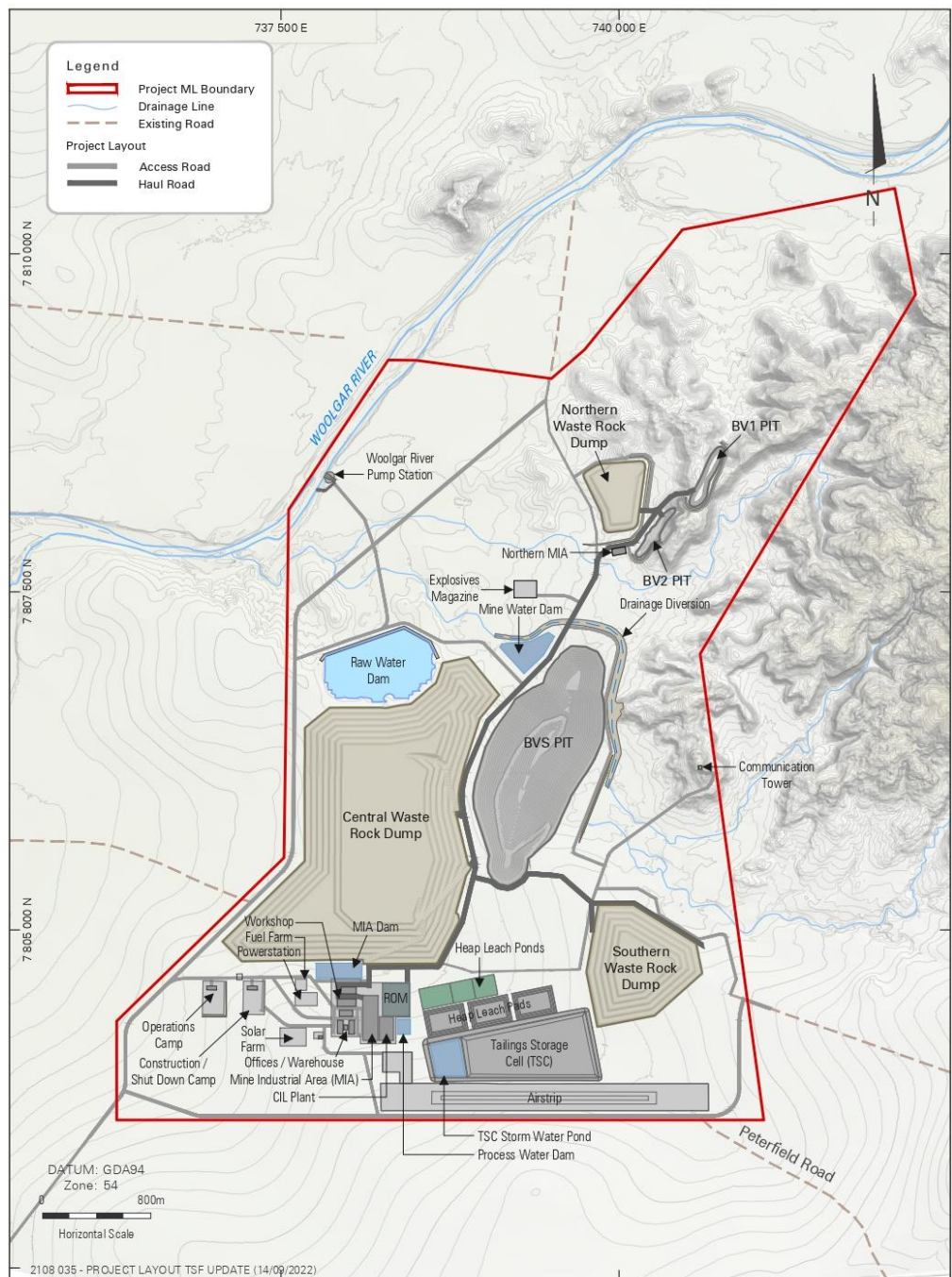
BIG VEIN SOUTH GOLD PROJECT



Location Plan

FIGURE 1

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BIG VEIN SOUTH GOLD PROJECT



Project Layout

FIGURE 2

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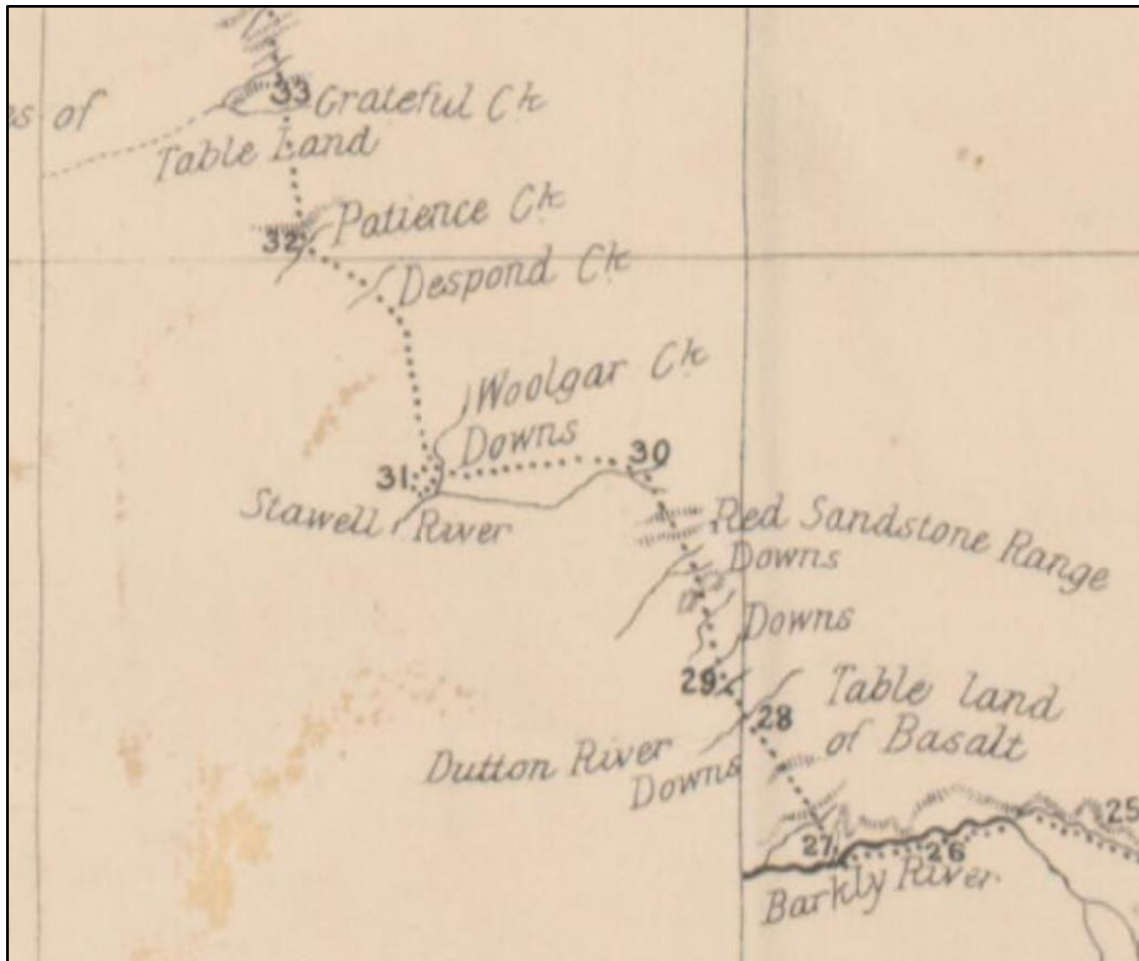


Figure 1: Walker and Landsborough Routes: closeup of Woolgar Creek and Downs. Melbourne:
Lithographed at the Dept. of Lands & Survey, April 10th 1862

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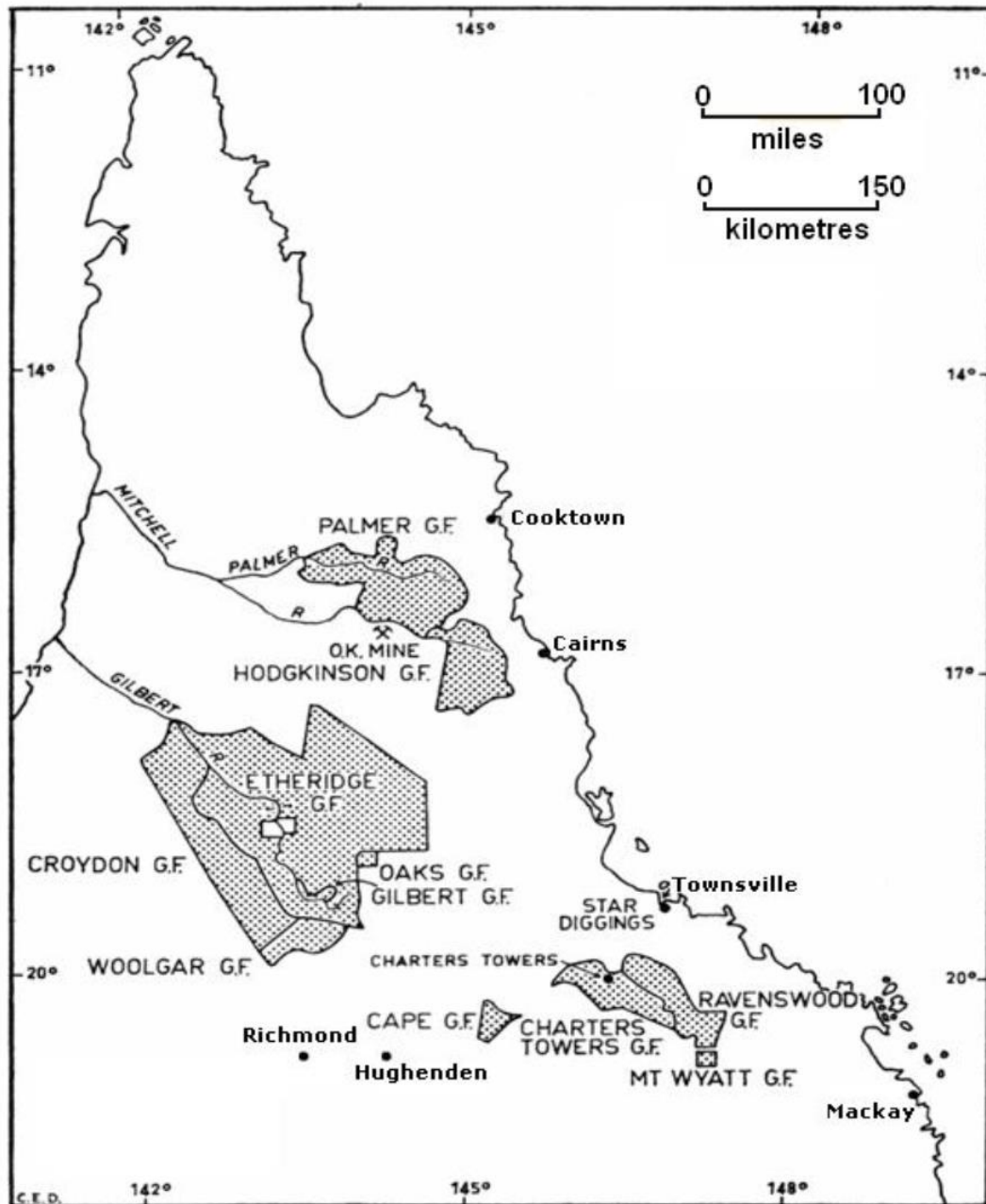


Figure 2: Major goldfields of Far North Queensland (Bolton 1972:49 in Taylor 2013:1)

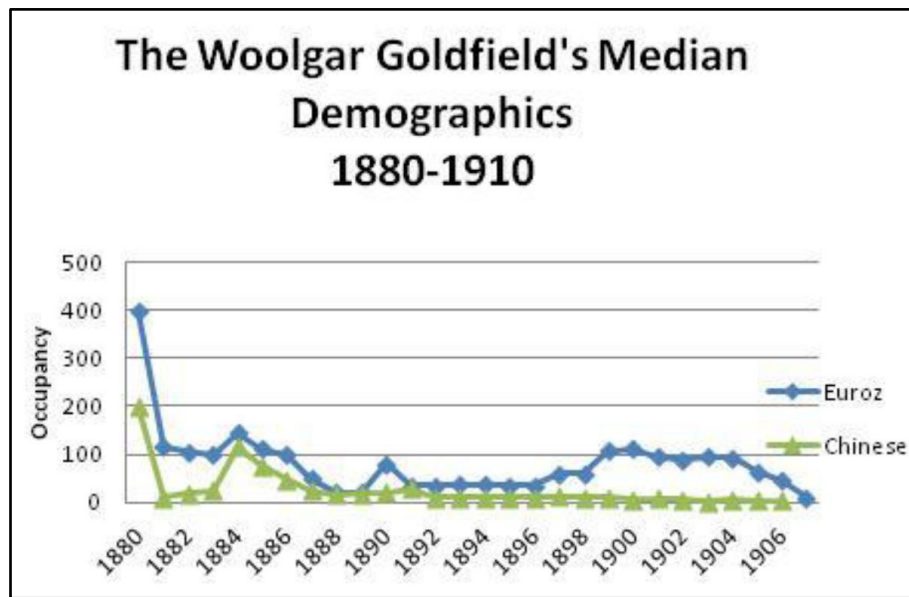


Figure 3: Estimated Woolgar Goldfield's demographics depicting European and Chinese occupancy
(after Denaro et al. 2001 in Taylor 2013:94)

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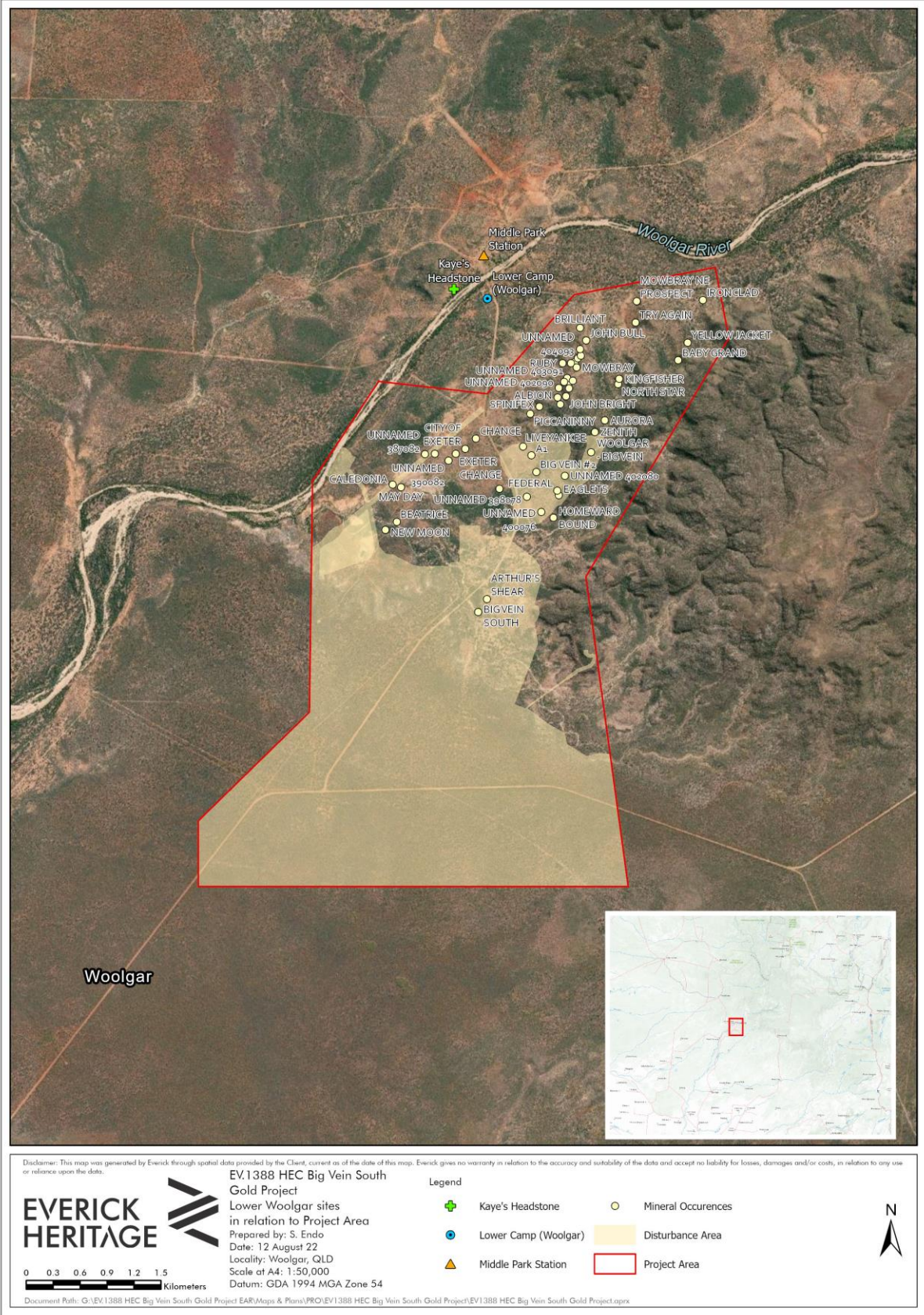


Figure 4: Overview of Lower Woolgar sites in relation to the project site

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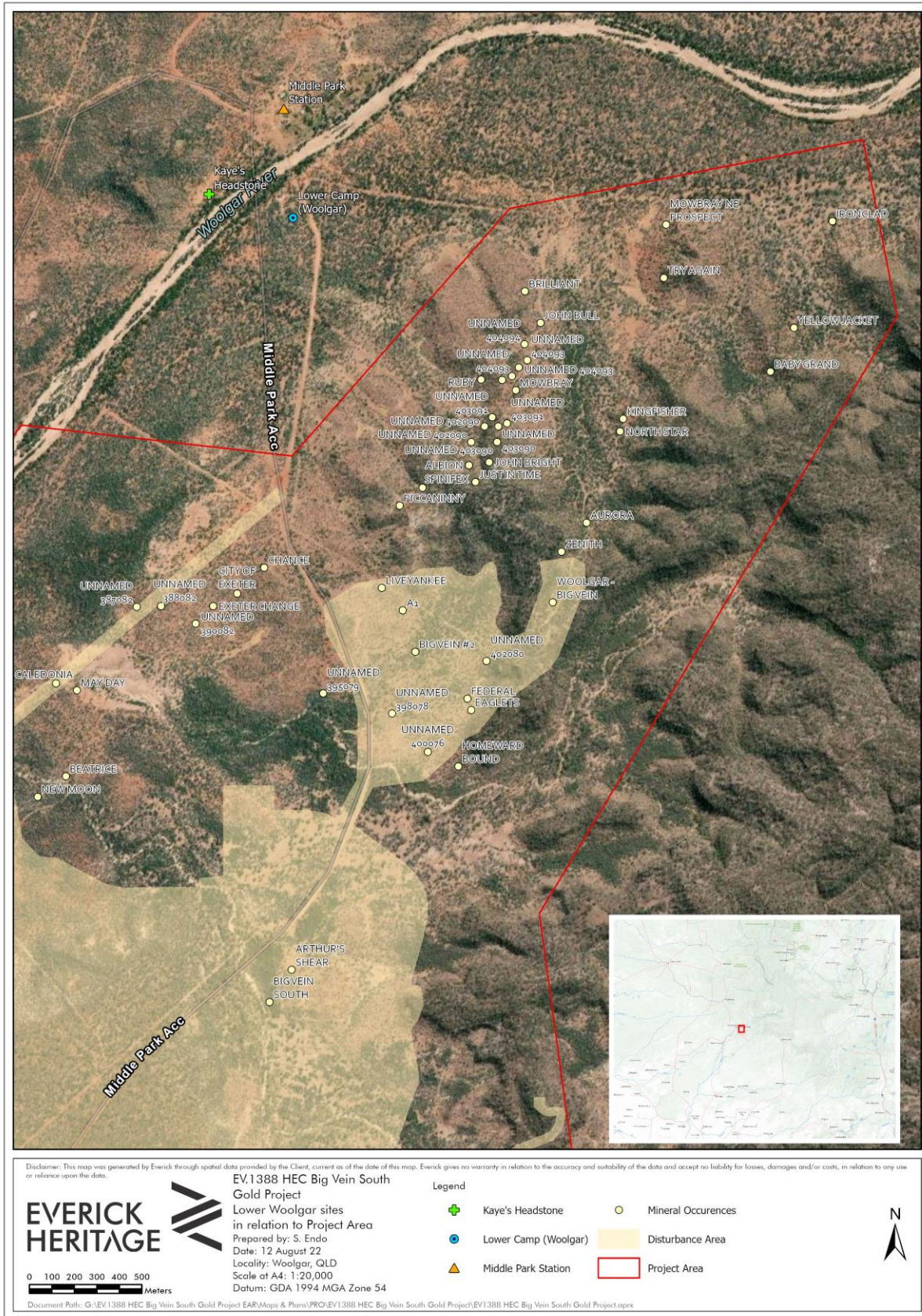


Figure 5: Lower Woolgar sites in relation to the project site

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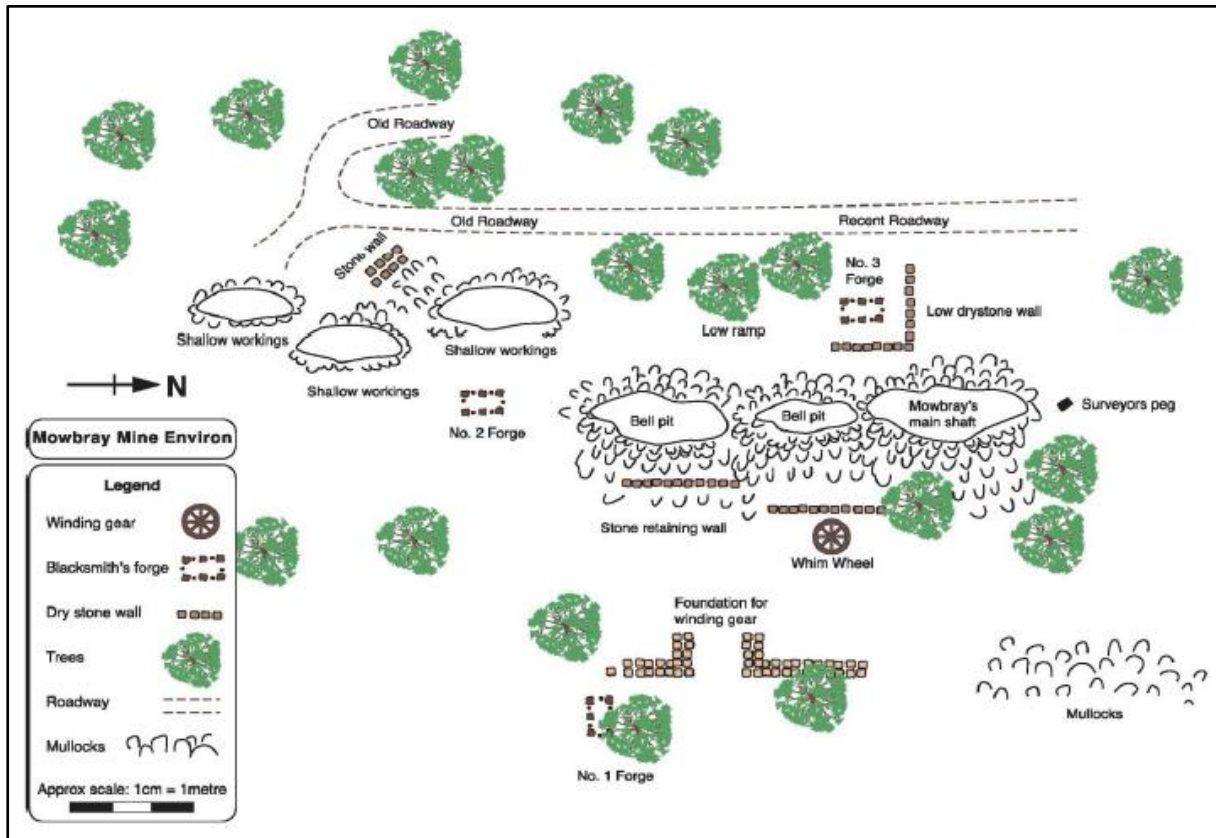


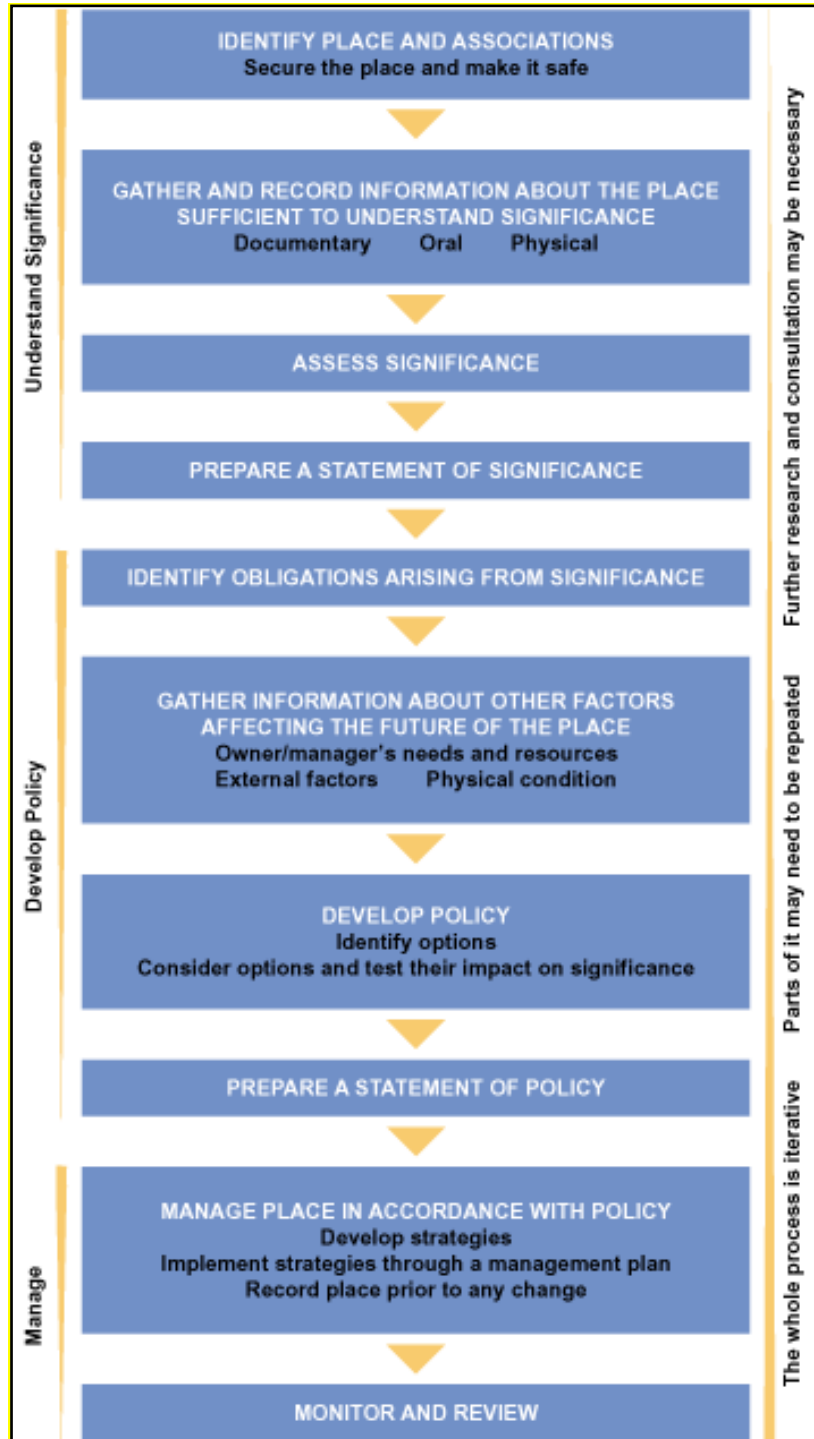
Figure 6: The Mowbray Mine site map (drawn by Taylor 2005 in Taylor 2013)

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Figure 7: Mowbray Mine in relation to project site

Appendix A: The Burra Charter Assessment Process



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Appendix B: 1967 Historic Aerial of the Project

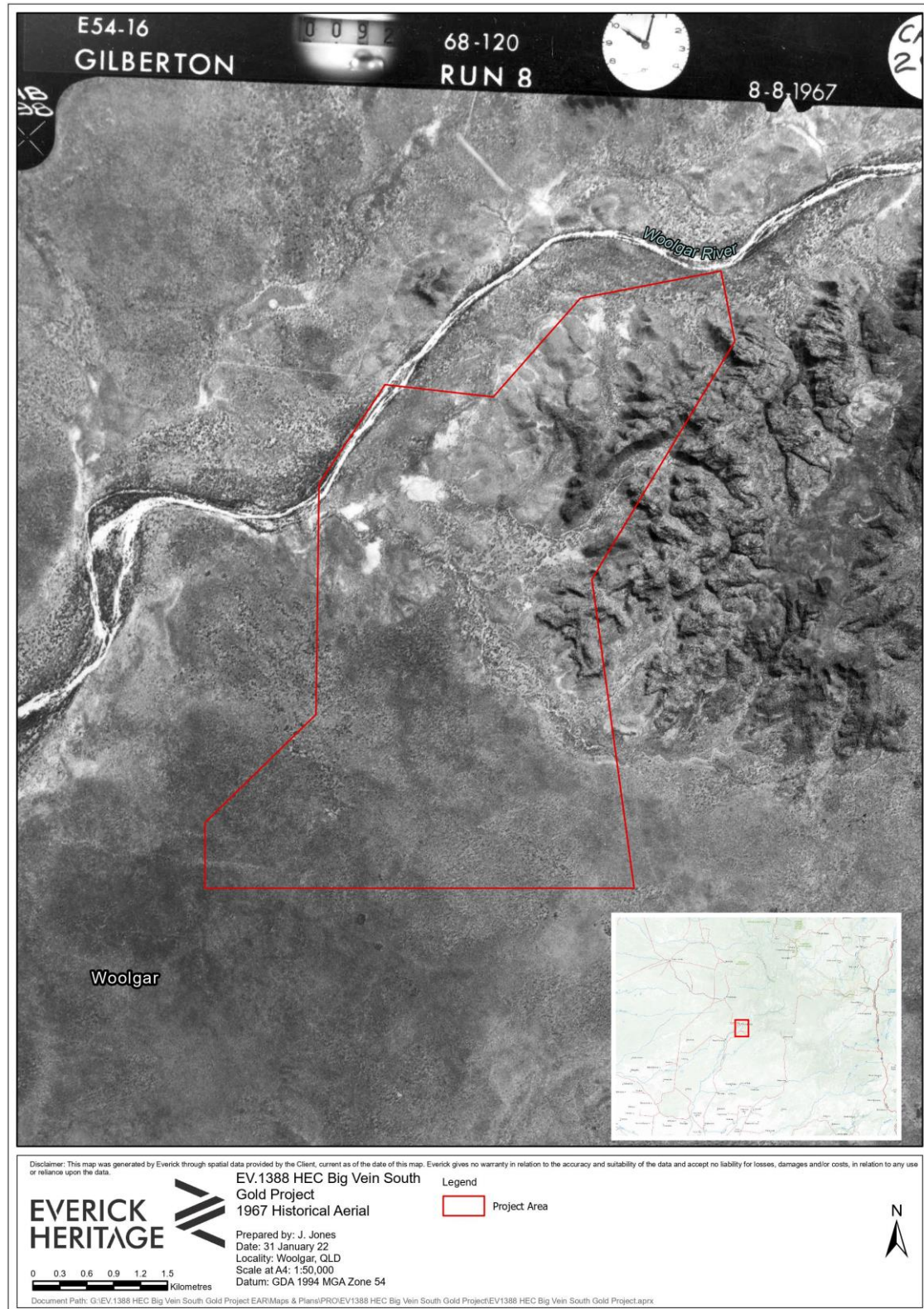


Figure 8: 1967 historic aerial of project site

Appendix C: Historic Maps and Plans

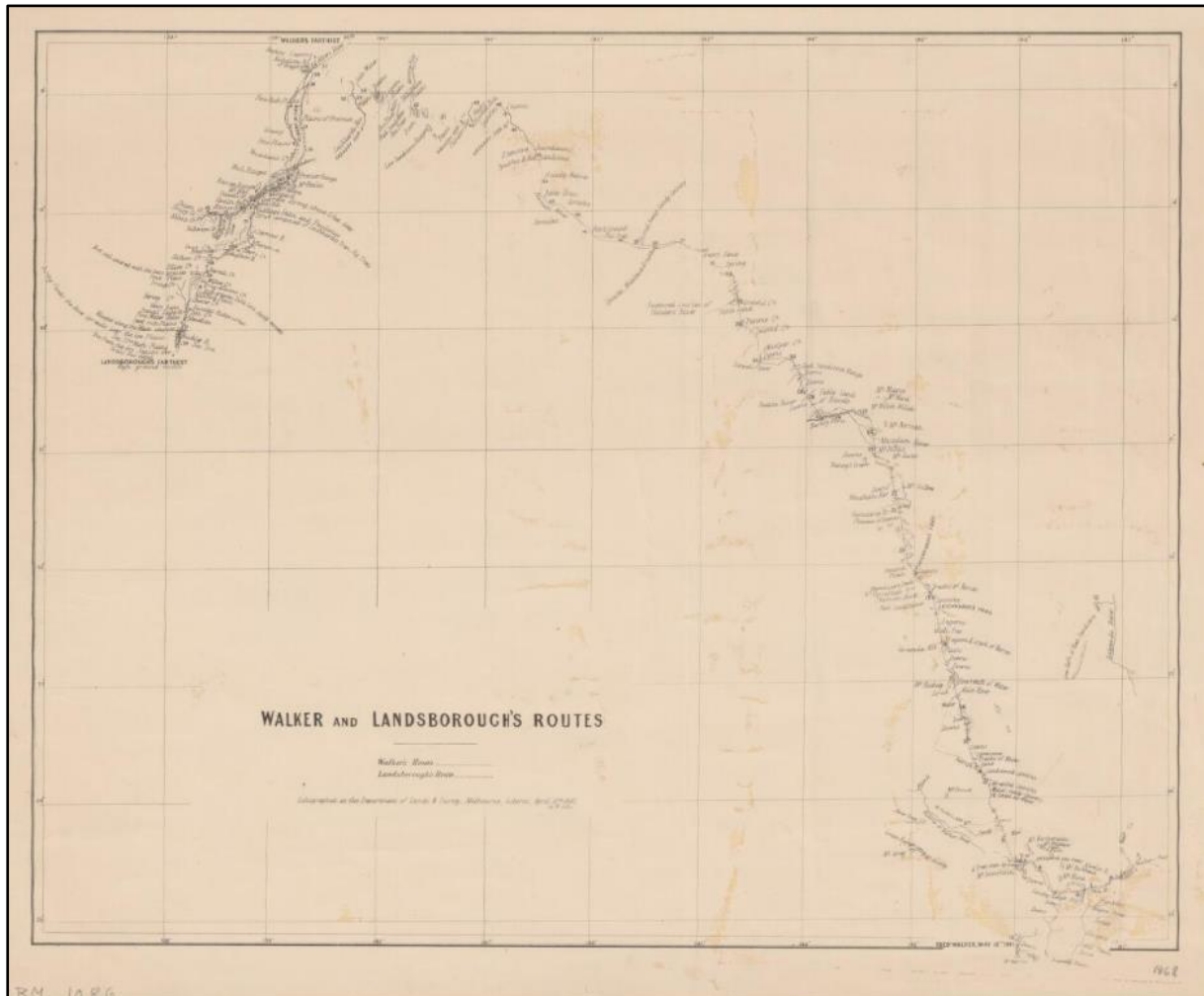


Figure 9: Walker and Landsborough Routes. Melbourne: Lithographed at the Dept. of Lands & Survey, April 10th 1862

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Figure 10: Map of Queensland showing railway lines and Cobb's Coach Routes 1883 – closeup of North Queensland region (QSA Series ID1924 / IID629989)

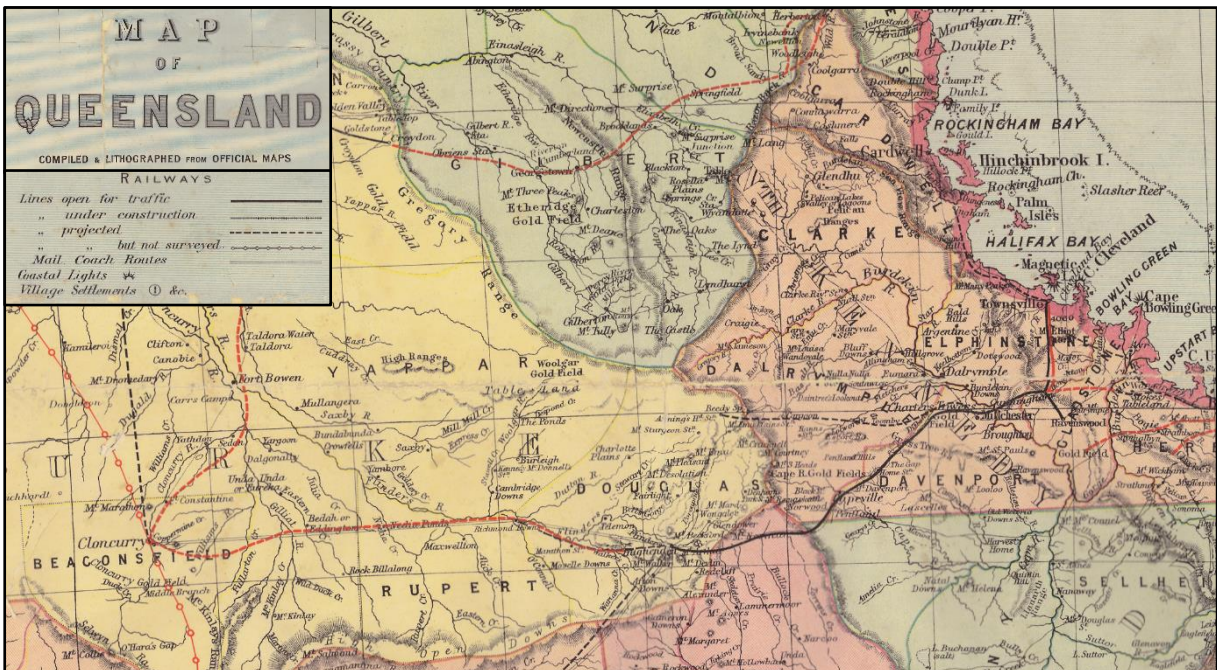


Figure 11: Map of Queensland showing counties, towns, and coach routes 1896 – closeup of North Queensland (QSA IID629746)

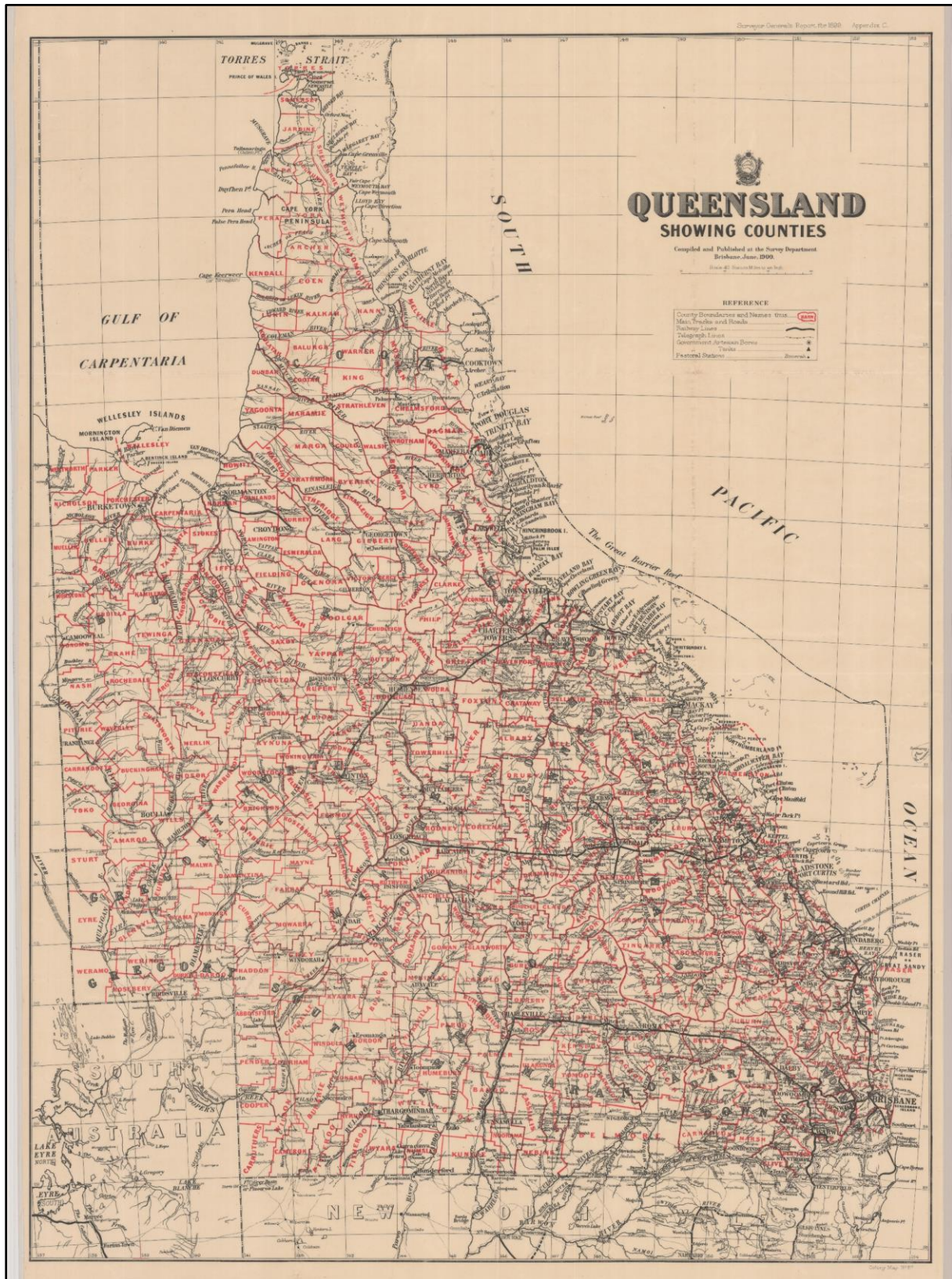


Figure 12: Map of Queensland showing Counties 1900 showing Northern, Central, and Southern Railways

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Figure 13: Map of Queensland showing Counties 1900 – closeup of Northern Queensland (DNRME)

Appendix D: Woolgar Goldfield

Table 9: Overview of Woolgar Goldfield history, adapted from Denaro et al. 2001

Date	Denaro et al. 2001 Detailed History Summary
1879-1880	Discovery and Gold Rush
1881	Reef mining commences
1882	A new Goldfield proclaimed
1883	Middle Camp established
1884	Crushing mills established
1885	Mill Workers strike over Chinese miners
1886	Conflicting reports on Goldfield's future
1887	Decline commences
1888-1889	A "dormant" Goldfield
1890	Police Station and Court of Petty Sessions closed
1891	Soapspar lease forfeited; Crapp Brothers move battery to Middle Camp
1892	Warden Haldane visits field; cattle raising now more significant than mining
1893-1895	Severe decline
1896	Goldfield almost deserted
1897	Gold discovered at Hampstead Creek; Woolgar Goldfield boundaries altered
1898	No progress
1899	Revival imminent; steam-powered mine machinery arrives
1900	Mowbray Gold Mining Ltd is registered
1901	First public school opened
1902	Best gold production since 1886, despite severe drought
1903-1906	Last years with > 10 kg annual gold production; Lower Woolgar School closes
1907-1913	Decline
1914-1916	First World War
1917-1921	No production
1922	First inspection by a Government Geologist
1923-1928	No production reported; drought conditions prevail
1929	Minor alluvial production
1930-1931	Drought continues; Commonwealth Mines Preliminary Syndicate Ltd gains concession area
1932	Opening up of the Old Ironclad Mine leads to revival
1933	Department of Mines battery erected; revival continues
1934	Flood; Department of Mines battery ceases operations; Peter Pan battery commences public crushings
1936	Aurora Battery commences crushing; concession area cancelled
1937	Aurora United main producer; Government Geologist Keid inspects goldfield
1938	Identity battery reconditioned; Peter Pan battery forfeited
1939	Crapp Brothers' battery refurbished
1940	Miners leave for Second World War
1941	Government Geologist Morton inspects Perseverance Mine
1942	Goldfield abandoned
1943-1945	Second World War; no production
1946-1949	Perseverance Mine reopened but no production; Barns commences prospecting at Soapspar
1950-1953	Little activity on field
1954-1961	Severe decline
1962-1988	Last of the Woolgar miners

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1989-2001

Exploration continues

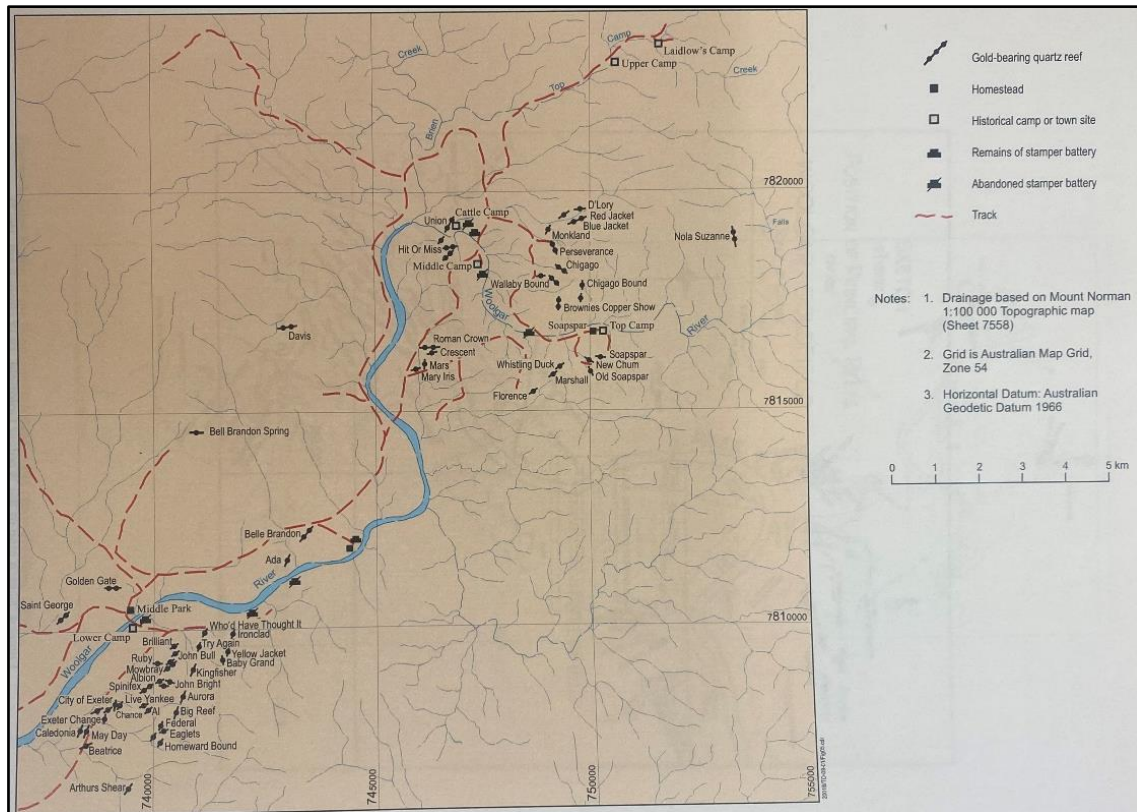


Figure 14: Historic mines and sites Woolgar Goldfield (Denaro et al. 2001:8)

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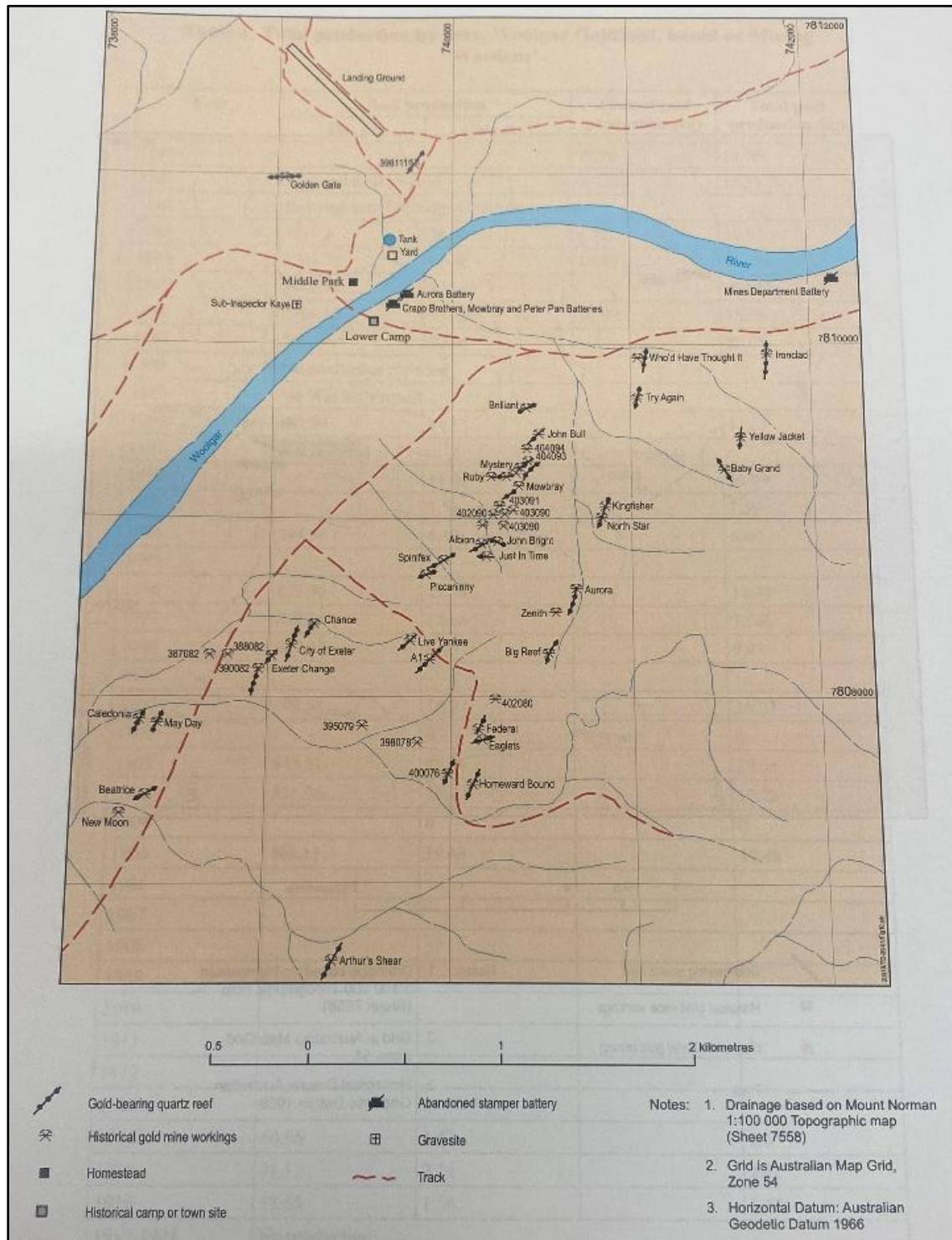


Figure 15: Historic mines and sites – Lower Camp (Denaro et al. 2001:13)

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Date	Mine	Troy Ounces
1867	Gympie	3,308,158
1870	Ravenswood	865,054
1872	Charter Towers & Cape	6,622,261
1873	Palmer	1,329,042
1875	Hodgkinson	229,706
1886	Croydon	766,996
1886 *	Various Small Mines	825,182
1888	Rockhampton & Mt Morgan	4,565,624
1888	Eidsvold	97,679
1893	Coen	51,255
1900	Hamilton	45,547
1909	Chillago	18,504
1869/09 ^	Various Small Mines	605,797
*	Cloncurry, Calliope, Clermont, Paradise, Normanby & others	
^	Etheridge, Woolgar & Oaks	

Figure 16: Queensland's principal gold mining production (Bernays 1919 in Taylor 2013)

Appendix E: Mowbray Archive



Figure 17: The Mowbray Mine's mullock heap with drystone retaining wall (Taylor 2005 in Taylor 2013)



Figure 18: Mowbray eastern side showing signs of modern skimming (Taylor 2005 in Taylor 2013)

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Figure 19: Modern loading ramp east of the Mowbray mine (Taylor 2005 in Taylor 2013)



Figure 20: No. 1 drystone forge with metalwork remnants (Taylor 2005 in Taylor 2013)

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Figure 21: No. 2 drystone forge (Taylor 2005 in Taylor 2013)



Figure 22: No. 3 drystone forge (Taylor 2005 in Taylor 2013)

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Figure 23: Possible platform for winding gear on top of mullocks (Taylor 2005 in Taylor 2013)



Figure 24: Mowbray mine discarded double winding drum (Taylor 2005 in Taylor 2013)