



TOMINGLEY

GOLD OPERATIONS PTY LTD

(A wholly owned subsidiary of Alkane Resources Ltd)

ABN 53 149 040 371



Tomingley Gold Extension Project

Historic Heritage Assessment Report

Part 11a

Major Project Application No. PA 09_0155



Prepared by



OzArk Environment & Heritage Pty Ltd

December 2021

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View of the Rosewood Homestead.

HISTORIC HERITAGE ASSESSMENT REPORT

TOMINGLEY GOLD EXTENSION PROJECT

TOMINGLEY, NSW

DECEMBER 2021

Report prepared by
OzArk Environment & Heritage
for Tomingley Gold Operations Pty Ltd

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ABBREVIATIONS AND GLOSSARY

DPIE	NSW Department of Planning, Industry and Environment
EIS	Environmental Impact Statement. A required document for major projects documenting all potential impacts to the environment, including heritage, that may arise due to the development.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
Heritage Act	<i>Heritage Act 1977</i> . Provides for the protection and conservation of historical places and objects of cultural heritage significance and the registration of such places and objects.
Heritage Council	The Heritage Council makes decisions about the care and protection of heritage places and items that have been identified as being significant to the people of NSW.
Heritage NSW	Government department tasked with ensuring compliance with the Heritage Act. Heritage NSW is part of the Department of Premier & Cabinet.
HHMP	Historic Heritage Management Plan
LEP	Local Environmental Plan
SEARs	Secretary's Environmental Assessment Requirements issued by the DPIE.
SHR	State Heritage Register. A register of places in NSW that are protected by the Heritage Act.
SSD	State Significant Development

EXECUTIVE SUMMARY

OzArk Environment & Heritage (OzArk) has been engaged by RW Corkery & Co Pty Limited on behalf of Tomingley Gold Operations Pty Ltd (the Applicant) to complete a *Historic Heritage Assessment Report* (HHAR) for the proposed Tomingley Gold Extension Project (the Project) for the San Antonio Roswell deposits (SAR).

The Project is located immediately to the south of the village of Tomingley in central western NSW. The Project is located within the Narromine Local Government Area.

The purpose of the assessment is to form part of an *Environmental Impact Statement* (EIS) being prepared by RW Corkery & Co Pty Limited to accompany an application for development consent under Division 4.1 and 4.7 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the Project.

Desktop database searches completed prior to the survey showed that no listed historic heritage items are located within or near to the Study Area. However, review of the history of Tomingley indicated that three historic heritage items would be located within the Study Area: the village of McPhail, the McPhail mine, and the Rosewood Trotting Stud.

The field survey of the Study Area was completed over nine days across four mobilisations. Five historic heritage items were identified during the survey including the village of McPhail, the McPhail Mine, and the Rosewood Stud, the Eulinda Park homestead, and the Old Thornycroft ruins.

The Eulinda Park homestead and the Old Thornycroft ruins were assessed as having no significant historic values under the current Heritage NSW guidelines and the Burra Charter, while the village of McPhail, the McPhail Mine, and the Rosewood Stud were assessed as having local heritage values. In addition, areas of archaeological potential identified during the survey are limited to a small area in the northwest of the McPhail mine extent area and at the village of McPhail.

Recommendations concerning the historic values within Study Area are as follows.

1. Following development consent of the Project, the Applicant would develop a *Historic Heritage Management Plan* (HHMP) which would be agreed to by the Department of Planning, Industry and Environment (DPIE) (with input from Heritage NSW). The HHMP would also include an unanticipated finds protocol and unanticipated skeletal remains protocol. An example of an unanticipated finds protocol for historic items and/or human skeletal materials is provided in **Section 7.3.1**.
2. Should development consent for the Project be granted, management strategies to manage and mitigate the impact of the Project would include:

- a. McPhail mine: The steel infrastructure within the 30 m Proposed Limit of Disturbance buffer should either be avoided or moved to an area where it would not be harmed as outlined in **Section 7.2.1**. If relocation is required, this should take place prior to any Project-related ground disturbance activities commencing in the vicinity of the item.
 - b. Village of McPhail: Archaeological investigations within the impact footprint of the Newell Highway realignment should be undertaken prior to Project-related ground disturbance activities commencing in the vicinity of the item as outlined in **Section 7.2.2**.
 - c. Rosewood Trotting Stud: This report, including the SOHI presented in **Section 6**, should be forwarded to Narromine Shire Council prior to the demolition of the item, to allow consideration of the potential impacts to an item with local heritage significance (Section 5.10 of the LEP). Photographic recording of the homestead and associated buildings should be completed prior to any Project-related ground disturbance activities commencing in the vicinity of the item.
 - d. Eulinda Park Homestead: No management measures are warranted for the item as it has been assessed as having no heritage significance and it would not be impacted by the Project.
 - e. Old Thornycroft ruins: The item would be totally impacted by the Project, however, no management measures are warranted as it has been assessed as having no heritage significance.
3. All land-disturbing activities must be confined within the assessed Study Area or the approved TGO Mine Site. Should Project impacts change such that the area to be impacted is outside of the assessed Study Area or the approved TGO Mine Site, then additional assessment may be required.

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1 INTRODUCTION

1.1 DESCRIPTION OF THE PROJECT

OzArk Environment & Heritage (OzArk) has been engaged by RW Corkery & Co Pty Limited on behalf of Tomingley Gold Operations Pty Ltd (the Applicant) to complete a *Historic Heritage Assessment Report* (HHAR) for the proposed Tomingley Gold Extension Project (the Project) for the San Antonio and Roswell deposits (SAR).

The Project is located immediately to the south of the village of Tomingley in central western NSW (**Figure 1-1**). The Project is located within the Narromine Local Government Area on land zoned RU1 – Primary Production and SP2 – Infrastructure, under the *Narromine Local Environmental Plan 2011* (LEP).

The purpose of the assessment is to contribute to the *Environmental Impact Statement* (EIS) being prepared by RW Corkery & Co Pty Limited to accompany an application for development consent under Division 4.1 and 4.7 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for the Project.

1.2 BACKGROUND

The Applicant is the operator of the approved Tomingley Gold Operations (TGO) and is a subsidiary company of Alkane Resources Ltd (Alkane). The TGO mine (TGO Mine Site) is located immediately south of the village of Tomingley and immediately north of the proposed SAR Mine Site (**Figure 1-1**).

TGO operates under State Significant Development (SSD) consent MP 09_0155 originally granted on 24 July 2012. MP 09_0155 has been modified five times, most recently on 5 May 2021. Approved TGO mining operations include:

- Mining of four open cuts, with underground mining under three of the approved open cuts, namely Wyoming 1, Caloma 1 and Caloma 2 Open Cuts, until 31 December 2025.
- Placement of waste rock into three out-of-pit waste rock emplacements and two in-pit waste rock emplacement, namely the Wyoming 3 and Caloma 2 Open Cuts. It is noted that Waste Rock Emplacements 2 and 3 are complete, and with the exception of a small area on the upper surface of Waste Rock Emplacement 3, are under rehabilitation.
- Construction and use of a carbon-in-leach processing plant and associated infrastructure, including:
 - a run-of-mine (ROM) pad;
 - a crushing and screening circuit;
 - a ball mill and grinding circuit; and
 - a cyanide leaching and gold extraction circuit.
- The approved processing plant also includes workshops, ablutions facilities, stores, office area and car parking. The maximum approved rate of processing is 1.5 million tonnes per annum (Mtpa).
- Construction and use of Residue Storage Facility 1 (to Cell 1, Stage 9) for the storage of process residues, with a maximum approved elevation of 291.5 metres (m) Australian Height Datum (AHD).
- Construction and use of Residue Storage Facility 2 (to Stage 2) for the storage of process residues, with a maximum approved elevation of 272.0 m Australian Height Datum (AHD).
- Construction and use of infrastructure required for the TGO Mine, including:
 - dewatering ponds;
 - a water pipeline, from a licensed bore located approximately 7 kilometres (km) to the east of Narromine;
 - various internal and external roads, including an underpass beneath the Newell Highway and upgrades to Tomingley West Road and associated intersections;
 - a transformer and electrical distribution network within the TGO Mine Site;

- various clean and dirty water management structures; and
- fenced biodiversity offsets and vegetated amenity bunds.

Construction of the TGO Mine commenced in February 2013 with open cut mining commencing in November 2013. Underground mining development from a portal in the Wyoming 1 Open Cut commenced in January 2019, with ore production from stopes commencing in December 2019.

Table 1-1 presents the publicly available production figures for the TGO Mine. In summary, approximately 7.5 Mt of ore has been mined and processed. The maximum annual rate of processing was 1.14 Mt in 2015, less than the approved maximum rate of processing of 1.5 Mtpa.

Table 1-1: Previous Production Statistics.

Production	Units	Financial Year								Total
		2014	2015	2016	2017	2018	2019	2020	2021	
Waste rock mined	bcm	4 635 684	5 730 661	6 199 820	7 679 110	3 165 414	657 647	50 473	1 218 779	29 337 588
Ore mined	t	545 550	1 286 291	1 285 454	1 222 868	1 589 811	400 187	335 879	778 236	7 464 276
Ore milled	t	359 096	1,140 704	1 096 105	1 087 983	1 092 602	998 703	838 743	928 531	7 542 467
Gold produced	oz	20 711	69 612	67 812	68 836	78 533	48 969	33 507	56 958	444 938

Source: Alkane Resources Ltd – Annual Reports for each financial year

The TGO Mine operates up to 365 days per year and 24 hours per day using two 12 hour shifts. As at December 2021, the TGO Mine employed 230 full time equivalent positions.

All TGO activities approved under MP 09_0155 would continue under any new development consent granted, with MP 09_0155 to be surrendered following receipt of the new development consent and all required approvals for the Project.

1.3 PROPOSED WORK

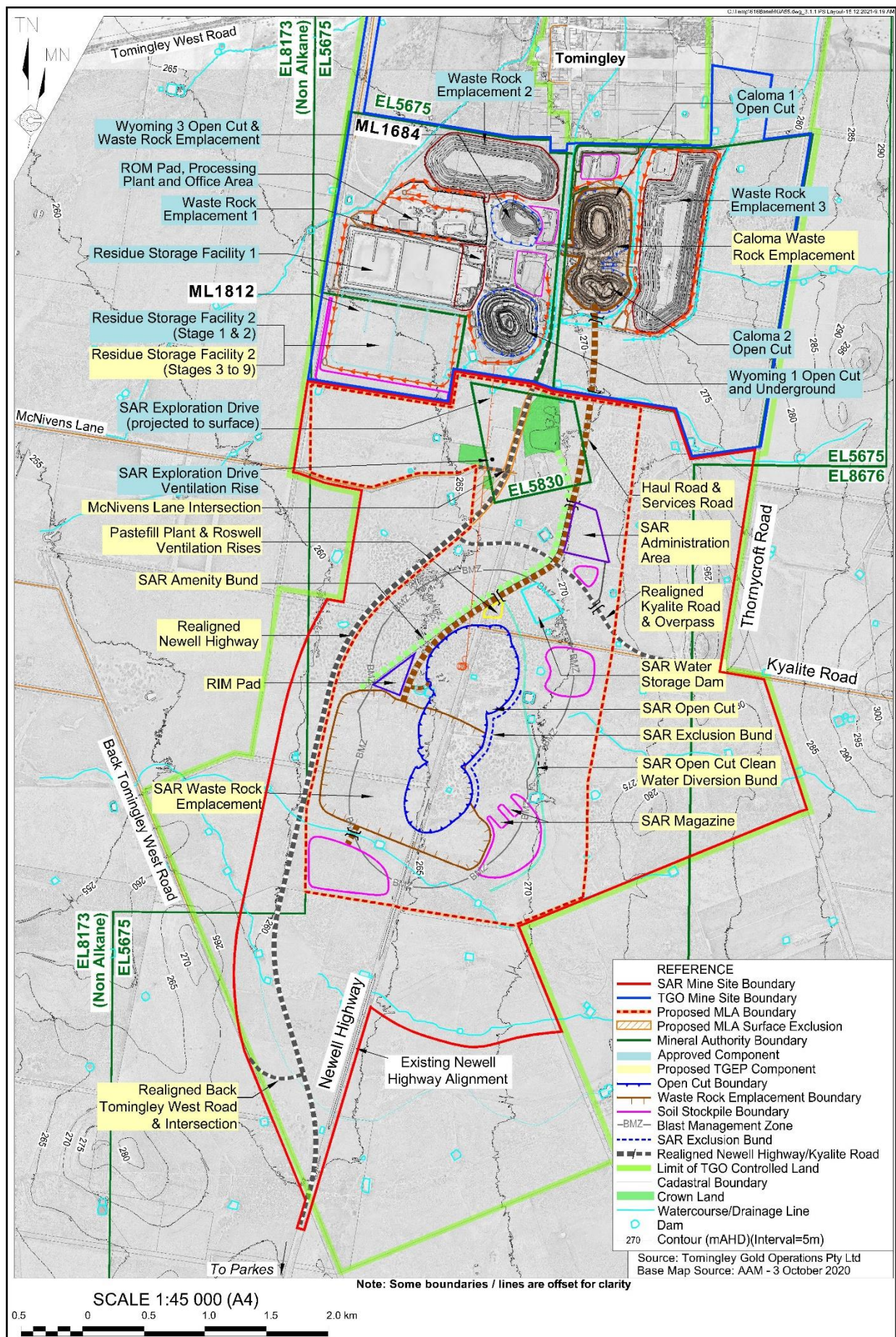
The Project comprises two components as follows:

- Approved TGO mining operations (**Figure 1-2**). These activities are undertaken in accordance with development consent MP 09_0155. The approved activities would continue under any new development consent, with MP 09_0155 to be surrendered following receipt of the new development consent and all required approvals for the Project. The approved activities include the following.
 - Extraction of ore and waste rock from four open cuts, with underground mining beneath three of those open cuts.
 - Construction of three out-of-pit waste rock emplacements and one in-pit emplacement.
 - Construction and use of various haul roads, a ROM pad and associated stockpiles.

- Construction and use of a Processing Plant to process up to 1.5 Mtpa.
- Construction and use of two residue storage facilities comprising Residue Storage Facility 1 (to Stage 9 or a maximum elevation of 286.5 m AHD) and Residue Storage Facility 2 (to Stage 2 or a maximum elevation of 272 m AHD).
- Construction and use of ancillary infrastructure.
- The proposed SAR operations and additional or modified TGO operations, including the following (**Figure 1-2**).
 - Realigned Newell Highway and Kyalite Road and associated intersections with Back Tomingley West Road and McNivens Lane and Kyalite Road overpass.
 - The SAR Open Cut and Underground Mine.
 - Construction of two waste rock emplacements, namely the Caloma and SAR Waste Rock Emplacement and backfilling of the associated open cuts.
 - The SAR Amenity Bund, Haul Road and Services Road between the SAR Open Cut and the Caloma 2 Open Cut.
 - Processing of ore from the SAR deposits using the approved Processing Plant at a maximum rate of 1.75 Mtpa.
 - Increased capacity for Residue Storage Facility 2, from Stage 2 to Stage 9, with a maximum elevation of 286 m AHD.
 - Associated surface and underground activities and infrastructure.

In addition, the Project would include an extension of the approved mine life, from 31 December 2025 to 31 December 2032.

Figure 1-2: Proposed work showing impact footprint.



1.4 STUDY AREA

The Study Area is located to the south of the village of Tomingley, approximately 7.5 km north of Peak Hill and 38 km south of Narromine.

The Study Area encompasses approximately 1,950 hectares (ha) of flat to gently undulating land located to the south of the TGO Mine Site, on either side of the Newell Highway (**Figure 1-3**).

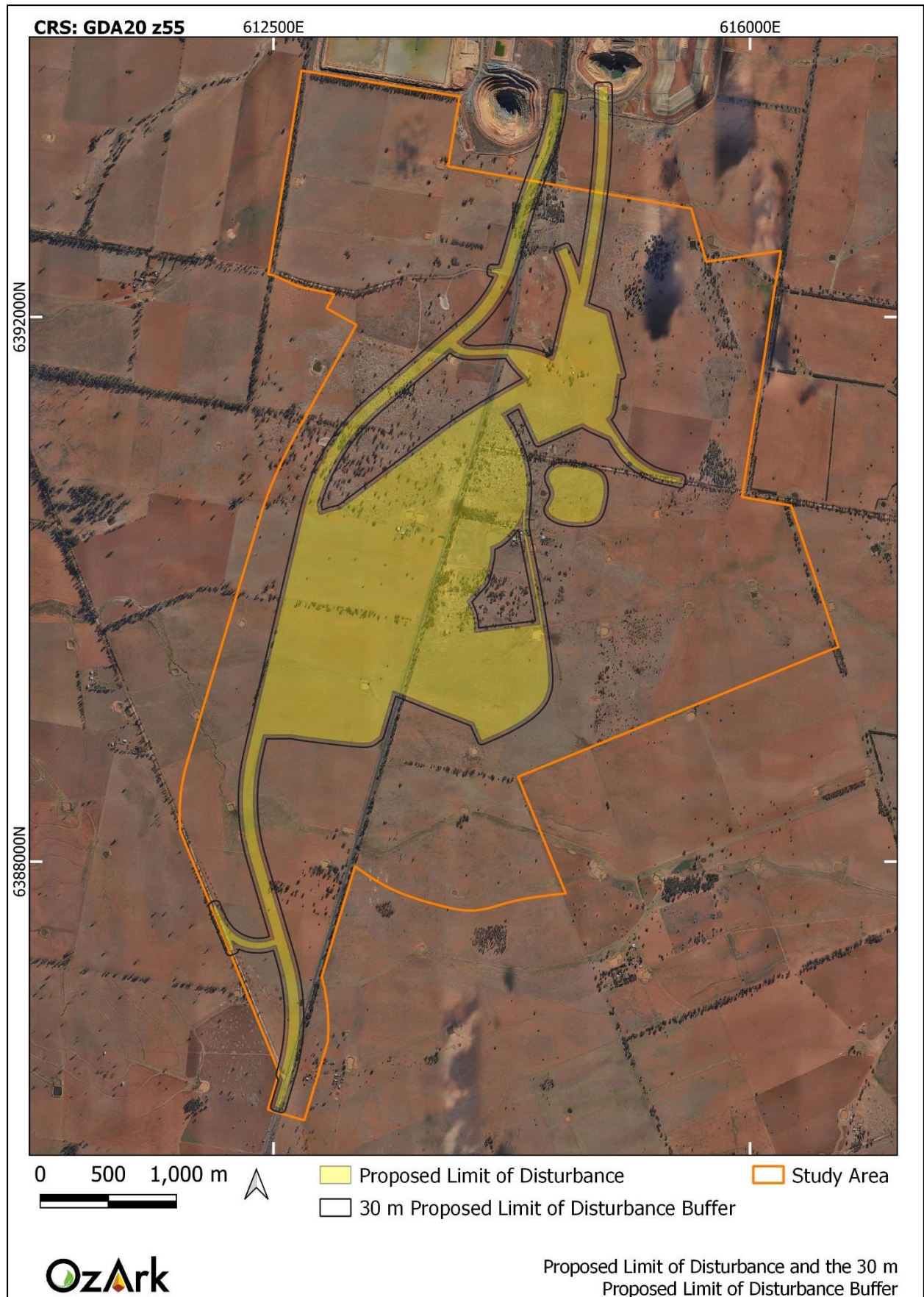
The land is currently utilised for agricultural purposes as it has been since colonial settlement of the area. There is also a history of gold mining in the area associated with the former McPhail Mine and the current TGO Mine Site.

1.5 PROPOSED LIMIT OF DISTURBANCE

The Proposed Limit of Disturbance for the Project encompasses approximately 465 ha of land and is the area in which all Project impacts detailed in **Section 1.3** will be located. However, a 30 metre (m) buffer is being applied to the Proposed Limit of Disturbance to allow for movement of heavy machinery for the construction of the Project.

The majority of the Proposed Limit of Disturbance is located within the Study Area, however, the northern end of the proposed Newell Highway realignment and a haul road extend outside of the Study Area into the existing approved TGO Mine Site Boundary (**Figure 1-3**).

Figure 1-3: Aerial showing the Study Area and the Proposed Limit of Disturbance.



2 ASSESSMENT INTRODUCTION

2.1 RELEVANT LEGISLATION

Cultural heritage is managed by several state and national Acts. Baseline principles for the conservation of heritage places and relics can be found in the *Burra Charter* (Burra Charter 2013). The *Burra Charter* has become the standard of best practice in the conservation of heritage places in Australia, and heritage organisations and local government authorities have incorporated the inherent principles and logic into guidelines and other conservation planning documents. The *Burra Charter* generally advocates a cautious approach to changing places of heritage significance. This conservative notion embodies the basic premise behind legislation designed to protect our heritage, which operates primarily at a state level.

Several Acts of parliament provide for the protection of heritage at various levels of government.

2.1.1 Commonwealth Legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

The EPBC Act, administered by the Commonwealth Department of Agriculture, Water and the Environment, provides a framework to protect nationally significant flora, fauna, ecological communities, and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to National/Commonwealth heritage places.

Applicability to the Project

It is noted there are no Commonwealth or National heritage listed places within either the Study Area and as such, the heritage provisions of the EPBC Act and other Commonwealth Acts do not apply (refer to **Section 3.2.1**).

2.1.2 State Legislation

Environmental Planning and Assessment Act 1979 (EP&A Act)

The EP&A Act established requirements relating to land use and planning. The framework governing environmental and heritage assessment in NSW is contained within Part 4 of the EP&A Act:

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items.

- Division 4.7: Approvals process for state significant development.

Applicability to the Project

As the Project is an SSD, Section 4.41 of the EP&A Act (formerly Section 89J) applies and provides a defence for any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements (i.e. Secretary's Environmental Assessment Requirements [SEARs]: see below).

Section 4.41 of the EP&A Act also notes that an approval under Part 4, or an excavation permit under Section 139, of the *Heritage Act 1977* (Heritage Act) are not required. It is normally a condition of approval for SSD projects that historic heritage be managed under a *Historic Heritage Management Plan* (HHMP).

Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) for the Project (SSD-9176045) was issued on 5 July 2021.

The SEARs recognise historic heritage as a key issue to be examined in the EIS and state:

"an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, including adequate consultation with Aboriginal stakeholders having regard to the Aboriginal Cultural Heritage Consultation requirements (DECCW, 2010), and documented in an Aboriginal Cultural heritage Assessment Report (ACHAR) including the significance of cultural heritage values for Aboriginal people who have cultural association with the land.

an assessment of the impact on historic heritage in accordance with the NSW Heritage Manual, including heritage conservation areas and State and local heritage items within and near the site, and detailed mitigation measures to offset potential impacts on heritages values."

The agency letter from Heritage NSW dated 29 June 2021 notes that as there are no items listed on the State Heritage Register (SHR) or any known historical archaeological relics, therefore they have not provided any comments regarding the historic heritage assessment process.

The agency letter received from Narromine Shire Council dated 7 July 2021 states:

The EIS shall address and identify cultural heritage sites, items or relics that are known or may become apparent in the area.

Applicability to the Project

This HHAR has been prepared in accordance with the *NSW Heritage Manual* (Heritage Office 1996) to address the SEARs and agency requirements for the Project.

Aboriginal cultural heritage for the Project is addressed in *Aboriginal Cultural Heritage Assessment Report: Tomingley Gold Extension Project, Tomingley NSW* (OzArk 2021).

Heritage Act 1977 (Heritage Act)

The *Heritage Act 1977* (Heritage Act) is applicable to the current assessment. This Act established the Heritage Council of NSW. The Heritage Council's role is to advise the government on the protection of heritage assets, make listing recommendations to the Minister in relation to the SHR, and assess/approve/decline proposals involving modification to heritage items or places listed on the SHR. Most proposals involving modification are assessed under Section 60 of the Heritage Act.

Automatic protection is afforded to 'relics', defined as '*any deposit or material evidence relating to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and which holds state or local significance*' (note: formerly the Act protected any 'relic' that was more than 50 years old. In 2009 the age determination was dropped from the Act and now relics are protected according to their heritage significance assessment rather than purely on their age). Excavation of land on which it is known or where there is reasonable cause to suspect that 'relics' will be exposed, moved, destroyed, discovered or damaged is prohibited unless ordered under an excavation permit.

Applicability to the Project

There are no SHR listed items within, or near to, the Study Area (refer to **Section 3.2.1**). Items of local heritage significance that are normally listed in LEPs are also protected under the Heritage Act.

2.1.3 Local Legislation

Local Environmental Plans

The Study Area is within areas administered by the Narromine Shire Council LEP 2011.

The LEP includes a schedule of heritage conservation areas and items that require either development consent or exemptions for projects that may impact conservation outcomes (Section 5.10 of the LEP). The objectives set out in Section 5.10 of the LEP states:

- (a) to conserve the environmental heritage of an LGA,
- (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- (c) to conserve archaeological sites,
- (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.

Section 5.10(3)(a) (i) and (ii) set out the circumstances when a Development Application is not required when there is an impact to heritage items. Exemptions to consent are related to works that are of a minor nature or works that will not adversely impact the heritage values of a place.

Applicability to the Project

There are no items listed on the Narromine LEP within, or near to, the Study Area (refer to **Section 3.2.1**).

2.2 HISTORIC HERITAGE ASSESSMENT OBJECTIVES

The current assessment will apply the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations, to meet the following objectives:

- Objective One:** To identify whether historical heritage items or archaeological deposits are likely to be present within the Study Area.
- Objective Two:** To assess the significance of any recorded historical heritage items or potential deposits.
- Objective Three:** Determine whether the Project would likely cause harm to recorded historical heritage items or potential deposits.
- Objective Four:** Provide management recommendations and options for mitigating impacts.

2.3 DATE OF HISTORIC HERITAGE ASSESSMENT

The historic heritage assessment took place at the same time as the Aboriginal heritage assessment for the Project (OzArk 2021). The historic heritage assessment was undertaken by on the following days:

- 6 to 10 July 2020;
- 17 July 2020;
- 1 and 2 September 2020; and
- 26 February 2021.

2.4 FIELD ASSESSMENT TEAM

The fieldwork component of the historic heritage assessment was undertaken by:

- Fieldwork Director: Stephanie Rusden (OzArk Senior Archaeologist, BSc, University of Wollongong, BA, University of New England).
- Archaeologist: Ben Churcher (OzArk Principal Archaeologist, BA [Hons], University of Queensland; Dip Ed, University of Sydney).

- Archaeologist: Dr Alyce Cameron (OzArk Senior Archaeologist, BA [Hons] and PhD [Archaeology & palaeoanthropology] Australian National University).

2.5 REPORTING

This assessment report was compiled by:

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3 HISTORIC HERITAGE ASSESSMENT: BACKGROUND

3.1 BRIEF HISTORY OF TOMINGLEY AND SURROUNDS

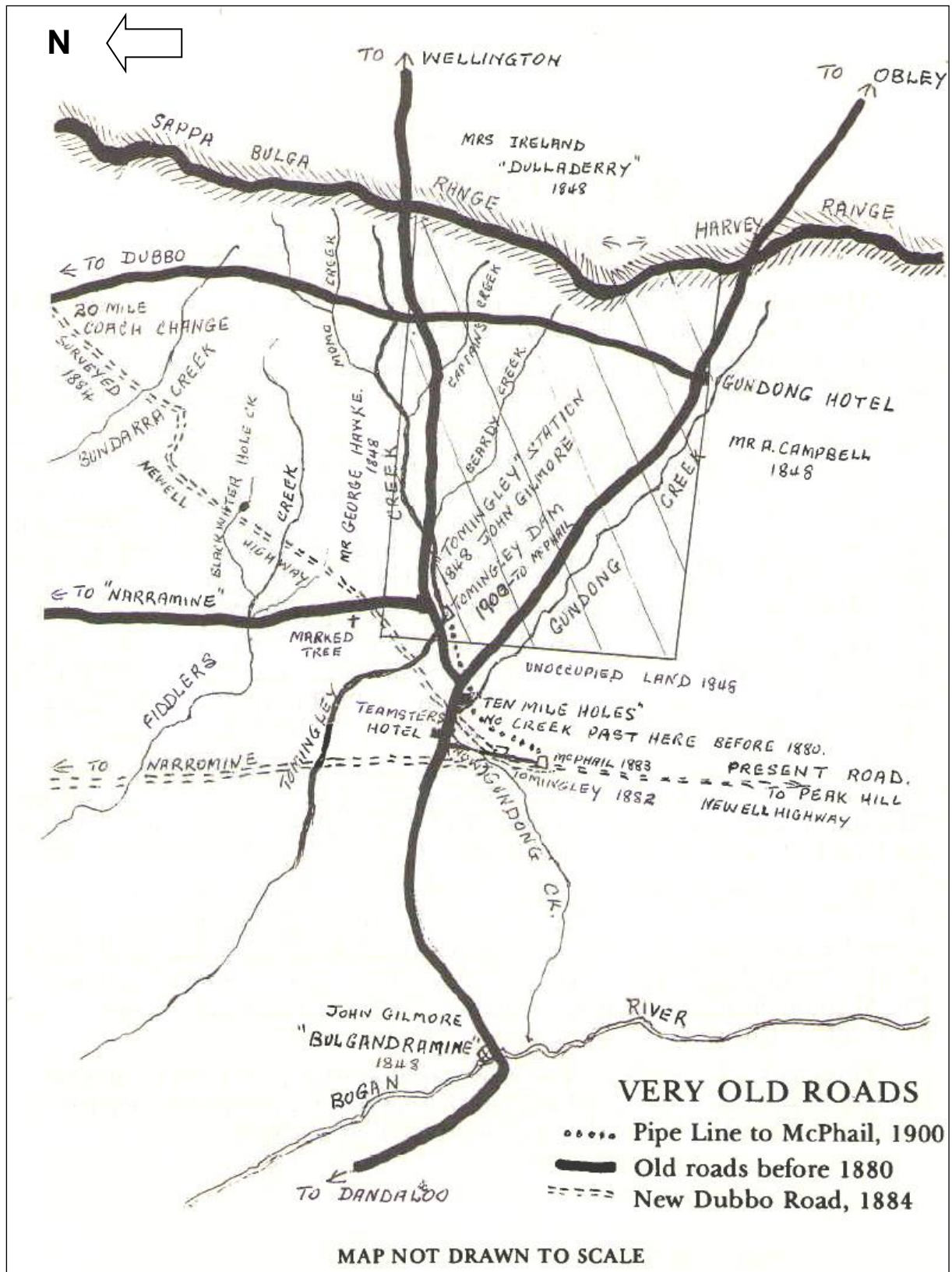
3.1.1 Early Settlement

The first colonial exploration of the area was in 1817 when Oxley travelled east from the watershed between the Bogan and Lachlan Rivers. Settlers claiming pastoral runs in the area followed the routes of Oxley and Sturt through the region. By the time Mitchell's expedition reached and followed the Bogan in 1835, there were colonial settlers in the area, despite it being beyond the limits of land selection in the colony. This period of unregulated land selection along the Bogan River was marked by violent conflicts between the local Aboriginal population and the squatters that continued for decades. William Lee, whose run 'Derribong' likely encompassed the future site of Tomingley, was implicated in a massacre as he led cattle north along the river in search of water during drought (*The Colonial Observer* 1841: 59).

The name 'Tomingley' first appears in the Government Gazette of 1848 naming a run of 22,400 acres claimed by J. Gilmore and covering the entirety of modern Tomingley (Mewburn 1982: 8). The name Tomingley is said to have been after an early settler of the area, Tom Ingley (Cook and Garvey 1999: 271). It is also reported to be derived from a Wiradjuri word for 'death adder' by early ethnographers of Dubbo and surrounds (Garnsey 1942: 62).

The earliest roads in the area followed waterways where possible, and the road from the Bulgandramine on the Bogan River to the east towards Obley and onto Wellington had as its first stop, at place called Ten Mile Holes on Gundong Creek (**Figure 3-1**). This was the first place after leaving the Bogan River where water could predictably be found on the journey east. Ten Mile Holes therefore provided a camping place for travellers and later for teams who were carting ore from the Cobar mines to Orange before the arrival of the railway (Mewburn 1982: 11).

Figure 3-1: Early sketch map of roads and waterways around Ten Mile Holes (Mewburn 1982: 10).



3.1.2 Discovery of Gold and Initial Boom

Gold was discovered in Tomingley in 1879, ten years before it was found at Peak Hill, located to the south. By 1883, Bill Reakes and Jim Smith had two sunk exploration shafts that found reefs at depths of 65 feet and 25 feet respectively and the quality of the gold was high enough for the establishment of a community to service the gold mining (Mewburn 1982: 12). In 1883 the Tomingley Gold Mining Company was established and installed a 15 head stamper (crusher) and once some rain had come to fill the dams they had created (immediately west of the edge of Modern Tomingley), it and the Star Gold Mining Company had excellent returns (Cook and Garvey 1999: 271). Although Tomingley was then proclaimed a village in 1884 (Chappel 1989:19), mining did slow somewhat in this year, forcing the closure of one store, although two hotels, two stores and school remained open, the latter educating 33 children in 1884 (Cook and Garvey 1999: 272).

3.1.3 Myall United and the Village of McPhail

The mining leases in the area that would become the Myall United Gold Mine and the village of McPhail were originally pegged in 1883 by Donald McPhail. By 1895 five leases south of Tomingley had been sold to the English syndicate that became the Myall United Gold Mine, which in turn became part of the locality known as McPhail, named after Donald McPhail. The main shaft of at Myall United Gold Mine was 350 feet in depth and by 1899 the mine had considerable infrastructure: 40 stampers, a large water storage tank and cyanide treatment vats.

In 1884, one year after mining began within the mining leases, there were about 40 miners and their families at Tomingley and McPhail and by 1889, the population at Tomingley and McPhail was static at 250. During its height of operation, the township supported two hotels (the Miners Arms and the Commercial; **Figure 3-2**), at least one church, a school (**Figure 3-3**), shops, and dwellings. **Figure 3-4** and **Figure 3-6** show some of the Myall United infrastructure at the peak and the end of mining operations.

Figure 3-6 shows the location of the village of McPhail in relation to the mine in 1900 from a parish of Bulgandramine map and **Figure 3-7** is a detailed diagram of the lots within the village. It appears that only the lots outlined in red on the plan shown on **Figure 3-7** have associated landholder names or details, see **Table 3-1**. It is likely that these vacant lots were occupied or leased informally by the miners and their families.

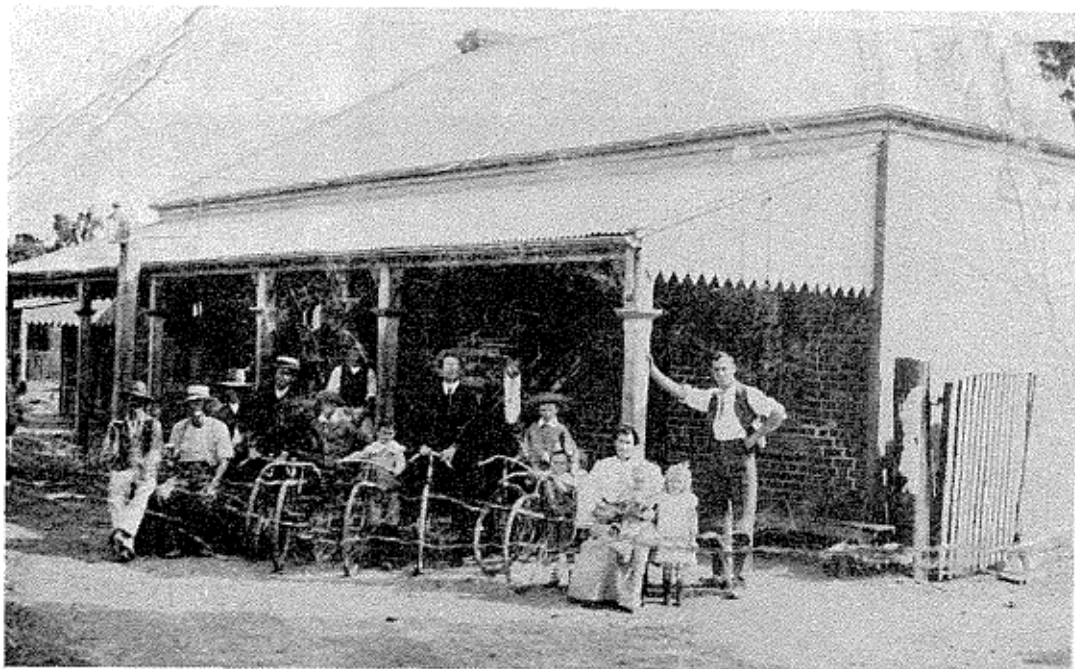
Water from Ten Mile Holes played a vital role in enabling the settlement of Tomingley and the mining at McPhail, as there was little water otherwise available in the locality. It is recorded that before British settlement, Gundong Creek had no channel west of the Ten Mile spring and water simply overflowed from the spring and spread across the landscape. The first man to apparently begin to channel the spring was Wah Sing, a Chinese market gardener (Mewburn 1982: 11). Wah Sing dug a channel from the spring head to the southwest to bring water to his vegetable gardens.

He apparently created little dams in which to hold the water and then bucketed it from the dams to his gardens (Mewburn 1982: 11). The vegetables generated through Wah Sing's endeavours are said to have supported the needs of the mining community of McPhail. Wah Sing and his family are reportedly buried in the Tomingley Pioneer Cemetery.

Subsequent use of the water and the channelisation of Gundong Creek has led to the spring no longer flowing.

McPhail mining operated for almost 30 years and is said to have extracted 50,000 ounces of gold in that time. However, the expansion and contraction of McPhail demonstrates the rapid life cycle of some gold rush towns across NSW. A peak population of 250 in 1889 had almost entirely dispersed by 1913, when mining extraction was largely abandoned in favour of retreating slimes and tailings for diminishing returns (Mewburn 1982: 12). These materials were again re-treated in the late 1990s by Tailings Treatment Pty Ltd during which time a new tailings dam, namely the McPhail Tailings Dam, was constructed. Additional infrastructure required for the re-processing of the tailings dam was also constructed at this time, including (Cook 1995).

Figure 3-2: The Commercial Hotel (Mewburn 1982: 29).



*The "COMMERCIAL HOTEL" McPhail
The Dawson family on the right of the picture had the licence of this hotel in 1909. Standing, Ern Dawson, seated is Mrs. Dawson with Erna on her knee, Herb on her left and Lila, (Mrs. Campbell, Dubbo) on her right.
This hotel closed in 1911.*

Figure 3-3: The McPhail Public School (Mewburn 1982: 39).

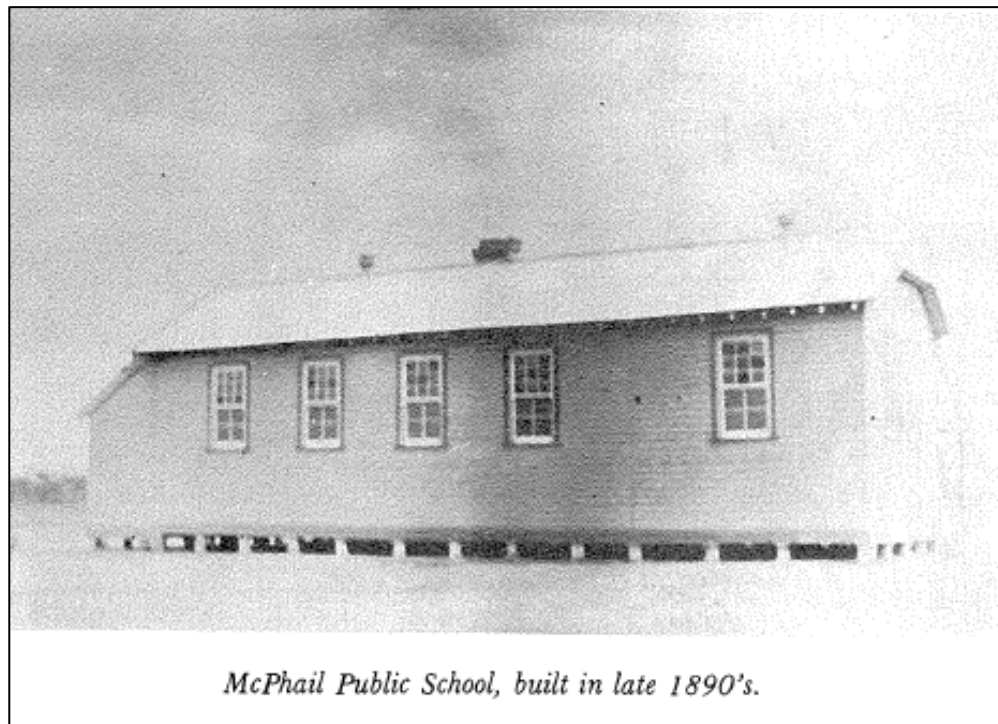


Figure 3-4: Photo taken from McPhail mine facing southwest to the village (Mewburn 1982: 15).

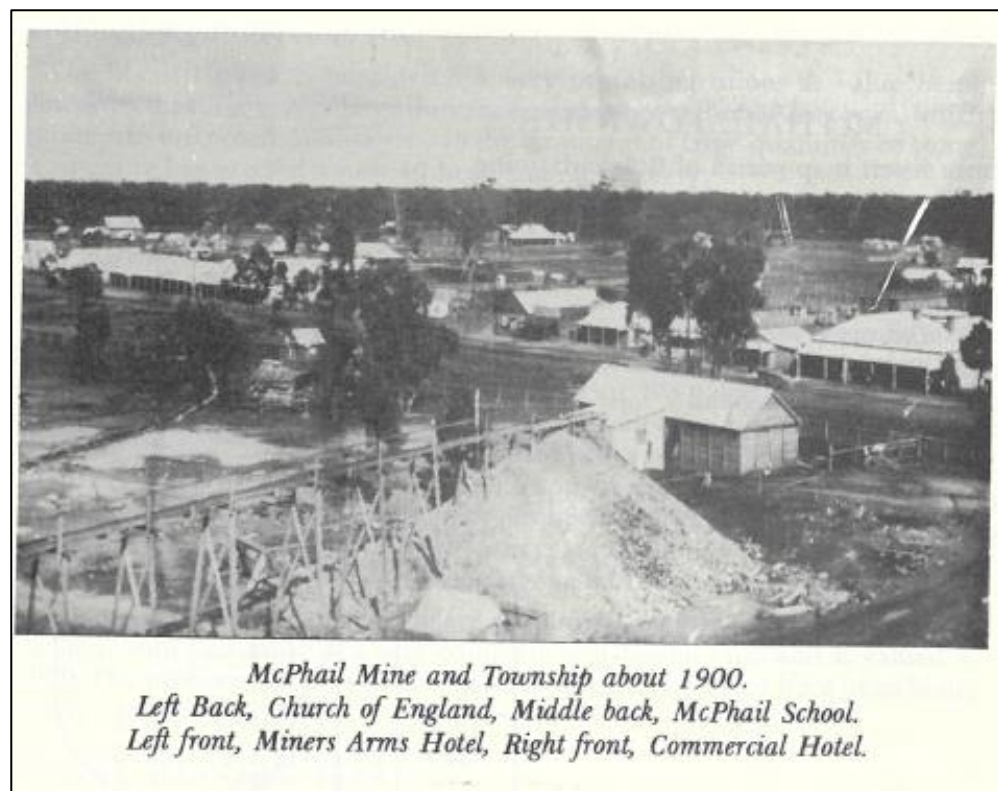
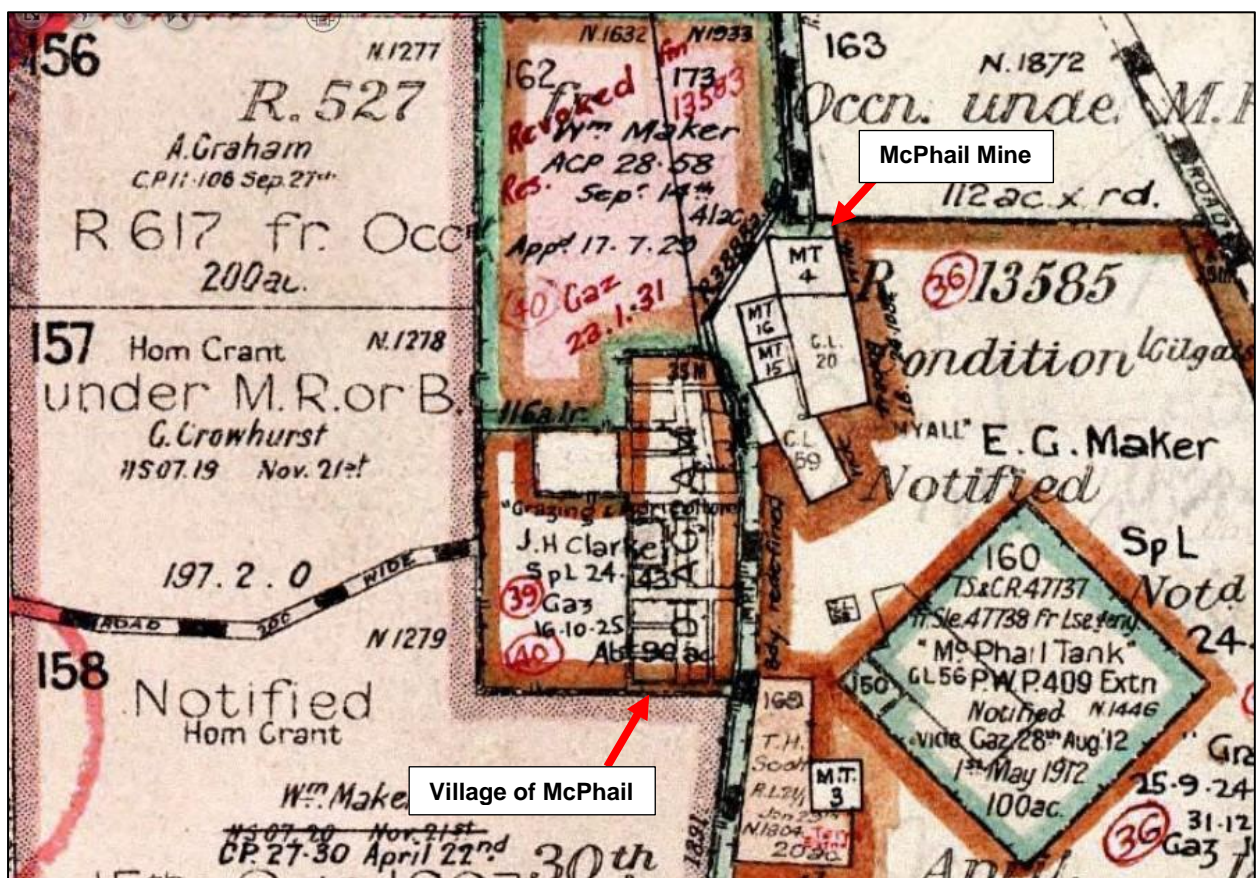
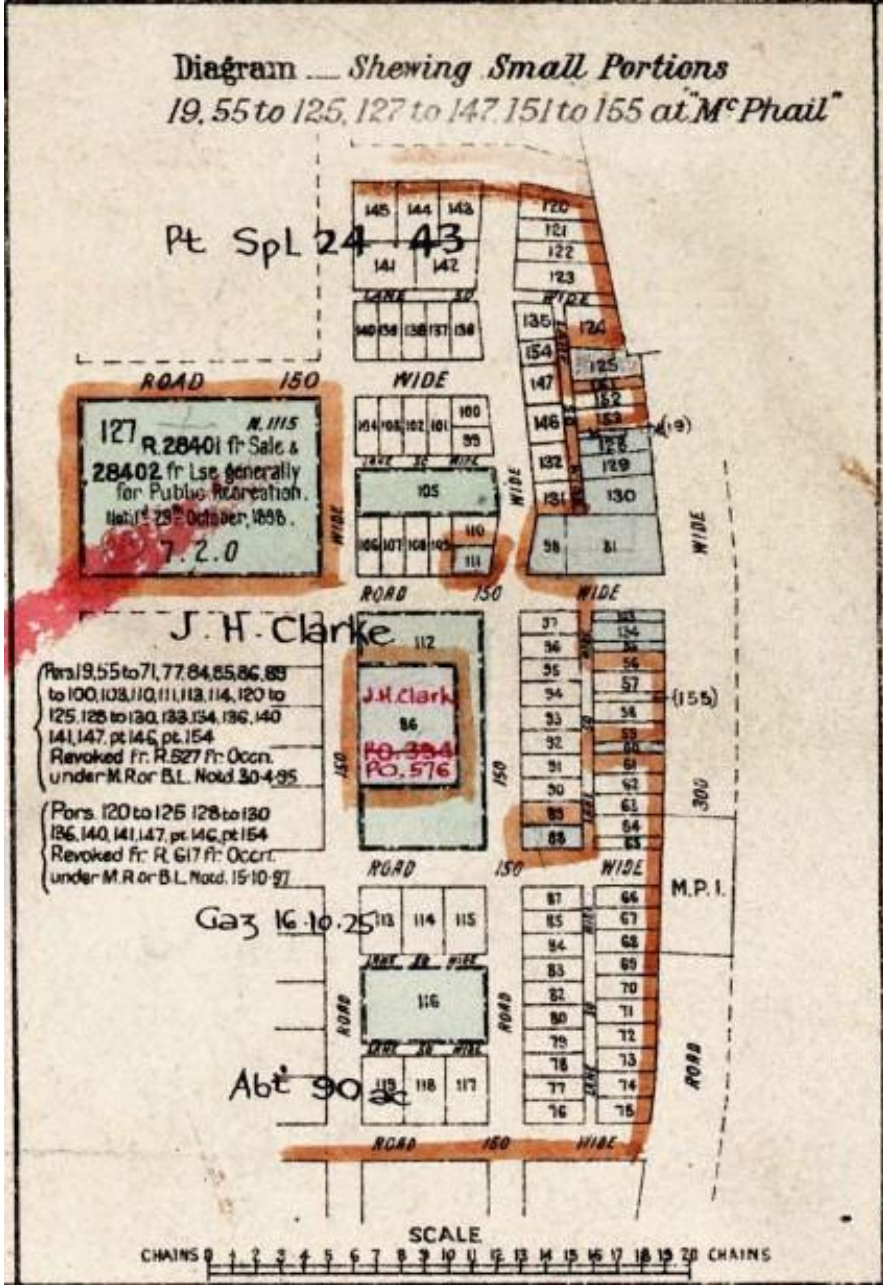


Figure 3-5: View of remnant headframe and infrastructure in 1926 (Mewburn 1982: 19).



Figure 3-6: Parish map of the village of McPhail from 1921.

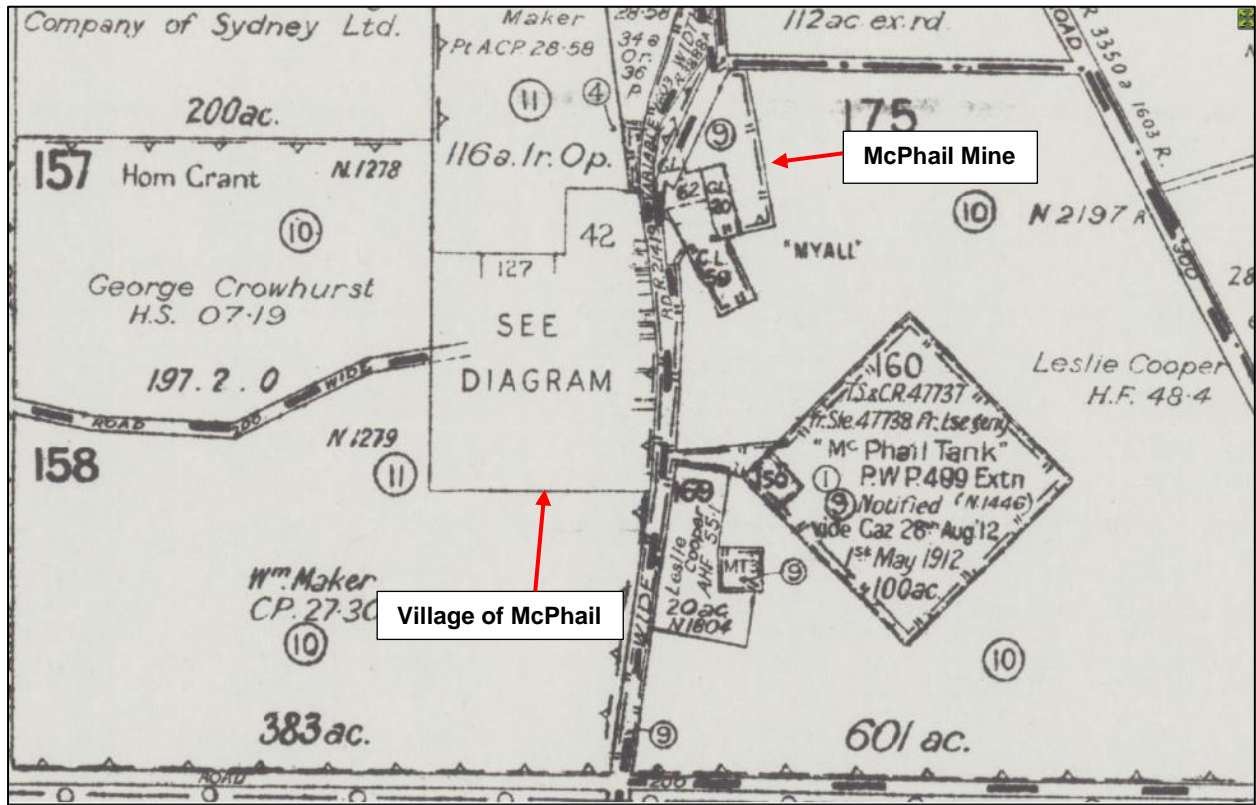




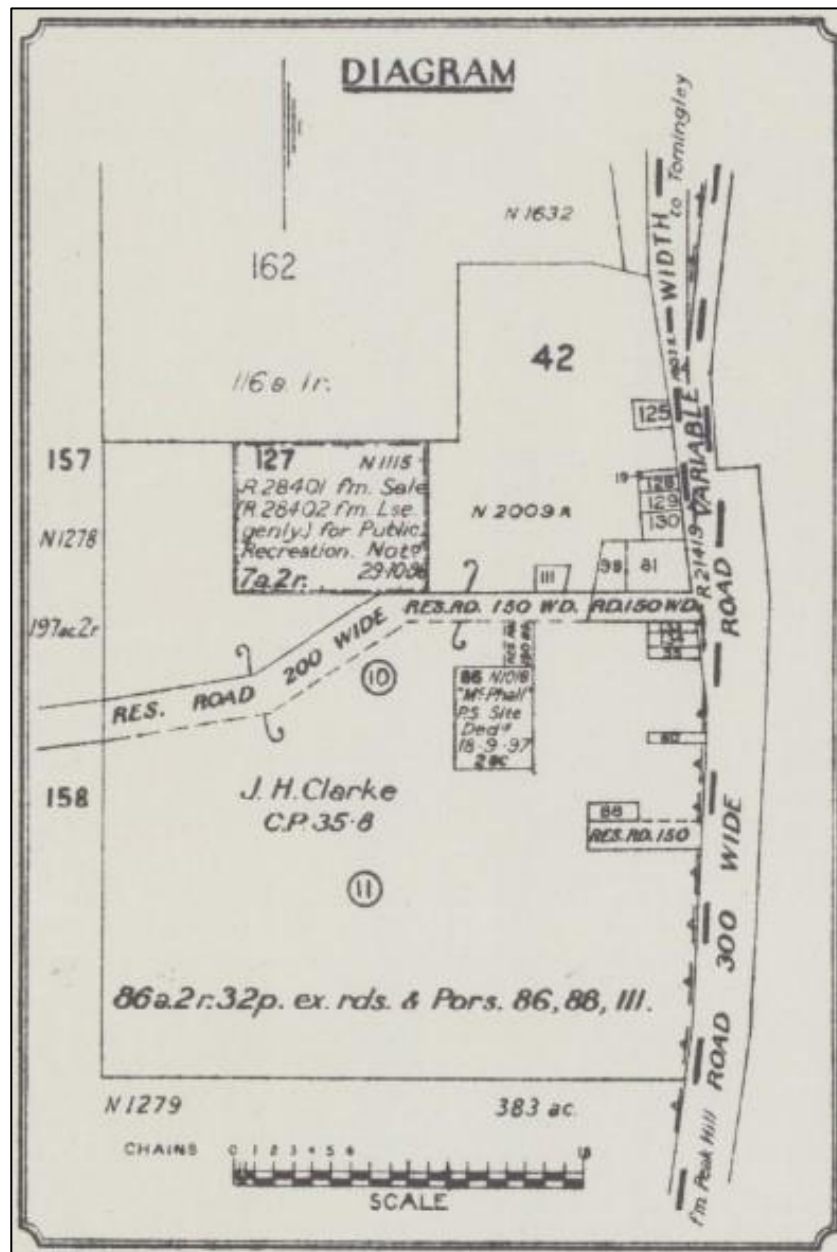
No.	Owner
125	Robert Golding "Commercial Hotel"
19	John McGaw
128	John McGaw
129	Dennis O'Meally
130	G.H. Paddinson
111	Church of England
98	W.H. Parr
81	A.F. Wythes
133	C.H. Paddison
134	Oliver Williams

No.	Owner
55	Bethold
60	John Crozier
88	Trustees Wesleyan Church

Figure 3-8: Parish map of the village of McPhail from 1959.



OzArk Environment & Heritage



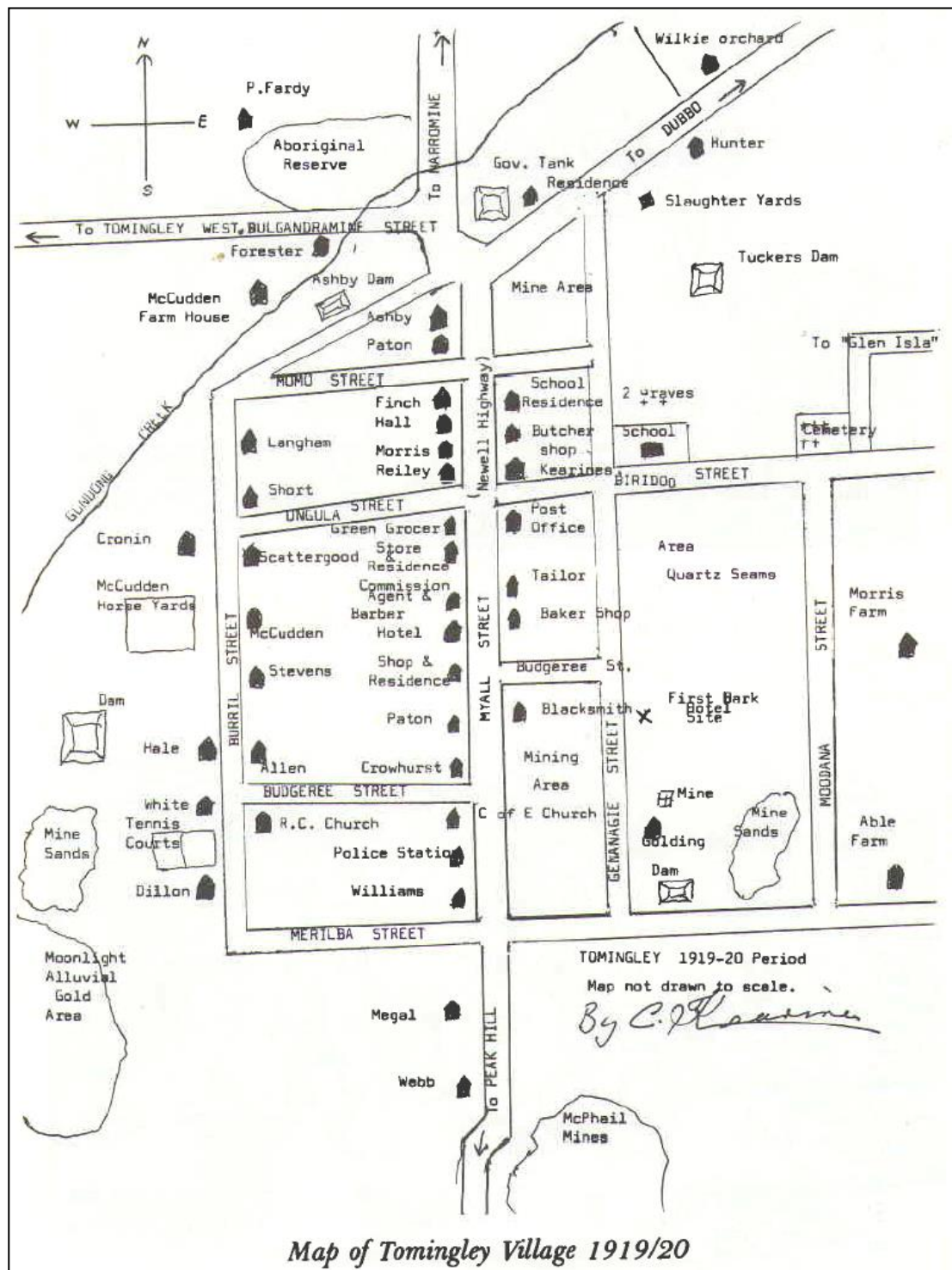
3.1.4 Tomingley and Surrounds in the 20th Century

While gold mining defines the period between 1880 and 1920 in the Tomingley area, inhabitants were also making livings for themselves from cropping and animal rearing. **Figure 3-10** shows the extent of the Tomingley town around 1919–1920 and shows the location of the McPhail mine to the south (note this is not to scale). Tomingley became the rural centre as the population and businesses of McPhail dispersed once the returns from the goldfield diminished. Most properties grew wheat and had stock.

A notable success in Tomingley was the Rosewood property. William Daniel (W.D. or Bill) Hando, established himself on the Rosewood property (1 279 acres) in 1897 while working the McPhail Mine during the day and the property in the evenings. He grew his first crop of wheat in 1902 and

later bred Clydesdales and exhibited them at local shows. From the breeding of Clydesdales, W.W Hando became one of the pioneers of trotting in NSW and established the Rosewood Trotting Stud (Chappel 1989). The Rosewood Trotting Stud became one of the largest and most successful breeders of trotting stock in Australia. The Hando brothers founded the Peak Hill trotting club in 1961, but their stud had had plenty of state-wide success by this time with sires 'Peak Hill', 'Silver Peak', and others. Jack McCudden also bred trotting stock in the area, including horses such as 'Rock Huon' and 'Lula Boy'.

Figure 3-10: Sketch map of Tomingley township in 1919/20 (source: Source Mewburn 1982: 71).



3.2 LOCAL CONTEXT

3.2.1 Desktop Database Searches Conducted

A desktop search was conducted on the following databases to identify any potential previously recorded heritage within the Study Area. The results of this search are summarised in **Table 3-2**.

Table 3-2: Historic heritage: desktop-database search results.

Name of Database Searched	Date of Search	Type of Search	Comment
National and Commonwealth Heritage Listings	1/7/2020	Narromine LGA	No places listed on either the National or Commonwealth heritage lists are located within the Study Area.
SHR	1/7/2020	Narromine LGA	No items on the SHR are located within or near the Study Area.
Section 170 Heritage and Conservation Register	1/7/2020	Narromine LGA	No items on the Section 170 Register are located within or near the Study Area.
LEP	1/7/2020	Narromine LEP of 2011	No items on the LEP are located within or near the Study Area.

A search of the Heritage Council of NSW administered heritage databases and the Narromine LEP returned no records for historical heritage sites within, or near to the Study Area.

The closest listed items to the Study Area listed on Schedule 5 of the Narromine LEP are the 'Pioneer Cemetery' (Item I21) and the 'Teamsters Hotel and grave sites' (Item I15), located 2.7 km and 4.7 km to the north, respectively (**Figure 3-11**).

Figure 3-11: Location of the LEP listed items in relation to the Study Area.

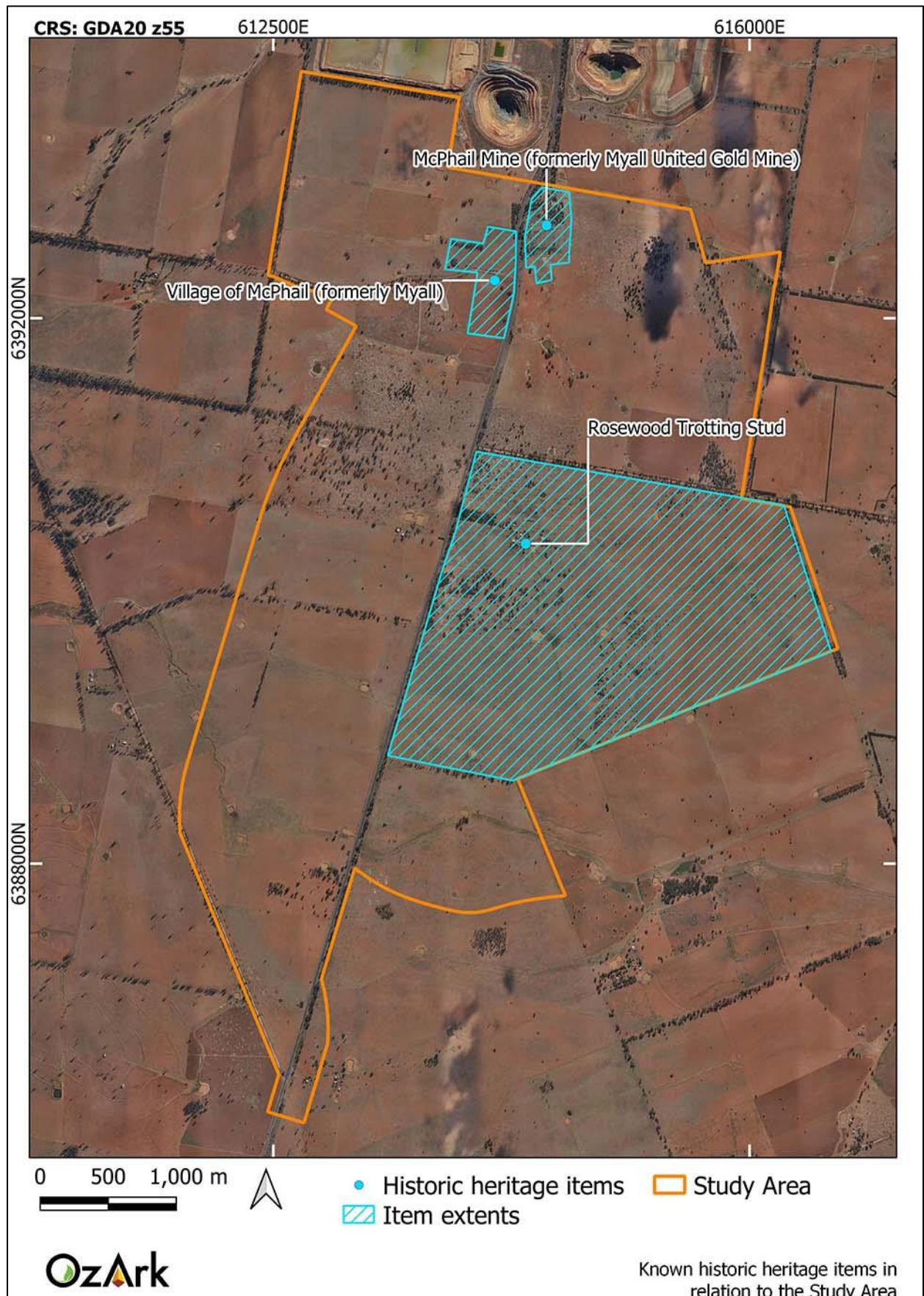


3.2.2 Local History Review

Despite no historic heritage items being listed within the Study Area, review of the history of the local area (**Section 3.1**) indicates that there has been a long period of settlement in Tomingley and the surrounds and that the village of McPhail and the McPhail Mine are located within the Study Area. In addition, Rosewood Trotting Stud is located within the central portion Study Area.

The location of these in relation to the Study Area are shown on **Figure 3-12**.

Figure 3-12: Location of the village of McPhail, the McPhail Mine, and the Rosewood Trotting Stud in relation to the Study Area.



4 RESULTS OF HISTORIC HERITAGE ASSESSMENT

4.1 SURVEY AND FIELD METHODS

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The historic heritage assessment occurred concurrently with the Aboriginal heritage survey (OzArk 2021). Variable levels of pedestrian survey were completed across the Study Area based on the archaeological potential of the landforms and areas identified as having potential heritage significance i.e., homesteads and surrounding infrastructure.

Figure 4-1 shows the survey tracks of the OzArk archaeologists during the survey.

4.2 PROJECT CONSTRAINTS

All portions of the Study Area were able to be accessed and as the Study Area is primarily grass paddocks across a flat plain, there were no physical impediments to the survey within the Study Area.

The survey was unable to be completed during the first mobilisation in July 2020 due to significant rain making parts of the Study Area inaccessible.

4.3 RECORDED HISTORIC HERITAGE ITEMS

Table 4-1 summarises the historic heritage items recorded during the survey of the Study Area and the location of the recorded sites are shown in **Figure 4-1**: Pedestrian coverage of the Study Area.



Figure 4-2.

Farming infrastructure, including corrugated iron sheds, stock ramps and windmills, were identified across the study area, however, these are common features across agricultural properties today and therefore are not considered to be significant historic heritage items.

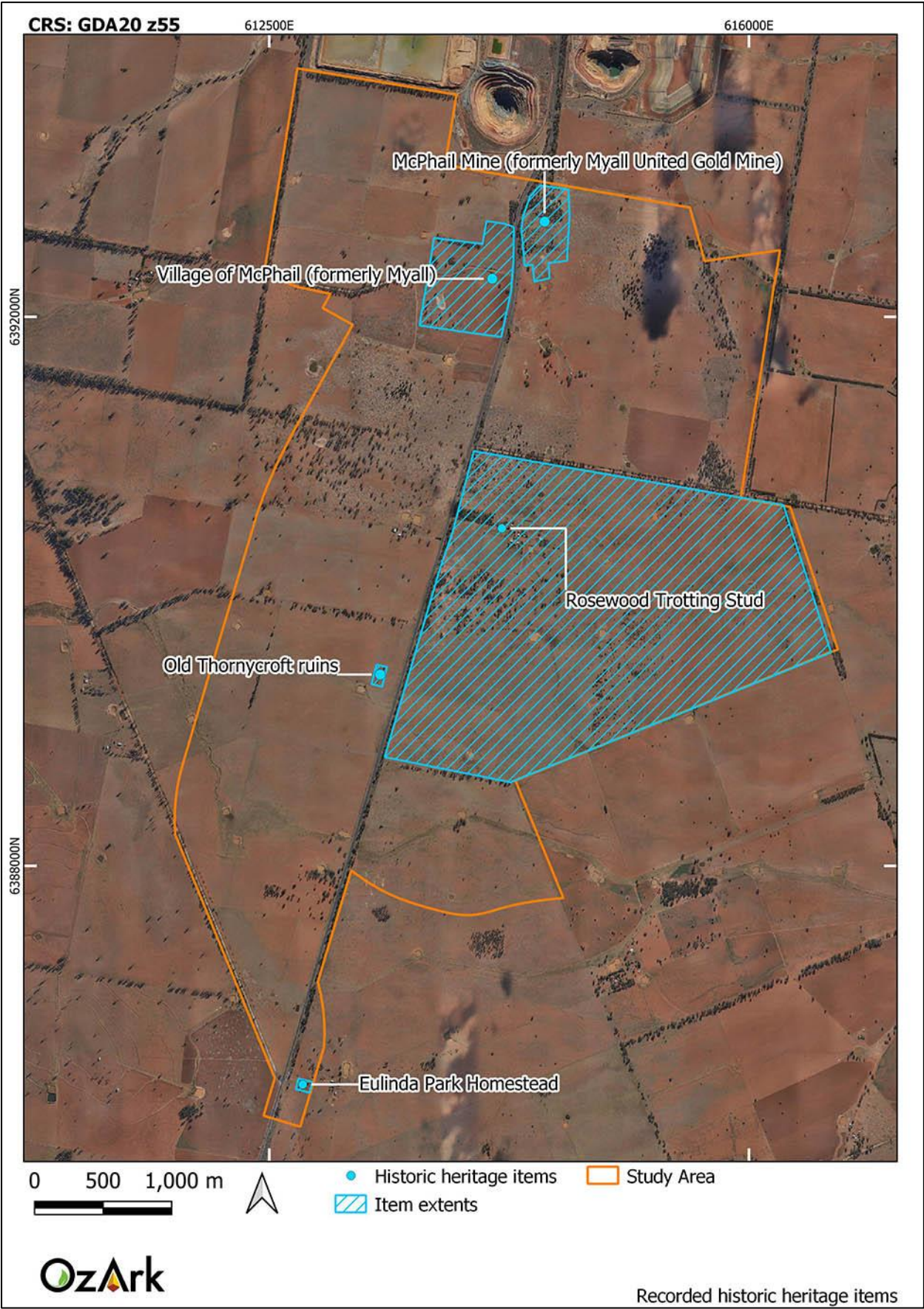
Table 4-1: Historic heritage items recorded during the survey.

Item name	Description	GDA Zone 55 coordinates
McPhail Mine	Concrete and quartz structure and mounds. Isolated concentrations of discarded materials.	614508E 6392675N
Village of McPhail	Isolated concentrations of discarded materials i.e. brick, glass, ceramics, metal.	614110E 6392284N
Rosewood Trotting Stud	Homestead style cottage built in 1915; sleeping quarters; woolshed; storage sheds.	614364E 6390344N
Eulinda Park Homestead	Bungalow-style homestead.	612744E 6386407N
Old Thornycroft ruins	Collapsed wooden frames and corrugated iron	613307E 6389396N

Figure 4-1: Pedestrian coverage of the Study Area.



Figure 4-2: Location of recorded historic heritage items in the Study Area.



4.4 ITEM DETAILS

McPhail mine

Location of Site: The former McPhail Mine is located within Lot 176 DP722842 and Lot 7300 DP1151814, on the eastern side of the Newell Highway and the South Tomingley rest stop (**Figure 4-3**).

Description of Site: The former McPhail mine is located in an area of regrowth trees in the north and extends south where it is generally cleared. As noted in **Section 3.1.3** and shown on **Figure 3-5**, there was considerable infrastructure at the mine which included stampers, a water storage shed, and cyanide treatment vats.

Aerial imagery shows all considerable structures and/or infrastructure associated with the mine was removed by 1966 (**Figure 4-4**). Remaining infrastructure and evidence of the McPhail mine is limited to a large rectangular, concrete structure, potential brick and stone foundations and scattered pieces of metal and steel (**Figure 4-5**).

Since the closure of the McPhail mine, the area has been heavily disturbed through rehabilitation activities, land management activities and re-use of the site for tailings re-processing. An example of the extent of disturbance across the area is provided in Appendix 1 of the EIS prepared by Cook (1995). This contains a letter from the Dubbo Rural Lands Protection Board detailing work undertaken in 1987 to remove noxious weeds and rabbit habitats, which included the removal of derelict mining equipment and levelling off the former tailings heaps (**Figure 4-6**). Further, aerial imagery from 1996 shows the level of disturbance across the area for the tailings re-processing operation (**Figure 4-7**).

Areas of archaeological potential are limited to the northwest of the item extent where potential remains of stone and brick foundations are present, although the extent of these are limited to less than two metres squared (**Figure 4-5**). Based on the extent of bulldozing which took place in 1987, it is likely that these features are not intact.

Additional infrastructure within the extent of the former mine includes a rehabilitated tailings dam and a large water tank which are associated with the tailings re-processing operation which took place in the 1990's (**Figure 4-3** and **Figure 4-8**). While the tailings dam and tank are not components of the original mining activities, they allow for some interpretation into the historical use of the land.

Figure 4-3: Location of the McPhail mine.

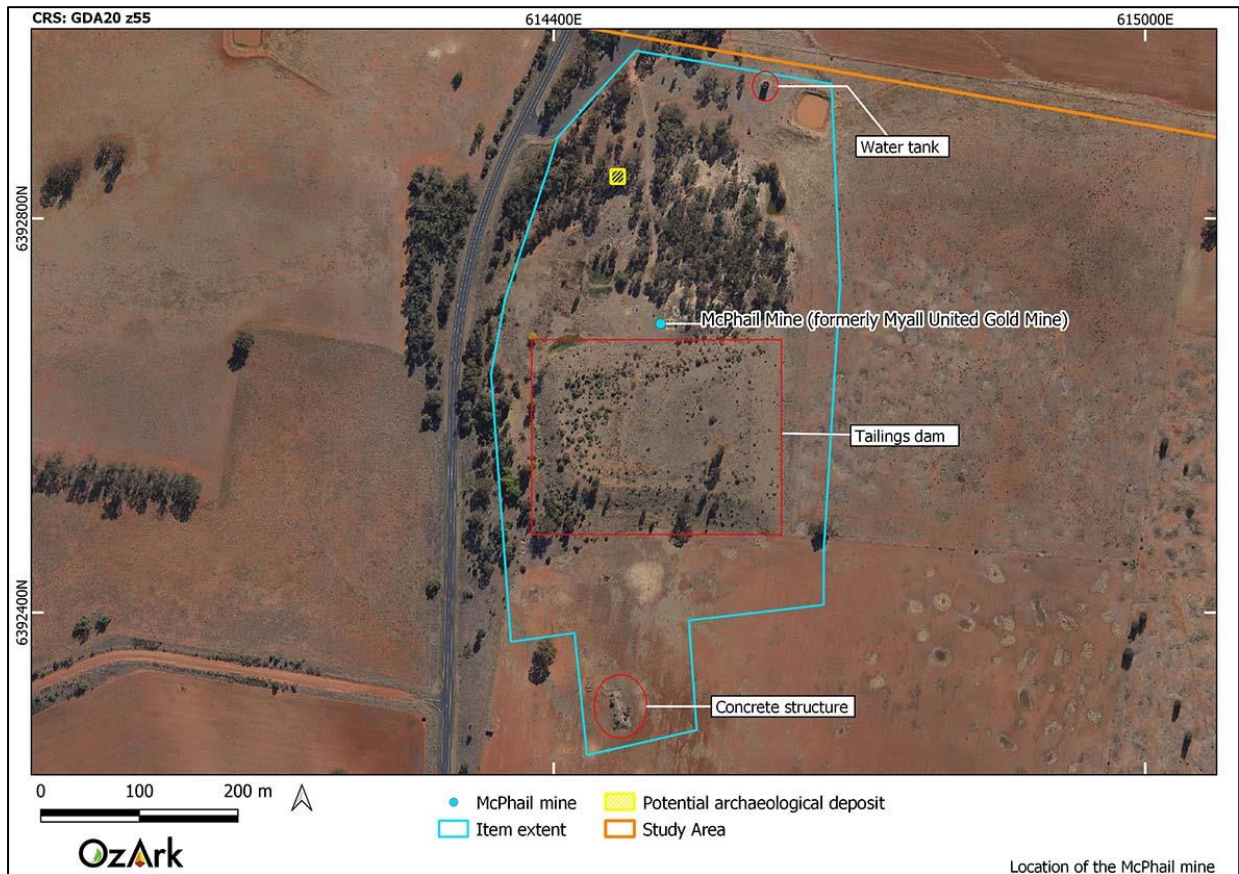


Figure 4-4: 1966 aerial overlaid with the location of the McPhail mine and village.

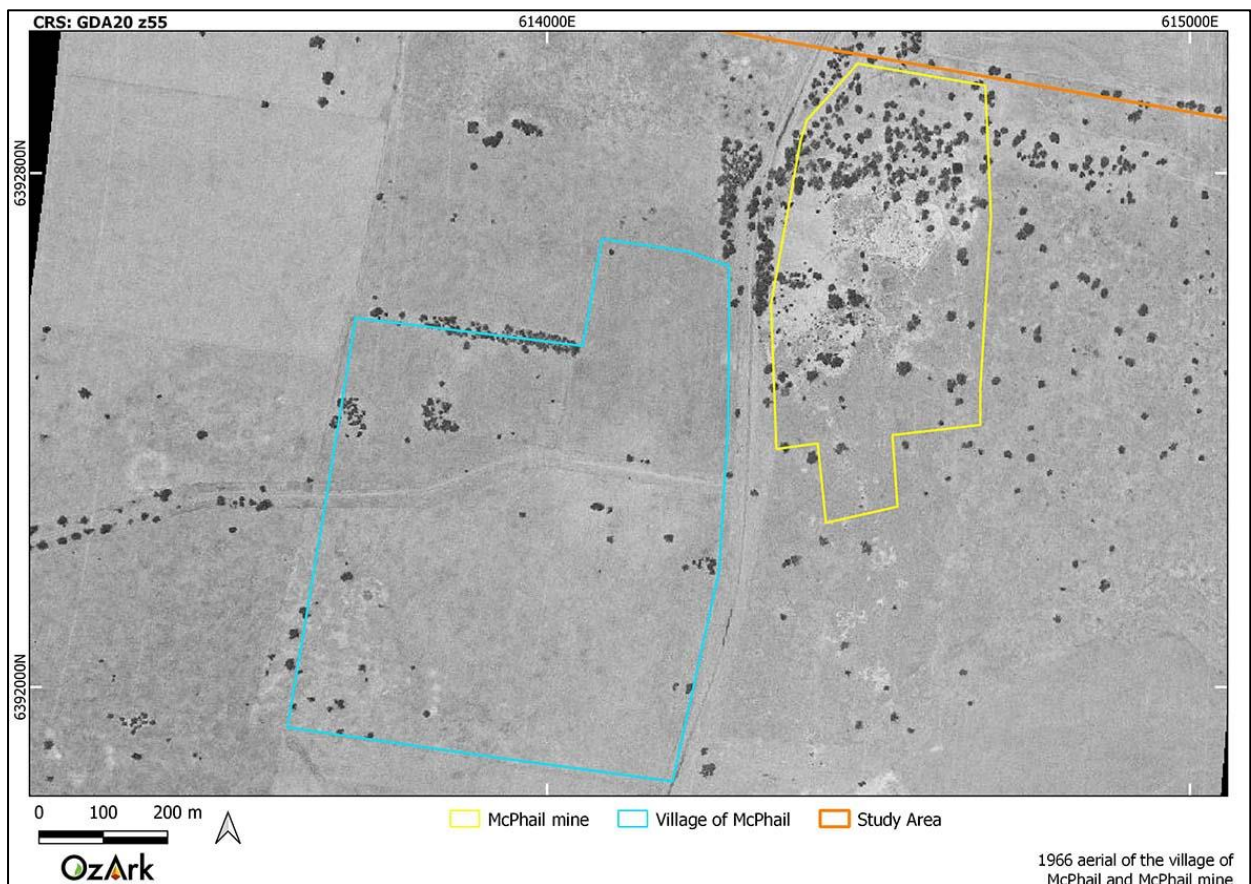


Figure 4-5: McPhail mine.





	
1. Remnant steel infrastructure (use unknown).	2. Detail of a stone wall foundation.
	
3. View of a brick and stone foundation.	4. Rectangular concrete structure with frequent quartz inclusions.

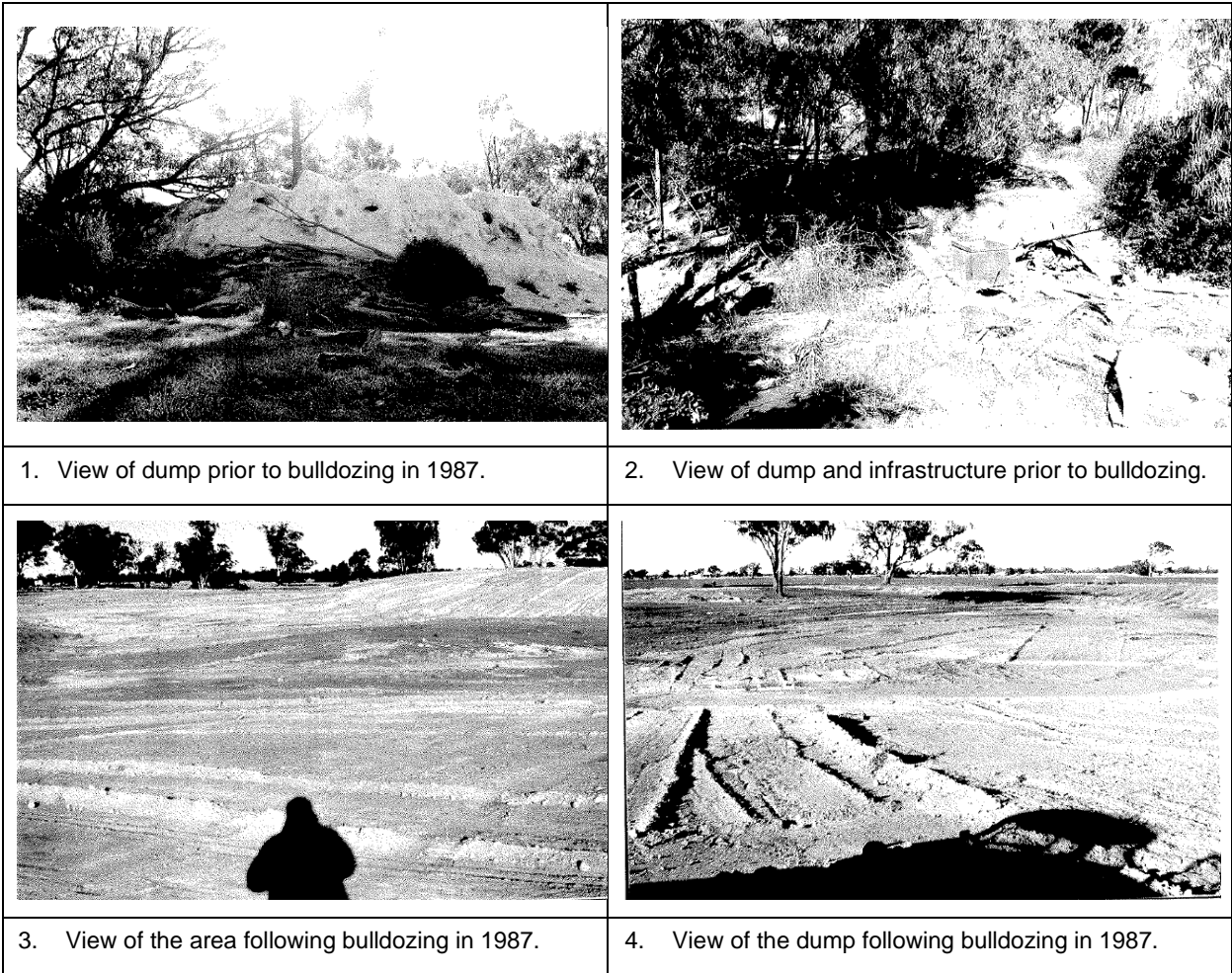
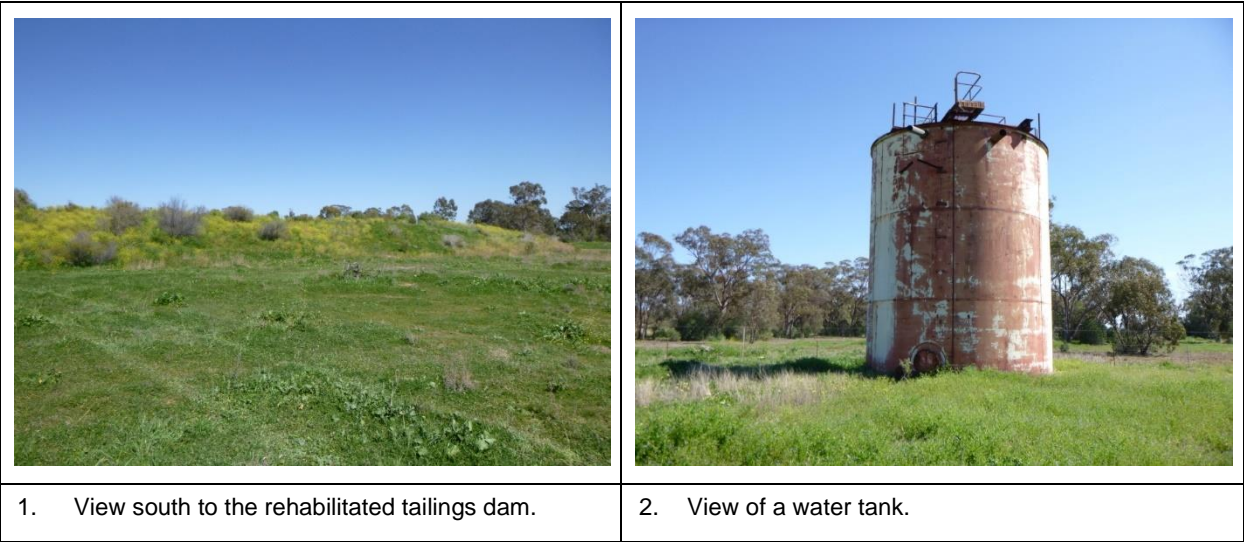
Figure 4-6: Extent of disturbance from bulldozing at the McPhail mine.

Figure 4-7: Extent of disturbance at the McPhail mine in 1996.



Figure 4-8: Infrastructure associated with the tailing re-processing operation.



Village of McPhail

Location of Site: The village of McPhail was located to the west of the Newell Highway and to the north and south of McNivens Lane (**Figure 4-9**). The village extended across Lot 1 DP1273565; Lot 86 DP755093 and Lot 127 DP755093.

Description of Site: The village of McPhail is now located within paddocks which have been extensively cropped and also grazed. As discussed in **Section 3.1.3**, the village once included a school, a church, two hotels, shops, and several other buildings. However, no extant structures or visible foundations remain across the extent of the former village. The earliest historic aerial imagery of the Study Area is from 1966, which shows all structures were removed by this time (**Figure 4-4**).

Remains of the village are limited to scattered fragments of glass, ceramic, brick, and pieces of metal and steel (**Figure 4-10**). Further, a number of historic artefacts have been placed underneath a small scatter of trees within the extent of the former village (**Figure 4-9**).

While the village has been subject to repeated ploughing which is likely to have removed any potential intact building foundations or deposits within the 'plough zone' (approximately the top 20–25 centimetres [cm]), there is some potential, albeit low, for foundations of substantial buildings such as the hotels (**Figure 3-2**) to be intact beneath the plough zone. Further, for those structures built on piers such as the school (**Figure 3-3**), postholes may remain beneath the plough zone.

Figure 4-9: Location of the village of McPhail.

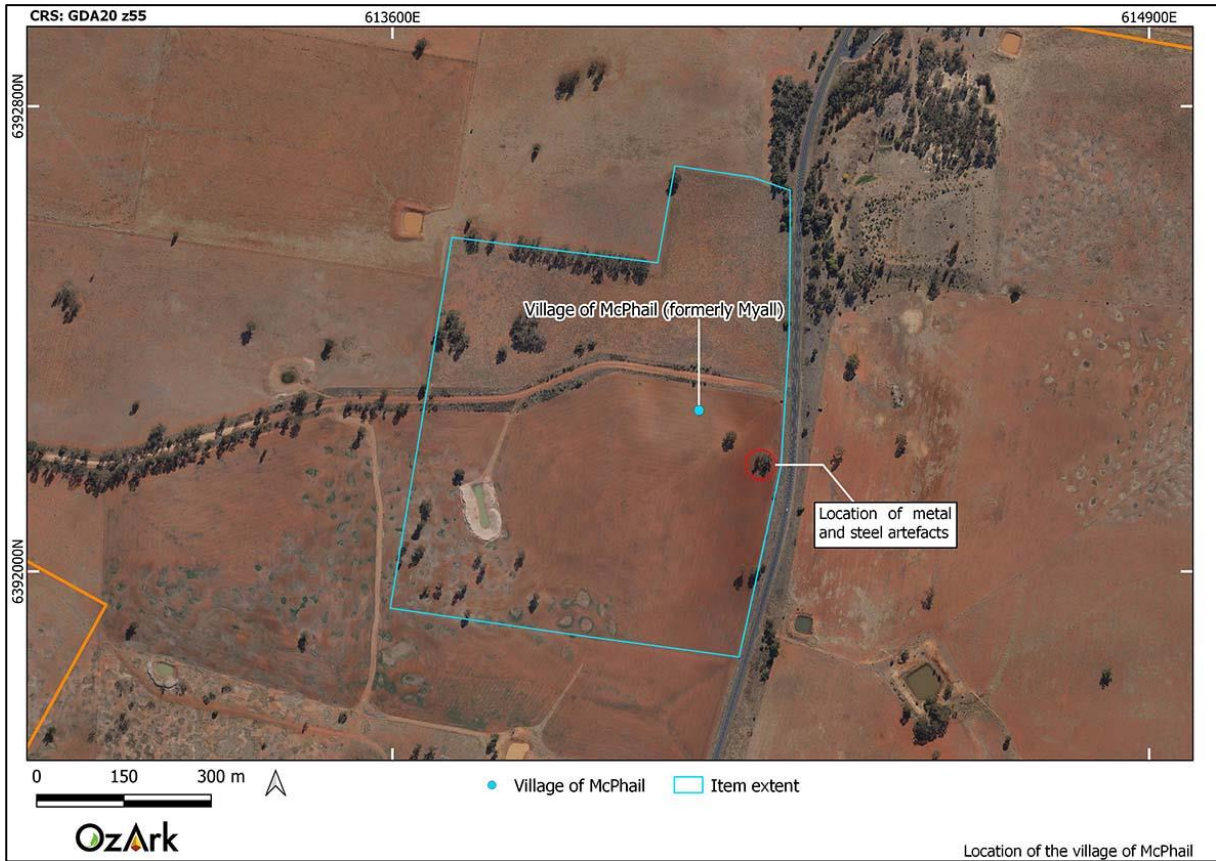



Figure 4-10: Village of McPhail.



1. View east across the former location of the village.



2. View of a small scatter of glass and ceramic fragments along an access track.

	
<p>3. View of the area of scattered artefacts beneath the group of trees.</p>	<p>4. Scattered metal artefacts beneath the trees.</p>
	
<p>5. Steel artefact with the mark "KING".</p>	<p>6. Small metal pot.</p>

Rosewood Trotting Stud

Location of Site: The Rosewood Trotting Stud and homestead are within Lot 43 DP755093 on the eastern side of the Newell Highway and to the south of Kyalite Road (**Figure 4-11**).

Description of Site: The Rosewood Trotting Stud includes a homestead style cottage built in 1915; sleeping quarters; woolshed; storage sheds (**Figure 4-12** and **Figure 4-13**). The homestead was built by a builder who travelled out from Sydney and bricks were transported from the railway depot at Parkes¹. Outbuildings were added gradually, with the shearing sheds being built during the 1920s, using cypress pine from the property. The stables were built as the trotting stud expanded in the 1950s; however, none of the stables remain.

¹ Pers comm. Graeme Hando 8/7/21.

Figure 4-11: Location of the Rosewood Trotting Stud.



Figure 4-12: Location of structures at the Rosewood Trotting Stud.

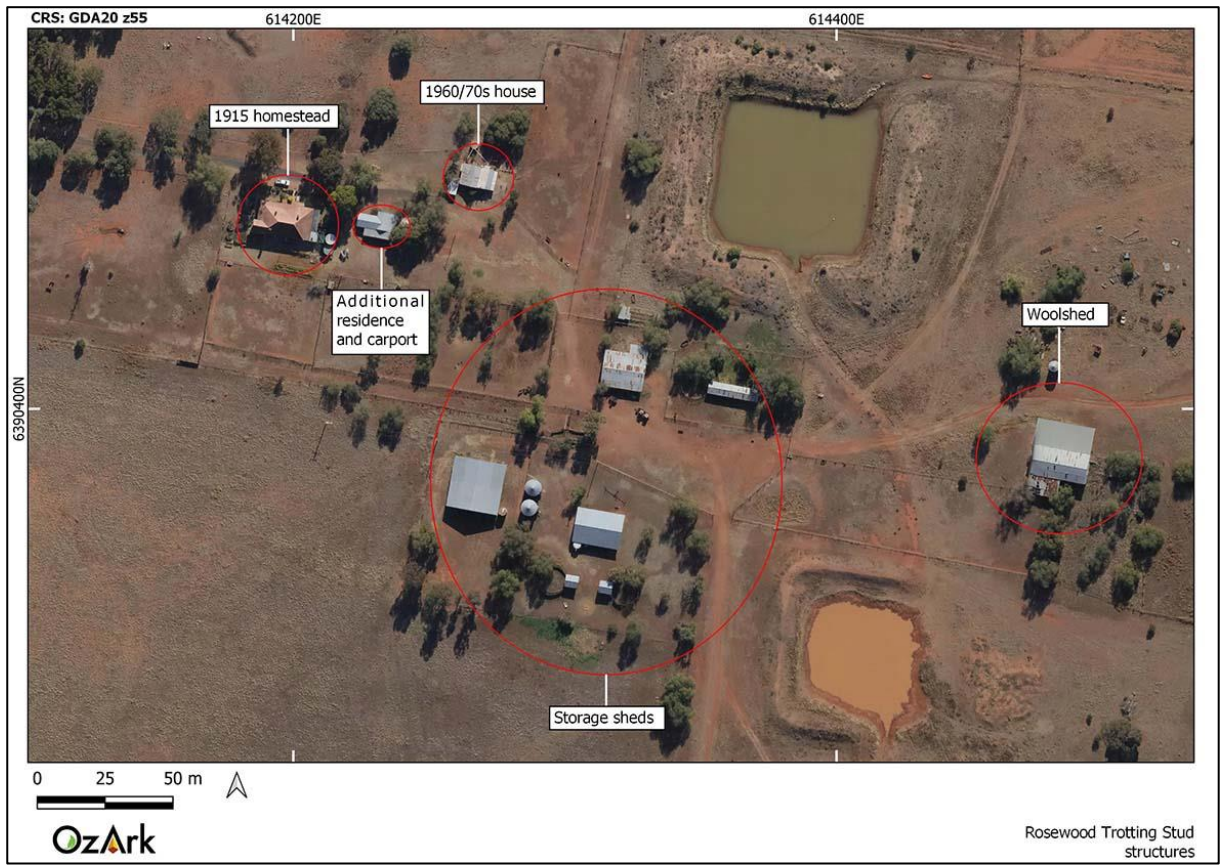


Figure 4-13: Rosewood Trotting Stud.

1. View of the northern elevation of the homestead.



2. Close up view of the front of the homestead.



3. View southeast of the north-western elevation.



4. View of additional residential building to the east of the homestead.



5. View north to a storage shed.



6. View east to the shearing shed.

Eulinda Park Homestead

Location of Site: The Eulinda Park homestead is within Lot 174 DP755093 on the western side of the Newell Highway, near the intersection of the Newell Highway and Back Tomingley West Road (**Figure 4-14**).

Description of Site: The Eulinda Park homestead is a Bungalow-style homestead with west and northern veranda and a double gable roof (**Figure 4-15**). Associated farming infrastructure is located to the east of the homestead, outside the Study Area.

The property on which the homestead is located was also in the Hando family, originally owned by Arthur Hando. Horses were also bred on the property, and it was also involved in the stud business².

Figure 4-14: Location of Eulinda Park homestead.



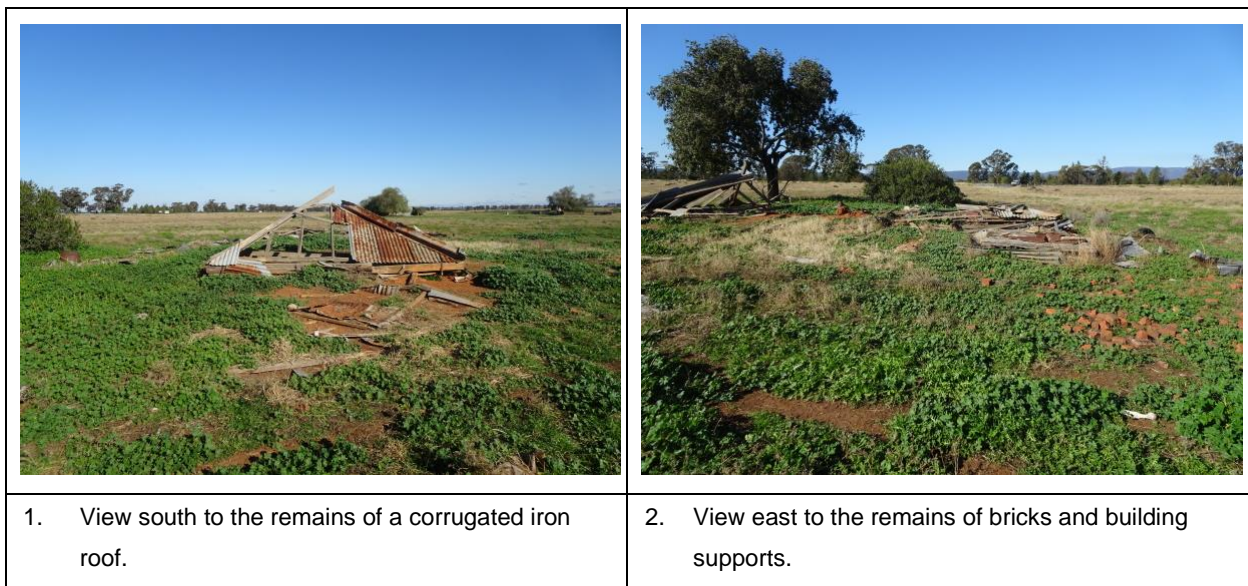
² Pers comm. Graeme Hando 8/7/21.

Figure 4-15: Eulinda Park homestead.

Old Thornycroft ruins

Location of Site: The Old Thornycroft ruins are located within Lot 4 DP1213503 to the west of the Newell Highway (**Figure 4-16**).

Description of Site: The item consists of two collapsed wooden frames and corrugated iron likely from a former house and shed adjacent to exotic tree and nearby stock ramp (**Figure 4-17**).

Figure 4-16: Location of the Old Thornycroft ruins.**Figure 4-17: Old Thornycroft ruins.**

4.5 SUMMARY OF HISTORICAL, ARCHAEOLOGICAL AND PHYSICAL CONTEXTS

The potential heritage resource of the Study Area generally reflects the documented history of Tomingley and the surrounding area which indicates that the land has predominately been utilised by graziers, agriculturalists, and mining (**Section 3.1**).

The historical heritage evidence of the Study Area demonstrates the documented pattern of settlement and use from the early to mid-nineteenth century, including the settlement by Europeans and subsequent use of the land for pastoral and agricultural activities. Sheep and cattle grazing was undertaken across the Study Area supplemented by other agricultural activities such as the cultivation of crops. Evidence of former house sites, sheds, yards, and other rural structures demonstrate the typical pattern of the land use and historical development of the area.

The historical heritage evidence in the north of the Study Area also demonstrates the documented pattern of settlement in the area for mining purposes through the McPhail Mine and the subsequent village of McPhail. The village of McPhail has potential to contain sub-surface deposits associated with a history of use and occupation from the late nineteenth century. However, the area has been subjected to repeated ploughing resulting in full disturbance/impact to the top 20–25 cm of any archaeological deposits and potentially some degree of disturbance to deposits below this depth. Sub-surface deposits also have the potential to be present at the site of the McPhail mine, although they are also likely to have been disturbed/impacted by the bulldozing completed across the site in 1987 and the rehabilitation works associated with the tailings reprocessing operation in the 1990s.

5 ASSESSMENT OF HISTORIC HERITAGE SIGNIFICANCE AND IMPACTS

5.1 INTRODUCTION

An assessment of significance is undertaken to explain why a particular place or item is important and to enable appropriate management measures to be determined.

5.2 ASSESSMENT OF SIGNIFICANCE—GENERAL PRINCIPLES

The current assessment will evaluate the heritage significance of the historic heritage item identified within the study area in accordance with the NSW Heritage Office's publication *Assessing Heritage Significance* (Heritage Office 2001). A historic heritage item must satisfy at minimum one of the following criteria to be assessed as having heritage significance:

Criterion (a): *An item is important in the course, or pattern, of NSW's cultural or natural history (or the cultural or natural history of the local area)*

Criterion (b): *An item has a strong or special association with the life or works of a person, or group of persons, of importance in NSW's cultural or natural history (or the cultural or natural history of the local area)*

Criterion (c): *An item is important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW (or the local area)*

Criterion (d): *An item has strong or special association with a particular community or cultural group in NSW (or the local area) for social, cultural or spiritual reasons*

Criterion (e): *An item has potential to yield information that will contribute to an understanding of NSW's cultural or natural history (or the cultural or natural history of the local area)*

Criterion (f): *An item possesses uncommon, rare or endangered aspects of NSW's cultural or natural history (or the cultural or natural history of the local area)*

Criterion (g): *An item is important in demonstrating the principal characteristics of a class of NSW's cultural or natural places; or cultural or natural environments (or a class of the local area's cultural or natural places; or cultural or natural environments).*

Archaeological significance

Archaeological significance can be described as a measure by which a place may contribute knowledge, not available from other sources to current research themes in historical archaeology and related disciplines (Bickford and Sullivan 1984: 19-26). An archaeological study focuses on the identification and interpretation of material evidence to explain how and where people lived, what they did and the events that influenced their lives.

Considerations material to the study of the archaeology include:

- Whether a place, or the fabric contained within a site, contributes knowledge or has the potential to do so. If it does, the availability of comparative sites and the extent of the historical record should be considered in assessing the strategies that are appropriate for the management of the site
- The degree and level at which material evidence contributes knowledge in terms of the 'current research themes in historical archaeology and related disciplines.

Following Bickford and Sullivan's work on archaeological significance (1984), the following questions can be used as a guide to assessing the significance of an archaeological site:

- Can the site contribute knowledge that no other resource can?
- Can the site contribute knowledge that no other site can?
- Is this knowledge relevant to the general questions about human history or other substantive questions relating to Australian history, or does it contribute to the major research questions?

Significance assessments are carried out on the basis that decisions about the future of heritage items must be informed by an understanding of these items' heritage values. The *Australia ICOMOS Burra Charter* (Burra Charter 2013) recognises four categories of heritage value: historic, aesthetic, scientific, and social significance

Items are categorised as having local or state level, or no significance. The level of significance is assessed in accordance with the geographical extent of the item's value. An item of state significance is one that is important to the people of NSW whilst an item of local significance is one that is principally important to the people of a specific LGA.

5.2.1 Assessment of Significance of Historic Items

McPhail mine

Table 5-1 assesses McPhail mine against the assessment criteria established in the Heritage Office publication, *Assessing Heritage Significance* (Heritage Office 2001).

Table 5-1: Assessment of heritage significance – McPhail Mine.

Criteria	Comments	Significance
a	Mining has been a significant shaping focus for the development and growth of the Tomingley and Peak Hill area, early evidence of the mining operations is important for documenting the development of the local area.	Local
b	McPhail Mine is associated with Donald McPhail who pegged the leases in 1883 and McPhail Mine, however, this does not meet the threshold for local heritage significance.	Nil
c	The site contains limited evidence of mining infrastructure and does not contain any remarkable architectural features.	Nil
d	The site does not provide evidence of particular connections on a social, cultural or spiritual level to parts of the Peak Hill and Tomingley community.	Nil
e	This site retains some physical information that would contribute to our understanding of McPhail Mine, although there is little above ground evidence	Local

Criteria	Comments	Significance
	remaining, and the evidence within any subsurface deposits is likely to be of limited local significance.	
f	The site does not appear to have uncommon, rare, or endangered aspects of the local area's history, although as the parameters of this study does not include scope for comparison against the wider body of historic sites relating to the mining industry in the area.	Nil
g	The site does not demonstrate the principal characteristics of a class of NSW or the local areas cultural or natural place	Nil

Village of McPhail

Table 5-2 assesses the village of McPhail against the assessment criteria.

Table 5-2: Assessment of heritage significance – Village of McPhail.

Criteria	Comments	Significance
a	Mining has been a significant shaping focus for the development and growth of the Tomingley and Peak Hill area. The village of McPhail which supported the McPhail Mine is an important for documenting the development of the local area. The potential archaeological resource at the village may provide a tangible link to the historical development and ownership of the village of McPhail.	Local
b	The site cannot be tied to an individual or group of persons.	Nil
c	At this time, when the archaeological evidence of the village is obscured, it is not possible to determine with any certainty whether, and if so, how, the archaeological features would meet this criterion.	N/A
d	At this time, when the archaeological evidence of the village is obscured, it is not possible to determine with any certainty whether, and if so, how, the archaeological features would meet this criterion. However, the village of McPhail may have social values as a result of community interest in their history, and the potential archaeological resource may provide evidence of particular connections with social, cultural or spiritual values to the local community.	Nil
e	The research potential of a particular site and its ability to answer research questions is dependent on a high level of intactness in the archaeological resource. The village of McPhail is a highly disturbed from repeated cultivation and the surface consists of a fragmented surface expression of low significance ephemeral. It is not possible to accurately determine the full extent of disturbance beneath the plough zone and hence the level of intactness of the potential archaeological resource. However, the archaeological resource that may survive includes building foundations, occupation deposits containing cultural material associated with former buildings, and various artefacts. This potential archaeological resource could yield information about the historical development, occupation, and commercial use of the village from the late nineteenth century. If intact, these deposits may provide a tangible link to this period of the area's history and would have research potential.	Local
f	At this time, when the archaeological evidence of the village is obscured, it is not possible to determine with any certainty whether, and if so, how, the archaeological features would meet this criterion.	N/A
g	At this time, when the archaeological evidence of the village is obscured, it is not possible to determine with any certainty whether, and if so, how, the archaeological features would meet this criterion.	N/A

Rosewood Trotting Stud

Table 5-3 assesses the Rosewood Trotting Stud against the assessment criteria.

Table 5-3: Assessment of heritage significance – Rosewood Trotting Stud.

Criteria	Comments	Significance
a	The stud complex was one of the largest breeders of pacing stock in Australia which bred and raced many championship horses.	Local
b	The stud complex is associated with the Hando family, one of the early settlers in the local area.	Local
c	The stud complex contains a classic Edwardian homestead-style cottage dating to 1915 which is in good condition and does not appear to have been significantly modified. However, while it does not demonstrate a high degree of creative or technical achievement in NSW, it does contribute to our understanding of the rural landscape in the early twentieth century.	Local
d	The item has no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	The item is unlikely to yield further data.	Nil
f	The item does not appear to have uncommon, rare or endangered aspects of the local area's history.	Nil
g	The item comprises unremarkable examples of its type and demonstrates little new information about rural properties in NSW.	Nil

Eulinda Park Homestead

Table 5-4 assesses the Eulinda Park Homestead against the assessment criteria.

Table 5-4: Assessment of heritage significance – Eulinda Park Homestead.

Criteria	Comments	Significance
a	The site is not an important item in the cultural history of the local region.	Nil
b	The site cannot be tied to an individual or group of persons.	Nil
c	While the façade does not appear to have been modified and appears to be in relatively good condition, the site does not contain any remarkable architectural features.	Nil
d	The item has no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	The site is unlikely to yield further data that will contribute to an understanding of NSW's cultural history.	Nil
f	The site does not appear to have uncommon, rare or endangered aspects of the local area's history.	Nil
g	The site comprises unremarkable examples of its type and demonstrates little new information about rural properties in NSW.	Nil

Old Thornycroft ruins

Table 5-5 assesses the Old Thornycroft ruins against the assessment criteria.

Table 5-5: Assessment of heritage significance – Old Thornycroft ruins.

Criteria	Comments	Significance
a	The item is not an important item in the cultural history of the local region.	Nil
b	The item cannot be tied to an individual or group of persons.	Nil
c	The objects within the site are in poor condition and do not provide a good example of creativity or craftsmanship.	Nil

Criteria	Comments	Significance
d	The item has no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	The item is unlikely to yield further data that will contribute to an understanding of NSW's cultural history.	Nil
f	The item does not appear to have uncommon, rare or endangered aspects of the local area's history.	Nil
g	The site comprises utilitarian ruins and demonstrates little new information about rural properties in NSW.	Nil

5.2.2 Assessment of Significance Summary

Table 5-6 details the assessed significance of recorded historic heritage items in accordance with the NSW Heritage Office guidelines and the *Burra Charter*.

Table 5-6: Historic heritage: assessment of significance.

Site Name	Level of Significance (none/ local /state/ national)
McPhail Mine	Local
Village of McPhail	Local
Rosewood Trotting Stud	Local
Eulinda Park Homestead	None
Old Thornycroft ruins	None

5.3 ARCHAEOLOGICAL RESEARCH POTENTIAL

Archaeological significance is directly linked to the archaeological (or scientific) research potential of an archaeological site or resource. An archaeological site broadly comprises below ground physical evidence of building foundations, occupation/archaeological deposits, features and artefacts.

The potential historical archaeological resource of the Study Area is limited to the village of McPhail and limited areas within the McPhail mine. As a result, the three questions derived from Bickford and Sullivan's work on archaeological significance have been considered in relation to the village of McPhail and the McPhail Mine.

Can the site contribute knowledge that no other resource can?

The potential archaeological resource from the village of McPhail and the McPhail Mine may provide physical evidence that could be used to supplement and test what is known about the Central West region and its history from other sites.

If intact, the archaeological resource may provide an opportunity to investigate the settlement of use of the use from the late nineteenth century and associations with the McPhail Mine. If present, intact artefact bearing deposits could provide insight into aspects of a small village and commercial enterprises in the late nineteenth and early twentieth centuries not available from other similar sites and the operation of a gold mine from the same time period.

Can the site contribute knowledge that no other site can?

The research undertaken as part of this assessment has included an evaluation of the available documentary evidence which provides relevant information about the potential structural remains and the use and development of the area. However, an archaeological resource is likely to be able to and fill gaps in the available documentary resource of the area. For example, intact artefact bearing deposits may provide specific information about the ways of life of the people who worked and resided in the village and the operations of the mine.

Is this knowledge relevant to the general questions about human history or other substantive questions relating to Australian history, or does it contribute to the major research questions?

The Study Area was part of the historical development of the Central Western region of NSW. There may be opportunity to reveal additional information about its past through the material remains that may have accumulated in the village of McPhail. The potential archaeological resource may also be suitable for comparative analysis with other sites in the area, as well as in a wider context of settlement and exploitation of the area.

5.4 STATEMENT OF SIGNIFICANCE

The Study Area is typical of a rural landscape within the central west region of NSW. The history of the area from the early to mid-nineteenth century, includes its settlement by Europeans, its subsequent use as cleared pastoral and agricultural land, and its exploitation of mineral resources. The rural character of the Study Area is evidenced in the houses and rural infrastructure recorded within the Study Area and its mining history is seen in the village of McPhail, the McPhail Mine. The rural character of the Study Area has contributed to the low potential of the archaeological resource as occupation was at a low density and has been subjected to disturbances such as ploughing.

Except for the village of McPhail, the McPhail Mine, and the Rosewood Trotting Stud, the identified historic heritage items have been assessed as having no heritage significance.

Any archaeological remains associated with the village of McPhail and the McPhail Mine would likely have little or local significance. Any additional, unidentified historic heritage items that may be present within the Study Area are likely to be insignificant rural structures, such as ruined sheds, fences, and stockyards, as well as utilitarian farming objects. If present, these are likely to be typical of those found throughout the central west and rural NSW and have no heritage significance.

5.5 LIKELY IMPACTS TO HISTORIC HERITAGE FROM THE PROJECT

Table 5-7 details the potential impacts to historic heritage from the Project and **Figure 5-1** shows the location of the items in relation to the Proposed Limit of Disturbance and the 30 m buffer.

The McPhail mine and the village of McPhail would partially be impacted by the proposed Newell Highway realignment. Further, the Rosewood Trotting Stud would be partially impacted by the proposed SAR Open Cut. Structures at the Rosewood Trotting Stud which would be impacted include the 1915 homestead, additional outbuildings and residences, and the storage sheds.

The Old Thorneycroft remains are located within the SAR Waste Rock Emplacement and would be totally impacted.

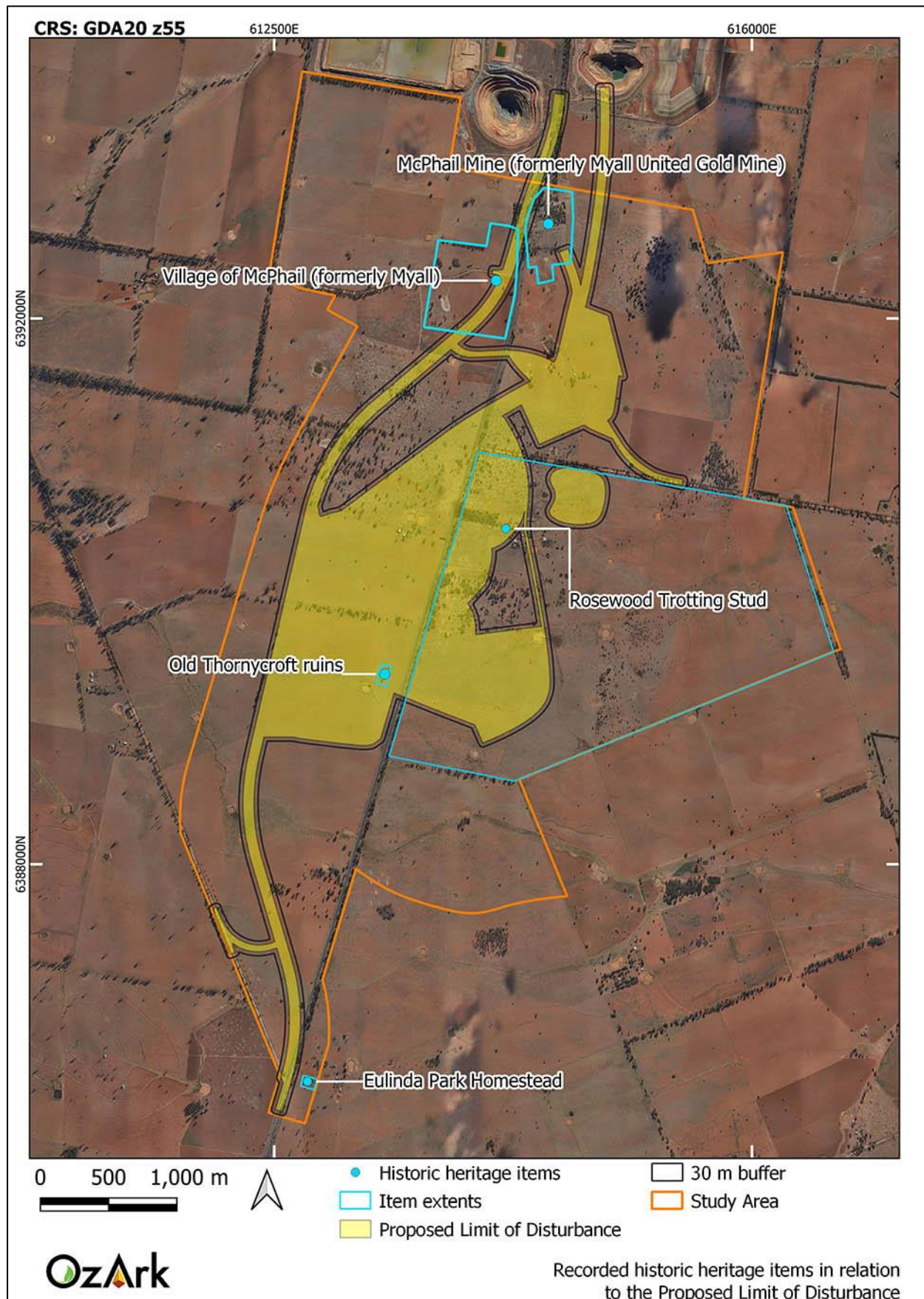
The Eulinda Park homestead is outside the Proposed Limit of Disturbance and would not be impacted by the Project.

As the McPhail Mine, the village of McPhail, and the Rosewood Trotting Stud have been assessed as having local heritage significance, a Statement of Heritage Impact (SOHI) is presented in **Section 6** for the items.

Table 5-7: Historic heritage: impact assessment.

Site name	Would this site be impacted?	Level of Significance (none/ local /state/ national)	Potential impact of Project
McPhail mine	Yes - partially	Local	Partially located within the 30 m Proposed Limit of Disturbance buffer associated with the Newell Highway realignment.
Village of McPhail	Yes - partially	Local	Partially located within the Newell Highway realignment.
Rosewood Trotting Stud	Yes - partially	Local	Partially located within the proposed SAR Open Cut.
Eulinda Park Homestead	No	None	None - located 75 m from the Proposed Limit of Disturbance.
Old Thorneycroft ruins	Yes	None	Located within the proposed waste rock emplacement.

Figure 5-1: Location of the historic heritage items in relation to the Proposed Limit of Disturbance and the 30 m buffer.



6 STATEMENT OF HERITAGE IMPACT

The Heritage Council requests that a SOHI be prepared if significant heritage items are to be impacted. Similarly, local councils and other development approval bodies are encouraged to require such a statement.

Where the impact of a project is likely to be detrimental to the heritage significance of the item or area, a SOHI needs to argue why such action is the only viable solution and explain why alternatives are not. The works that will have a negative impact should be listed, with statements made as to why the impact/s cannot be avoided, and what steps have been taken to minimise their effect/s. It might also be useful to consider these in relation to the criteria of heritage significance.

6.1 MCPHAIL MINE

6.1.1 Summary of Significance

The McPhail mine has been assessed as having local heritage significance due to its historical values associated with its contributing role in shaping the development and growth of the Tomingley and Peak Hill area (**Section 5.2.1**). While the former mine retains some physical evidence, these individual components are not significant in themselves, but as a precinct, allow for some interpretation of the former mine. The precinct also has limited research potential should archaeological deposits be present, although any subsurface deposits is likely to be of limited local significance.

6.1.2 SOHI

The McPhail mine is partially located within the Proposed Limit of Disturbance and the 30 m buffer associated with the Newell Highway realignment in the northwest and the amenity bund and haul road in the southeast. As such, these Project components would partially impact the heritage values of the McPhail mine.

Within the 30 m Proposed Limit of Disturbance buffer associated with the Newell Highway realignment, the only identified physical evidence of the McPhail mine is a large piece of steel infrastructure (use unknown) which is not *in situ* (**Figure 4-5**; image 1). As the piece of steel infrastructure is within the 30 m Proposed Limit of Disturbance buffer, it would potentially be impacted by the proposed work. If the item is not able to be avoided, the item should be moved outside the area of impact but kept within the extent of the McPhail mine. As the item is already in a secondary context, this will not diminish the item's historic association with the mine.

Within the Proposed Limit of Disturbance and the 30 m Proposed Limit of Disturbance buffer associated with the amenity bund and haul road, no physical evidence of the McPhail mine will be impacted.

As most of the identified components of the McPhail mine would not be harmed by the Project, there would only be moderate impacts to its heritage values, although its historic values will be maintained. Recommendations contained in this HHAR that are expected to be followed by the Applicant include. either avoiding or moving the piece of steel infrastructure to ensure that it is not harmed by the Project and that its association with the McPhail mine is maintained (**Section 7.2.1**).

6.2 VILLAGE OF MCPHAIL

6.2.1 Summary of Significance

The village of McPhail has been assessed as having local heritage significance due to its contributory role in supporting the McPhail Mine and shaping the development and growth of the Tomingley and Peak Hill area (**Section 5.2.1**). The former village site is no longer interpretable as it consists only of a fragmented surface expression of ephemeral items, however, the potential archaeological resource at the village may provide a tangible link to the historical development and ownership of the village of McPhail.

6.2.2 SOHI

The village of McPhail is located within the proposed Newell Highway realignment and therefore the Project would partially impact the village. Three potential alignments for the Newell Highway were considered for the Project, however, all alignments would have resulted in some level of impact to the village.

Overall, the proposed impact associated with the realignment would be relatively small when compared to the overall size of the village. Further, the village is currently uninterpretable with no above ground features remaining, except for dispersed surface artefacts. While the Project would potentially impact the physical features of the village of McPhail, the intangible historic values would continue following the proposed works. There is potential for archaeological deposits to remain across the village which may be impacted by the Project. This potential archaeological resource could yield information about the historical development, occupation, and commercial use of the village from the late nineteenth century and provide a tangible link to the historical values of the village. However, due to repeated ploughing within the extent of the village, it is unlikely that substantial deposits will remain intact, but this would not be known unless the potential areas of deposit are investigated.

To gain as much information as possible about the village of McPhail and to mitigate the potential loss of values from the Project, a series of test trenches along the proposed Newell Highway realignment following Project approval are recommended to determine whether intact deposits are present and ensure any features that are uncovered are appropriately recorded (**Section 7.2.2**).

6.3 ROSEWOOD TROTting STUD

6.3.1 Summary of Significance

The Rosewood Trotting Stud has been assessed as having local heritage significance for its historical, associative, and aesthetic values (**Section 5.2.1**). The historical and associative values of the Rosewood Trotting Stud relate to it having been one of the largest breeders of pacing stock in Australia and its association with the Hando family, one of the early settlers of the local area. The homestead at the Rosewood Trotting Stud has aesthetic significance as a representative example of an Edwardian style homestead which is becoming an increasingly rare style of architecture in rural landscapes.

6.3.2 SOHI

From a 'best-of-all-worlds' heritage perspective, and due to the recognised heritage significance of the Rosewood Trotting Stud, the retention, conservation and continued use of the significant component of built heritage associated with the item, the homestead, would be the ideal.

If this were undertaken, the heritage values of the item would be retained and the cumulative impact to the loss of heritage values to the item would be lessened. This would satisfy Article 2 of the Burra Charter, specifically Article 2.1 that states: *Places of cultural significance should be conserved*.

However, retention of the significant element of the homestead is not proposed as the Project involves the extraction of ore from the identified SAR deposits and the homestead is located within the proposed SAR Open Cut. Several outbuildings associated within the Rosewood Trotting Stud are also within this area of impact. Although these outbuildings do not have significant heritage values, they provide context of the activities undertaken at the property. Retention of the buildings is neither feasible nor reasonable given the economic benefits of the Project and its engineering requirements.

Demolition of the homestead would remove a representative and increasingly rare style of architecture, an Edwardian style homestead, and would result in the loss of the aesthetic value of the item. Further, demolition of the homestead would also harm the item's historic and associative value.

As a result, it is recommended that a photographic archival recording of the homestead be completed prior to demolition (**Section 7.2.3**). A photo of each of the surrounding outbuildings should also be included in the archival recording as they provide context of the Rosewood Trotting Stud. This would ensure a current record of the item but cannot mitigate the loss of the historic, associative, and aesthetic values of the item.

7 MANAGEMENT AND MITIGATION

7.1 GENERAL PRINCIPLES FOR THE MANAGEMENT OF HISTORIC SITES

Appropriate management of heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development.

In terms of best practice and desired outcomes, avoiding impact to any historical item is a preferred outcome, however, where a historical site has been assessed as having no heritage value, impacts to these items does not require any legislated mitigation.

7.2 MANAGEMENT AND MITIGATION OF RECORDED HISTORIC SITES

Based on the current impact footprint of the Project, the following sites would likely be impacted (**Section 5.2.2**):

- Village of McPhail.
- Rosewood Trotting Stud.
- McPhail Mine.
- Old Thornycroft ruins.

The recommended management measures for the historic heritage items and archaeological sites are discussed below.

7.2.1 McPhail mine

The McPhail mine is partially located within the Proposed Limit of Disturbance and the 30 m buffer associated with the Newell Highway realignment and the amenity bund and haul road.

The only infrastructure associated with the mine within the 30 m Proposed Limit of Disturbance buffer is a large piece of steel infrastructure which is not *in situ*. Therefore, to ensure no physical components associated with the mine would be impacted by the Project, the steel infrastructure should either be avoided or moved to an area where it would not be harmed prior to any Project-related ground disturbance activities commencing in the vicinity of the object. No other components associated with the mine, or potential areas of archaeological deposit, is at risk of being impacted by the Project.

7.2.2 Village of McPhail

The village of McPhail would be partially impacted by the realignment of the Newell Highway. As such, prior to the commencement of works associated with the road construction, archaeological investigations within the proposed realignment area should be undertaken, consisting of a combination of monitoring soil stripping and test excavations within the defined areas of interest. Prior to the archaeological works commencing, an Archaeological Work Method Statement

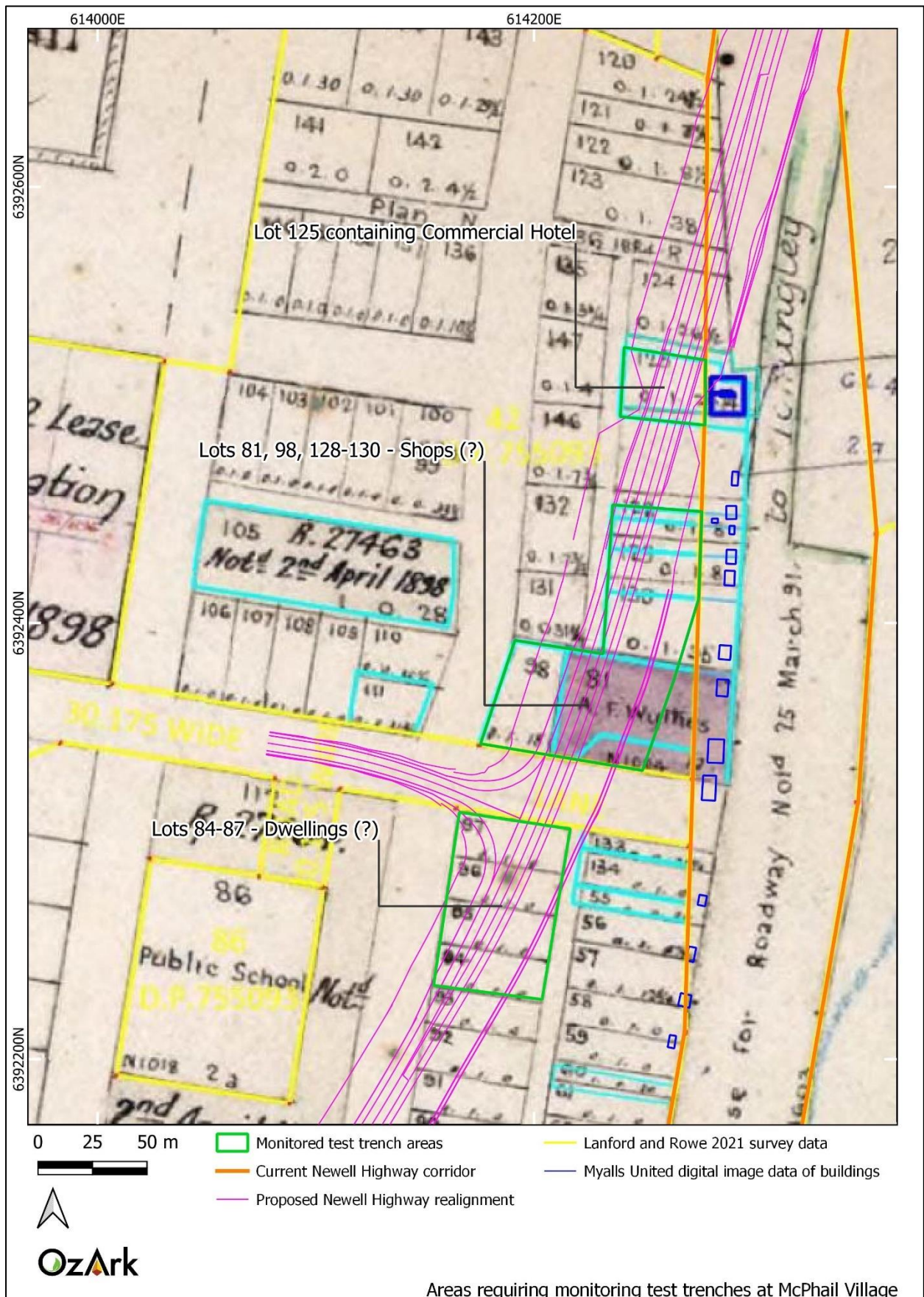
detailing the proposed works would need to be prepared and endorsed by Heritage NSW. The Archaeological Work Method Statement would detail the exact location of the trenches, as well as the number and extent.

The investigations should include a program of archaeologically monitored machine stripping of the top 20 cm (the plough zone) of the ground. This would take place in the potential areas of archaeological resource which includes the lots which contained the Commercial Hotel (Lot 125) and potential commercial businesses that once fronted the current Newell Highway alignment (Lots 91, 98, 128-130) (**Figure 7-1**). While survey data of a Myalls United digital image shows the Commercial Hotel and commercial buildings are now mostly located within the current road corridor of the Newell Highway (**Figure 7-1**), there is still potential for archaeological deposits to be present within these i.e. later buildings not included in the plans or deposits associated with the premises such as wells.

A series of test trenches within the proposed realignment area would also be excavated by machine across the part of the village where potential dwellings may have been located to identify whether there are any archaeological deposits remaining (**Figure 7-1**). If any archaeological remains are exposed during the monitored machine excavation of the test trenches, the remains would be recorded, and hand excavated. Further machine stripping may be required if any additional areas of archaeological interest are identified.

Following the stripping of the top 20 cm of soil in the areas of interest, any archaeological remains including concentrations/deposits of artefacts, structural remains, or deeper cut features that are exposed would be recorded and hand excavated. If no archaeological remains are identified following the removal of the top 20 cm of soil, then further monitored machine stripping may take place until such time as it is clear that archaeological remains or deposits would not be encountered. Excavation would not be required once pre-occupation sub-soils are exposed unless an archaeological feature is identified cut into the sub-soils.

Figure 7-1: Location of archaeological investigation areas in relation to the proposed Newell Highway realignment.



7.2.3 Rosewood Trotting Stud

The Rosewood Trotting Stud is partially located within the Proposed Limit of Disturbance.

A SOHI is presented in **Section 6** to assess the potential impact of the Project to the heritage item.

The SOHI should be forwarded to Narromine Shire Council to allow consideration of the potential impacts to an item with local heritage significance (Section 5.10 of the LEP).

Archival photographic recording of the homestead and associated buildings should be completed prior to any Project-related ground disturbance activities commencing in the vicinity of the item.

7.2.4 Eulinda Park Homestead

The Eulinda Park Homestead item is located 75 m from the Proposed Limit of Disturbance and therefore would not be impacted by the Project.

No management measures are warranted for the item as it has been assessed as having no heritage significance and it would not be impacted (**Section 5.2.1**).

7.2.5 Old Thornycroft ruins

The Old Thornycroft ruins are located within the Proposed Limit of Disturbance and would be totally impacted by the Project.

No management measures are warranted for the item as it has been assessed as having no heritage significance (**Section 5.2.1**).

7.3 UNANTICIPATED FINDS PROTOCOL

Should consent for the Project be gained, a HHMP would be developed in consultation with the Department of Planning, Industry and Environment (DPIE). The HHMP would contain procedures should a new discovery of significant historic artefacts or items be made during construction or operation of the Project.

The procedure in **Section 7.3.1** is an example of an unanticipated finds protocol that could be incorporated into the HHMP.

7.3.1 Unanticipated Finds Protocol Example

A historic artefact is anything which is the result of past activity not related to the Aboriginal occupation of the area. This includes pottery, wood, glass, and metal objects, as well as the built remains of structures, sometimes heavily ruined.

Heritage significance of historic items is assessed by suitably qualified specialists who place the item or site in context and determine its role in aiding the community's understanding of the local area, or their wider role in being an exemplar of state or even national historic themes.

The following protocol should be followed if previously unrecorded or unanticipated historic objects are encountered:

1. All ground surface disturbance in the area of the finds should cease immediately, then:
 - a) The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted
 - b) The site supervisor will be informed of the find(s).
2. If finds are suspected to be human skeletal remains, then NSW Police must be contacted as a matter of priority.
3. If there is substantial doubt regarding the historic significance for the finds, then gain a qualified opinion from an archaeologist as soon as possible. This can circumvent proceeding further along the protocol for items which turn out not to be significant. If a quick opinion cannot be gained, or the identification is that the item is likely to be significant, then proceed to the next step.
4. Notify Heritage NSW as soon as practical on (02) 9873 8500 providing any details of the historic find and its location.
5. If in the view of the heritage specialist or Heritage NSW that the finds appear not to be significant, work may recommence without further investigation. Keep a copy of all correspondence for future reference.
6. If in the view of the heritage specialist or Heritage NSW that the finds appear to be significant, facilitate the recording and assessment of the finds by a suitably qualified heritage specialist. Such a study should include the development of appropriate management strategies.
7. If the find(s) are determined to be significant historic items (i.e. of local or state significance), any re-commencement of ground surface disturbance may only resume following compliance with any legal requirements and gaining written approval from Heritage NSW.

8 RECOMMENDATIONS

The following recommendations are made based on the potential impacts associated with the Project and with regard to:

- Legal requirements under the terms of the Heritage Act
- Guidelines presented in the *Burra Charter*
- The findings of the current assessment
- The interests of the local community.

Recommendations concerning the historic values within Study Area are as follows.

1. Following development consent of the Project, the Applicant would develop an HHMP which is to be agreed to DPIE (with input from Heritage NSW). The HHMP would also include an unanticipated finds protocol and unanticipated skeletal remains protocol. An example of an unanticipated finds protocol for historic items and/or human skeletal materials is provided in **Section 7.3.1**.
2. Should development consent for the Project be granted, management strategies to manage and mitigate the potential impact of the Project would include:
 - a. McPhail mine: The steel infrastructure within the 30 m Proposed Limit of Disturbance buffer should either be avoided or moved to an area where it would not be harmed as outlined in **Section 7.2.1**. If relocation is required, this should take place prior to any Project-related ground disturbance activities commencing in the vicinity of the item.
 - b. Village of McPhail: Archaeological investigations within the impact footprint of the Newell Highway realignment should be undertaken prior to Project-related ground disturbance activities commencing in the vicinity of the item as outlined in **Section 7.2.2**.
 - c. Rosewood Trotting Stud: This report, including the SOHI presented in **Section 6**, should be forwarded to Narromine Shire Council prior to the demolition of the item, to allow consideration of the potential impacts to an item with local heritage significance (Section 5.10 of the LEP). Photographic recording of the homestead and associated buildings should be completed prior to any Project-related ground disturbance activities commencing in the vicinity of the item.

- d. Eulinda Park Homestead: No management measures are warranted for the item as it has been assessed as having no heritage significance and it would not be impacted by the Project.
 - e. Old Thornycroft ruins: The item would be totally impacted by the Project however no management measures are warranted as it has been assessed as having no heritage significance.
3. All land-disturbing activities must be confined within the assessed Study Area or the approved TGO Mine Site. Should Project impacts change such that the area to be impacted is outside of the assessed Study Area or the approved TGO Mine Site, then additional assessment may be required.

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