Parkes Bypass

Aboriginal and Non-Aboriginal heritage assessment report

Roads and Maritime Services | October 2018

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Roads and Maritime Services

Parkes Bypass

Aboriginal and Non-Aboriginal heritage assessment report

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Abbreviations

AHIMS	Aboriginal Heritage Information System
CW LLS	Central West Local Land Services
EP&A Act	Environmental Planning and Assessment Act 1979
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
GSE	Ground surface exposure
GSV	Ground surface visibility
Heritage Act	Heritage Act 1977
IF	Isolated find
ISEPP	Infrastructure State Environmental Planning Policy
LGA	Local Government Area
NPW Act	National Parks and Wildlife Act 1974
NSW	New South Wales
PACHCI	Procedure for Aboriginal cultural heritage consultation and investigation
PEI	Preliminary Environmental Investigation
PHLALC	Peak Hill Local Aboriginal Land Council
PSC	Parkes Shire Council
NMP	Northparkes Mine
OEH	Office of Environment and Heritage
REF	Review of Environmental Factors
TSRs	Travelling Stock Reserves

Executive summary

OzArk Environmental & Heritage Management (OzArk) has completed an Aboriginal and non-Aboriginal heritage assessment of a 418-hectare area of land surrounding the proposed Parkes Bypass footprint within Parkes, NSW, (the survey area). The survey area has the potential to contain Aboriginal or historic sites which could be impacted by the proposed construction and operation of a 10.5-kilometre bypass at Parkes as part of the Newell Highway Upgrade project (the proposal) within the Parkes Shire Local Government Area.

The survey area includes land currently under private ownership, Parkes Shire Council owned land, existing transport corridors and Crown land utilised as a travelling stock route (TSR).

The current assessment applies the guidelines set out in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (DECCW 2011) and Stage 2 of the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (RMS 2011). The assessment has determined that portions of the survey area are defined as 'disturbed land' under the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW 2010a) where a visual inspection is not required. Portions of the survey area that are not classified as 'disturbed land' require further investigation and were examined as per Stage 2 of the PACHCI (RMS 2011) and the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (DECCW 2010b). The historic heritage assessment follows the *Historical Archaeology Code of Practice* (Heritage Council 2006).

The fieldwork component of this assessment was undertaken by OzArk on Tuesday 21 and Wednesday 22 February 2017. Anthony Wilson, Tonia Robinson and Lyn Bell attended the survey on behalf of the Peak Hill Local Aboriginal Land Council (PHLALC).

Two Aboriginal sites, both scarred trees (Westlime Road-ST1 and Barkers Road-ST1), were recorded within the survey area as a result of the survey. Two previously recorded AHIMS sites (#43-3-0059 and #43-3-0061) were found to be located outside the survey area.

Six historic heritage sites and/or objects were recorded during the assessment. One item listed on the State Heritage Register, the Parkes Railway Group, was found to be located outside the survey area, however, given the potential impact to the aesthetic value of the item, a Statement of Heritage Impact (SOHI) has been included (Section 11).

Recommendations concerning Aboriginal heritage within the survey area are as follows:

1. An Aboriginal Heritage Management Plan (AHMP) should be prepared in accordance with the Procedure for Aboriginal cultural heritage consultation and investigation (Roads and Maritime, 2012) and Standard Management Procedure – Unexpected Heritage Items (Roads and Maritime, 2015) and implemented as part of the Construction Environmental Management Plan (CEMP). This should provide specific guidance on measures and controls to be implemented for managing impacts on Aboriginal heritage. The AHMP should be prepared in consultation with all relevant Aboriginal groups.
2. A buffer zone (10 metres around each site as a minimum; Section 7.2) should be created around Barkers Road-ST1 and Westlime Road-ST1 to ensure they are avoided during construction. High-visibility fencing should be used.
3. Outside of Barkers Road-ST1 and Westlime Road-ST1 there are no constraints to the proposal. All land-disturbing activities must be confined to within the assessed survey area shown in Figure 1-3. Should the parameters of the proposed work extend beyond the assessed area, then further archaeological assessment may be required.
4. All construction personnel should be made aware of the location of Barkers Road-ST1 and Westlime Road-ST1 and inductions should be provided as to the location of the recorded sites and their legislative protection under the NPW Act.

5. The *Standard Management Procedure - Unexpected Heritage Items* (Roads and Maritime, 2015; Appendix C) should be followed if an unknown or potential Aboriginal object/s, including skeletal remains, is found during construction. This applies where Roads and Maritime does not have approval to disturb the object (s) or where a specific safeguard for managing the disturbance (apart from the Procedure) is not in place.

Recommendations concerning historic heritage within the survey area are as follows:

1. A Non-Aboriginal Heritage Management Plan (NAHMP) will be prepared and implemented as part of the CEMP. This should provide specific guidance on measures and controls to be implemented to avoid and mitigate impacts to Non-Aboriginal heritage.
2. The location of the disused gold mine shafts (Reedsdale Road-HS01) should be included on site sensitivity plans and a no-go exclusion zone will be established before construction starts. If any part of the site cannot be avoided by the proposal, the site will be subject to a photographic archival recording.
3. Sites Reedsdale Road-HS02 to Reedsdale Road-HS06 are located within the survey area, however, these items and places have been assessed as having no heritage significance and they do not have statutory protection under the Heritage Act (Section 9.2.2). As such, the proposal can proceed at these locations without further requirements.
4. The proposal has been assessed as having no impact to the heritage values of the Parkes Railway Station Group. As such, the proposal can take place in the vicinity of this historic place without any further assessment of requirements.
5. All land-disturbing activities must be confined within the assessed survey area. Should project impacts change such that the area to be impacted is altered then additional assessment may be required.
6. All contractors undertaking the work should be made aware of the legislative protection of historic heritage sites in the event unknown heritage items ae encountered during the work. Accordingly, site inductions would be provided to workers on the project to inform them of the location of the recorded sites and their legislative protection under the *Heritage Act 1977.*
7. Under the Heritage Act, it is an offense to disturb, destroy or remove historic relics without the prior consent of the NSW Heritage Division. Accordingly, the *Standard Management Procedure - Unexpected Heritage Items* (Roads and Maritime, 2015) will be followed if any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. Work will only re-commence once the requirements of that Procedure have been satisfied. (Appendix C).

Contents

Abbreviations iii

Executive summary iv

1 Introduction 1

1.1 Brief description of the proposal 1

1.2 Background 3

1.3 Proposed work 3

1.4 Survey area 5

1.5 Relevant legislation 7

1.6 Assessment approach 8

2 Aboriginal archaeological assessment 9

2.1 Purpose and objectives 9

2.2 Date of archaeological assessment 9

2.3 Aboriginal community involvement 10

2.4 OzArk involvement 10

3 Landscape context 11

3.1 Topography 11

3.2 Geology and soils 14

3.3 Hydrology 14

3.4 Vegetation 14

3.5 Climate 15

3.6 Land–use history and existing levels of disturbance 15

3.7 Summary of landscape context 17

4 Aboriginal archaeology background 18

4.1 Ethno-historic sources of regional Aboriginal culture 18

4.2 Regional archaeological context 18

4.3 Local archaeological context 24

4.4 Predictive model for site location 29

5 Application of the due diligence Code of Practice 31

5.1 Defences under the NPW Regulations 2009 31

6 Results of Aboriginal archaeological assessment 33

6.1 Sampling Strategy and Field Methods 33

6.2 Project constraints 35

6.3 Effective survey coverage 35

6.4 Aboriginal sites recorded 36

6.5 Previously recorded Aboriginal sites located 42

6.6 Aboriginal community input 43

Contents (continued)

6.7 Discussion 43
6.8 Assessment of significance 44
6.9 Likely impact to Aboriginal heritage from the proposal 46
7 Management and mitigation: Aboriginal heritage 47
7.1 General principles for the management of Aboriginal sites 47
7.2 Management and mitigation of recorded Aboriginal sites 47
8 Historic heritage assessment: background 50
8.1 Brief history of Parkes 50
8.2 Local context 50
8.3 Survey methodology 53
8.4 Project constraints 53
9 Results of historic heritage assessment 54
9.1 Historic heritage sites 54
9.2 Assessment of historic heritage significance 62
9.3 Discussion 64
9.4 Likely impacts to historic heritage from the proposal 65
10 Management and mitigation: historic heritage 66
10.1 General principles for the management of historic sites 66
10.2 Management and mitigation of recorded historic sites 66
11 Statement of Heritage Impact (SOHI) 68
11.1 Statutory obligations 68
11.2 Conclusion 69
12 Recommendations 70
12.1 Aboriginal heritage 70
12.2 Historic heritage 70

Tables

Table 3-1	Landforms within the survey area	12
Table 4-1	Aboriginal heritage: desktop-database search results.	24
Table 4-2	AHIMS site types and frequencies	25
Table 6-1	Survey coverage data	36
Table 6-2	Landform summary—sampled areas	36
Table 6-3	Aboriginal sites recorded during the survey	36
Table 6-4	Barkers Road-ST1 scar attributes	38
Table 6-5	Westlime Road-ST1 scar attributes	40
Table 6-6	Aboriginal heritage significance assessment	46
Table 6-7	Aboriginal heritage impact assessment	46
Table 7-1	Activity exclusion/buffer zone at sites Barkers Road-ST1 and Westlime Road-ST1	49
Table 8-1	Historic heritage: desktop-database search results	51
Table 8-2	Description of Parkes Railway Station Group structures and items	51
Table 9-1	Historic sites recorded during the survey	54
Table 9-2	Assessment of heritage significance – Reedsdale Road-HS01	63
Table 9-3	Assessment of heritage significance – Reedsdale Road-HS02	64
Table 9-4	Assessment of heritage significance – Reedsdale Road-HS03 to HS06	64
Table 9-5	Historic heritage impact assessment	65
Table 10-1	Activity exclusion zone at Reedsdale Road-HS01	67

Figures

Figure 1-1 Location map showing the survey area in relation to Parkes, NSW 2
Figure 1-2 Proposed road alignment in relation to the survey area 4
Figure 1-3 Aerial showing the survey area 6
Figure 1-4: Aerial showing the survey area. 6
Figure 3-1 Mitchell landscapes of the survey area 11
Figure 3-2 Map of landforms within the survey area 13
Figure 3-3 Land use within and surrounding the survey area 16
Figure 4-1 Location of AHIMS sites in relation to the survey area 26
Figure 4-2 Location of AHIMS sites #43-3-0059 and #43-3-0061 in relation to the survey area 27
Figure 4-3 Differing location of #43-3-0059 between AHIMS and information on the site card 28
Figure 4-4 Differing location of #43-3-0061 between AHIMS and information on the site card 28
Figure 5-1 Aerial showing portions of the northern survey area assessed under the Due Diligence Code of Practice and the Code of Practice 32
Figure 5-2 Aerial showing portions of the southern survey area assessed under Due Diligence Code of Practice and the Code of Practice 32
Figure 6-1 Aerial showing spot check locations, pedestrian transects and vehicle reconnaissance across the survey area 34
Figure 6-2 Location of recorded Aboriginal sites in relation to the survey area 37
Figure 6-3 Location of Barkers Road-ST1 in relation to Barkers Road and the Newell Highway 38
Figure 6-4 Barkers Road-ST1. View of site and up close view of scars 39
Figure 6-5 Location of Westlime Road-ST1 in relation to Westlime Road and the Condobolin Road 40
Figure 6-6 Westlime Road-ST1. View of site and up close view of scars 41
Figure 6-7 Site #43-3-0059 showing photos at the time of the recording in 2004 and the locations ground-truthed in 2017 42
Figure 6-8 AHIMS register location of site #43-3-0061 43
Figure 7-1 View of Barkers Road-ST1 with a 10 metre buffer 48
Figure 7-2 View of Westlime Road-ST1 with a 10 metre buffer 48
Figure 8-1 Location of the Parkes Railway Station Group curtilage in relation to the survey area 52
Figure 8-2 Location of the buildings described in Table 9-2 52
Figure 9-1 Location of Reedsdale Road-HS01 to HS06 in relation to the survey area 55
Figure 9-2 Location of Reedsdale Road-HS01 in relation to the survey area 56
Figure 9-3 Reedsdale Road-HS01. View of site and sample view of shafts 57
Figure 9-4 Location of Reedsdale Road-HS02 in relation to the survey area 58
Figure 9-5 Reedsdale Road-HS02. View of site and sample view of historic items 59
Figure 9-6 Location of Reedsdale Road-HS03 to HS06 in relation to the survey area 60
Figure 9-7 Reedsdale Road-HS03. View of historic item 60
Figure 9-8 Reedsdale Road-HS04. View of historic item 61
Figure 9-9 Reedsdale Road-HS05. View of historic item 61
Figure 9-10 Reedsdale Road-HS06. View of historic item 62
Figure 10-1 View of Reedsdale Road-HS01 with proposed exclusion zone points 67

Appendices

Plates

Appendix A RMS clearance letter

Appendix B AHIMS extensive search result

Appendix C Historic heritage search results

Appendix D Unexpected heritage items procedure

Appendix E Aboriginal heritage: Artefact identification sheet

1 Introduction

1.1 Brief description of the proposal

OzArk Environmental & Heritage Management (OzArk) has completed an Aboriginal and historic heritage assessment of a 418 hectare area of land surrounding the proposed Parkes Bypass footprint within Parkes, NSW, (the survey area). The survey area has the potential to contain Aboriginal and non-Aboriginal heritage sites which could be impacted by the proposed construction and operation of a 10.5 kilometre bypass at Parkes as part of the Newell Highway Upgrade project (the proposal) within the Parkes Shire Local Government Area (LGA) (Figure 1-1).

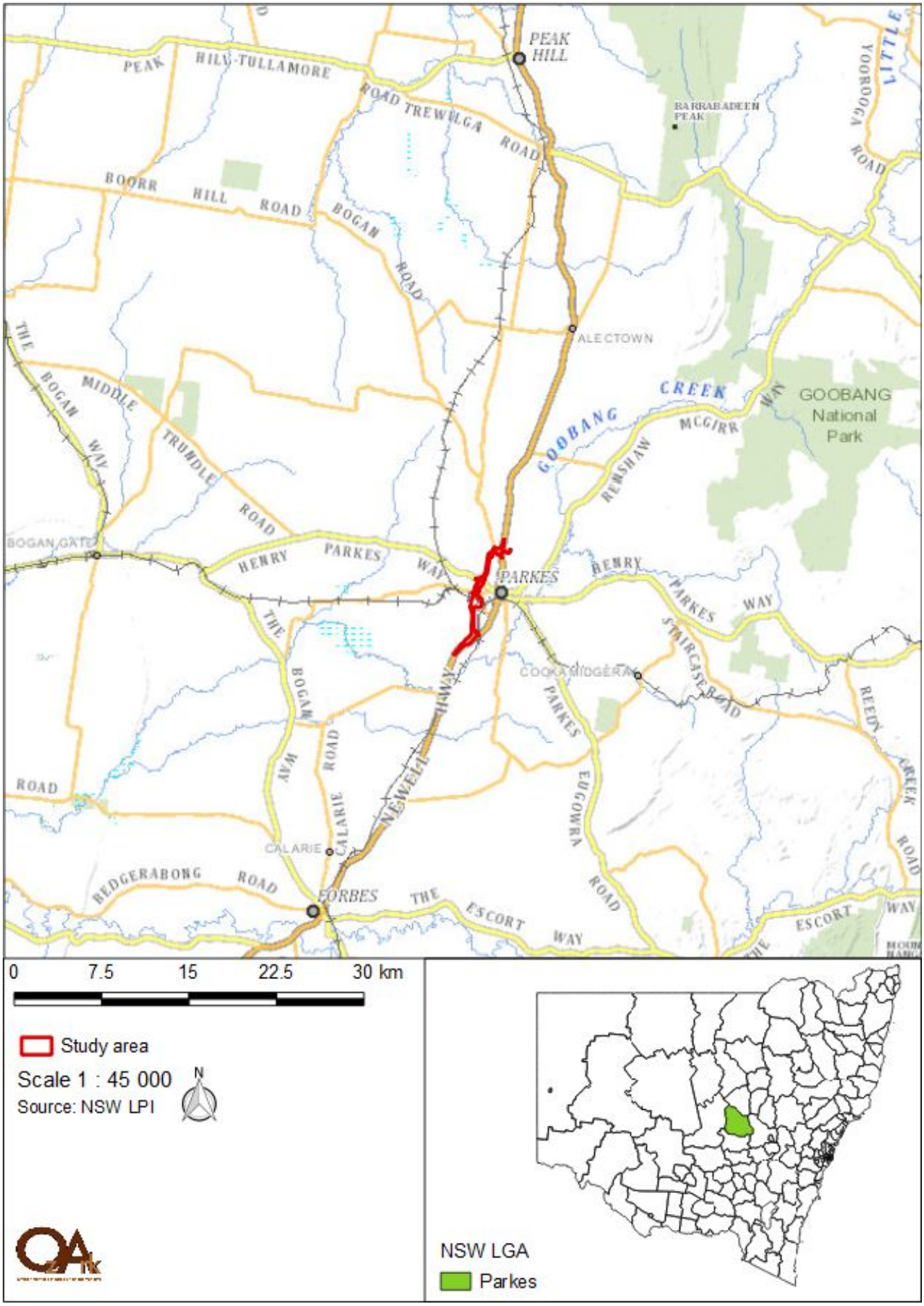

Figure 1-1 Location map showing the survey area in relation to Parkes, NSW

1.2 Background

In 2014, OzArk completed the *Preliminary Environmental Investigation Aboriginal and Historic Heritage Assessment, Newell Highway (A39) Upgrade* (PEI) on behalf of Roads and Maritime. The PEI was compiled to assist Roads and Maritime in the strategic design and options analysis in order to inform on Aboriginal and historic archaeological constraints associated with the current proposal.

The 2014 assessment identified constraints associated with both Aboriginal and historic archaeological sites within the current survey area. As such, it was recommended that further assessment would be required through the completion of Stage 2 of the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI, RMS 2011). This current assessment documents the findings of the Stage 2 PACHCI process.

1.3 Proposed work

The proposal's key features include:

- A new two-lane bypass (one lane in each direction) with four key intersections comprising:
    - T-intersections where the new bypass connects to the existing highway near Barkers Road (south) and Maguire Road (north)
    - A staggered T-intersection at London Road
    - A four-way roundabout at Condobolin Road
- A bridge over the Broken Hill and Parkes to Narromine rail lines and Hartigan Avenue and a shared pedestrian/cycleway bridge over the Parkes Bypass connecting Victoria Street and Back Trundle Road
- An extension of Hartigan Avenue that would connect to Brolgan Road (west of the bypass) and Condobolin Road
- Changes to local roads to tie in with the new bypass.

It is anticipated that construction would start in 2020 and would take about three years to complete. This would be subject to funding, weather and access considerations (Figure 1-2).

For full details on the key features of the proposal, refer to Section 3 of the Review of Environmental Factors (REF; WSP 2018).

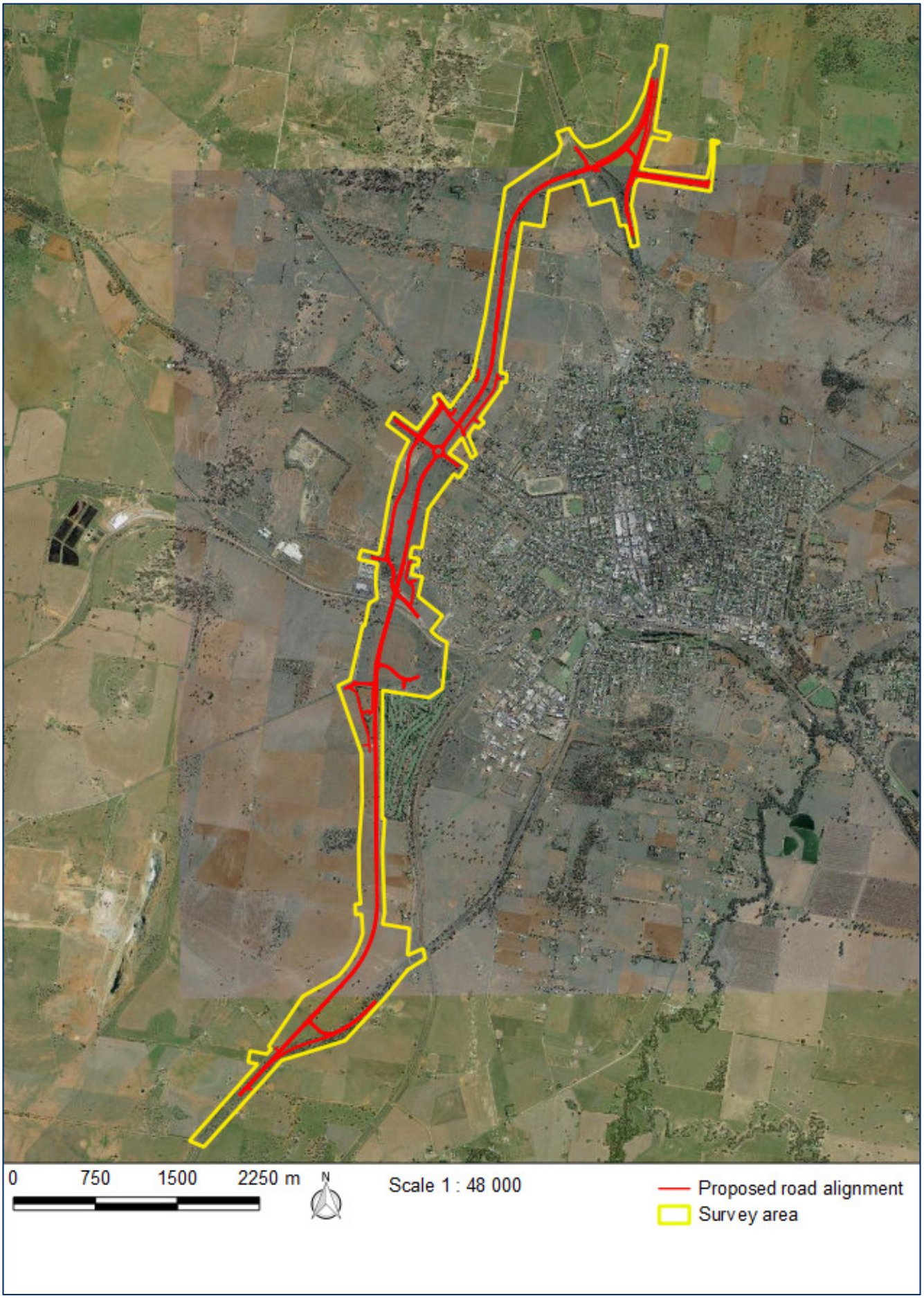

Figure 1-2 Proposed road alignment in relation to the survey area

1.4 Survey area

The Newell Highway Upgrade project area, hereafter referred to as the survey area, is located within Parkes Shire LGA, in the central west of NSW (Figure 1-3).

The limits of the survey area are:

- Northern limit – 790 metres north of Maguire Road
- Southern and western limit – 680 metres south of Parkesborough Road
- Eastern limit – 700 metres along Maguire Road from the intersection of the Newell Highway and Maguire Road.

The survey area includes land currently under private ownership, Parkes Shire Council (PSC) owned land, Crown land including travelling stock routes (TSRs); and existing transport corridors including Reedsdale Road.

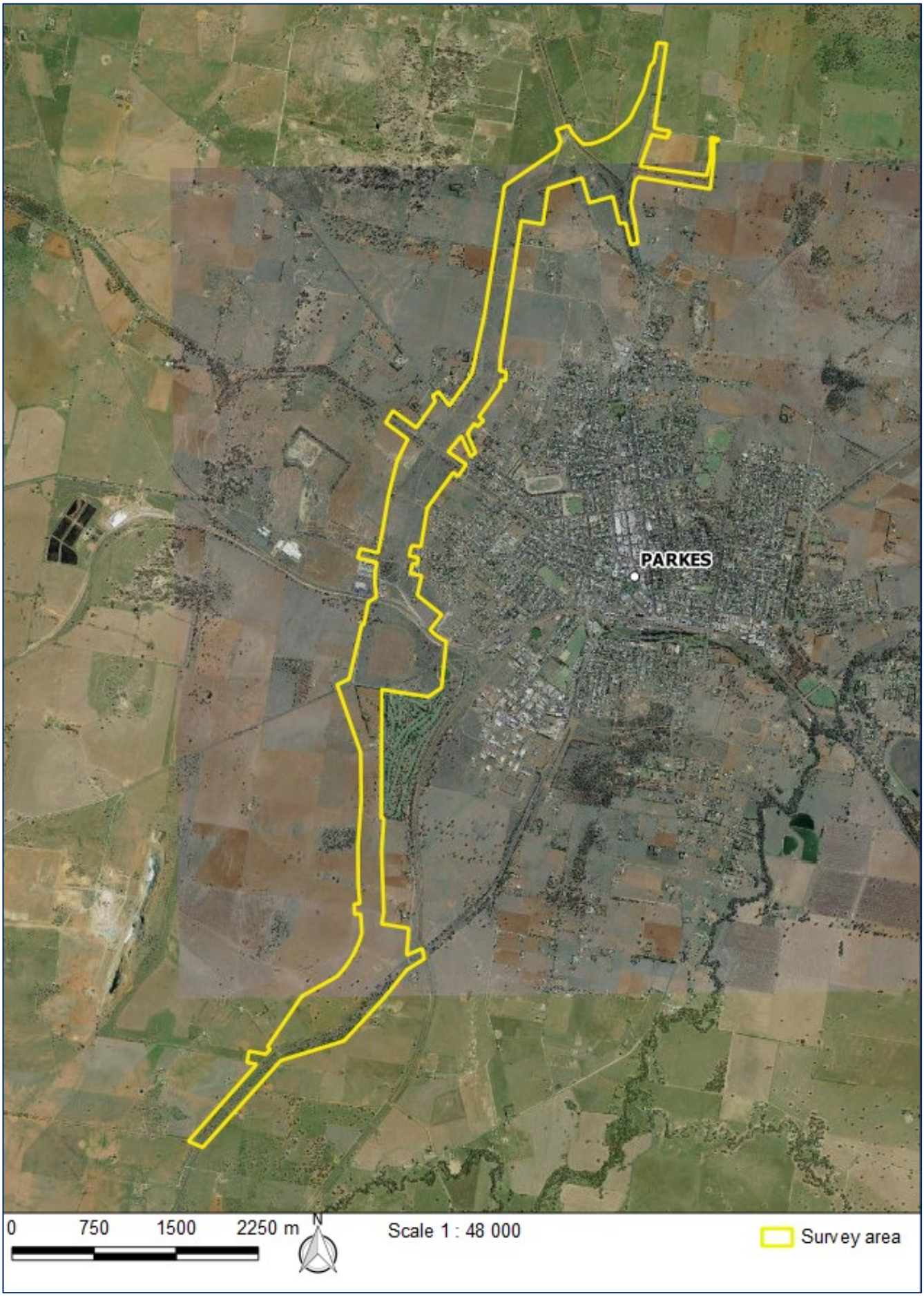

Figure 1-3 Aerial showing the survey area

1.5 Relevant legislation

1.5.1 State legislation and other environmental planning instruments (EPI)

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

This Act established requirements relating to land use and planning.

The proposal is to be carried out by Roads and Maritime, a self-determining authority, under Division 5.1 of the EP&A Act

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)

The proposed activity falls within the scope of the Infrastructure SEPP as being permissible without development consent, thereby permitting assessment of the proposal under Division 5.1 of the EP&A Act.

National Parks and Wildlife Act 1974 (NPW Act)

The NPW Act provides for the protection of Aboriginal objects and Aboriginal places. Under the Act (Part 6), an Aboriginal object is defined as: any deposit, object or material evidence (not being a handicraft for sale) relating to indigenous habitation within NSW.

An Aboriginal place is defined under the NPW Act as an area which has been declared by the Minister administering the Act as a place of special significance for Aboriginal culture. It may or may not contain physical Aboriginal objects.

As of 1 October 2010, it is an offence under Section 86 of the NPW Act to 'harm or desecrate an object the person knows is an Aboriginal object'. It is also a strict liability offence to 'harm an Aboriginal object' or to 'harm or desecrate an Aboriginal place', whether knowingly or unknowingly. Section 87 of the Act provides a series of defences against the offences listed in Section 86, such as:

- The harm was authorised by and conducted in accordance with the requirements of an *Aboriginal Heritage Impact Permit* (AHIP) under Section 90 of the Act
- The defendant exercised 'due diligence' to determine whether the action would harm an Aboriginal object; or
- The harm to the Aboriginal object occurred during the undertaking of a 'low impact activity' (as defined in the regulations).

Under Section 89A of the Act, it is a requirement to notify the Office of Environment and Heritage (OEH) Director-General of the location of an Aboriginal object. Identified Aboriginal items and sites are registered on Aboriginal Heritage Information Management System (AHIMS).

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 State Heritage Register, and assess/approve/decline proposals involving modification to heritage items or places listed on the Register. 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 within New South Wales, not being Aboriginal settlement, and which holds state or local significance'. Now the age determination has been dropped from the Act and 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.

1.5.2 Commonwealth legislation

Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)

Matters of National Environmental Significance listed under the EPBC Act include the National Heritage List and the Commonwealth Heritage List, both administered by the Commonwealth Department of the Environment and Energy. Ministerial approval is required under the EPBC Act for proposals involving significant impacts to National/Commonwealth heritage places.

1.6 Assessment approach

The current assessment also applies the guidelines set out in the *Guide to Investigating,* the *Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (DECCW 2011), Stage 1 and 2 of the PACHCI (RMS 2011) and the Cultural Heritage Guidelines (RMS 2015). The assessment will apply the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (Due Diligence Code of Practice; DECCW 2010a) to the survey area to determine if any portions can be regarded as 'disturbed land' where further investigation is not required (Section 5.1). Areas unable to be defined as 'disturbed land' require further investigation and these areas will be examined as per the *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (Code of Practice; DECCW 2010b; Section 6).

The historic and archaeological assessment follows the Historical Archaeology Code of Practice (Historical Code of Practice; Heritage Council of NSW 2006).

The Aboriginal archaeological assessment is presented in Sections 1 to 6 of this report while the historic heritage assessment is presented in Sections 7 to 11 of this report. Recommendations regarding Aboriginal cultural heritage and historic heritage are provided in Section 12.

2 Aboriginal archaeological assessment

2.1 Purpose and objectives

The purpose of the current study is to identify and assess heritage constraints relevant to the proposed work.

2.1.1 Aboriginal archaeological assessment objectives

The current assessment will apply the Due Diligence Code of Practice, the Code of Practice and Stage 2 of the PACHCI (RMS 2011), in the completion of an Aboriginal archaeological assessment, in order to meet the following objectives:

Objective One: Undertake background research on the survey area to formulate a predicative model for site location within the survey area.

Objective Two: Engage key Aboriginal stakeholders to participate in the field survey, and to provide cultural heritage knowledge of the area.

Objective Three: Identify and record objects or sites of Aboriginal heritage significance within the survey area, as well as any landforms likely to contain further archaeological deposits.

Objective Four: Assess the likely impacts of the proposed work to Aboriginal cultural heritage and provide management recommendations.

Additional areas added to the survey area in August 2018 following the field assessment have been assessed using Stage 1 of the PACHCI (RMS 2011) and the Due Diligence Code of Practice (Section 5 and Appendix A).

2.1.2 Historic heritage assessment objectives

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

Objective One: To identify whether or not historical heritage items or places are, or are likely to be, present within the survey area.

Objective Two: To assess the significance of any recorded historical heritage items or places.

Objective Three: Determine whether the activities of the proponent are likely to cause harm to recorded historical heritage items or places.

Objective Four: Provide management recommendations and options for mitigating impacts.

2.2 Date of archaeological assessment

The fieldwork component of this assessment was undertaken by Stephanie Rusden of OzArk on Tuesday 21 and Wednesday 22 February 2017.

2.3 Aboriginal community involvement

Consultation for this proposal was carried out in accordance with Stage 2 of the PACHCI (RMS 2011). The aim of Stage 2 is to undertake further assessment and a survey with specific Aboriginal stakeholders and an archaeologist to assess a project's potential to harm Aboriginal cultural heritage, and to determine whether formal Aboriginal community consultation and a cultural heritage assessment report is required. As such, Anthony Wilson, Tonia Robinson and Lyn Bell were invited to participate in the field survey on behalf of the Peak Hill Local Aboriginal Land Council (PHLALC).

Representatives from Roads and Maritime included Jonathon Blizzard, Lee Person and Doug Moore.

2.4 OzArk involvement

2.4.1 Field assessment

The fieldwork component of the heritage assessment was undertaken by:

- Archaeologist: Stephanie Rusden (OzArk Archaeologist; BSc – University of Wollongong, BA – University of New England (Archaeology).

2.4.2 Reporting

The reporting component of the heritage assessment was undertaken by:

- Report Author: Stephanie Rusden; and
- Reviewer: Ben Churcher (OzArk Principal Archaeologist; BA Hons. Queensland University, Dip Ed. University of Sydney).

3 Landscape context

The survey area falls within the South West Slopes bioregion, within the Lower Slopes ecosystem, and is comprised wholly of the Goonumbla Hills landscape unit (Figure 3-1; Mitchell 2002: 60).

3.1 Topography

The South Western Slopes bioregion is an extensive area of foothills and isolated ranges comprising the lower inland slopes of the Great Dividing Range extending from north of Cowra through southern NSW into western Victoria (OEH 2014). The topography of the Goonumbla Hills is typified by extensive undulating low hills (Mitchell 2002: 60). General elevation across this landscape type ranges from 290 metres to 390 metres, with a local relief of up to 70 metres. The topography of the survey area typifies the Goonumbla Hills landscape unit, comprising of extensive undulating landforms, crossing knolls, crests and valley basins.

The topography of the survey area typifies the Goonumbla Hills landscape unit, comprising undulating landforms with low to moderate gradients, crossing crests and a low hill rise (Table 3-1; Figure 3-2 and Plate 1 to Plate 3). Areas of higher elevation are largely located in the northern portion of the survey area, with the highest point of elevation being 380 metres at the hill landform.

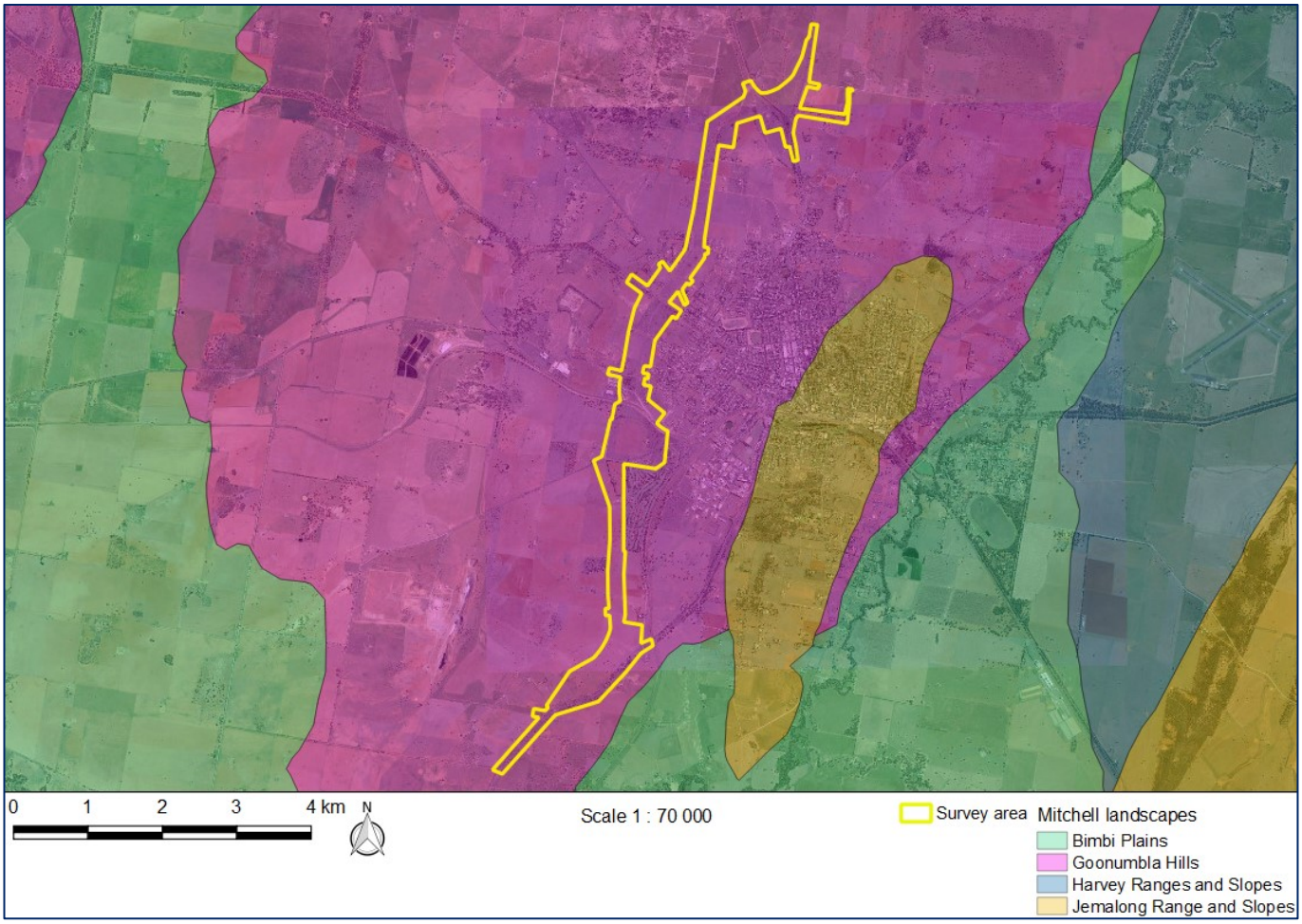

Figure 3-1 Mitchell landscapes of the survey area

Table 3-1 Landforms within the survey area

	Landform type within survey area (m^2)	Percentage of survey area
Lower slope	268,000	64.11%
Flat	112,000	26.79%
Mid-slope	17,000	4.07%
Crest	16,000	3.82%
Hill	5,000	1.19%
Total	**418,000 (418 hectares)**	**100**

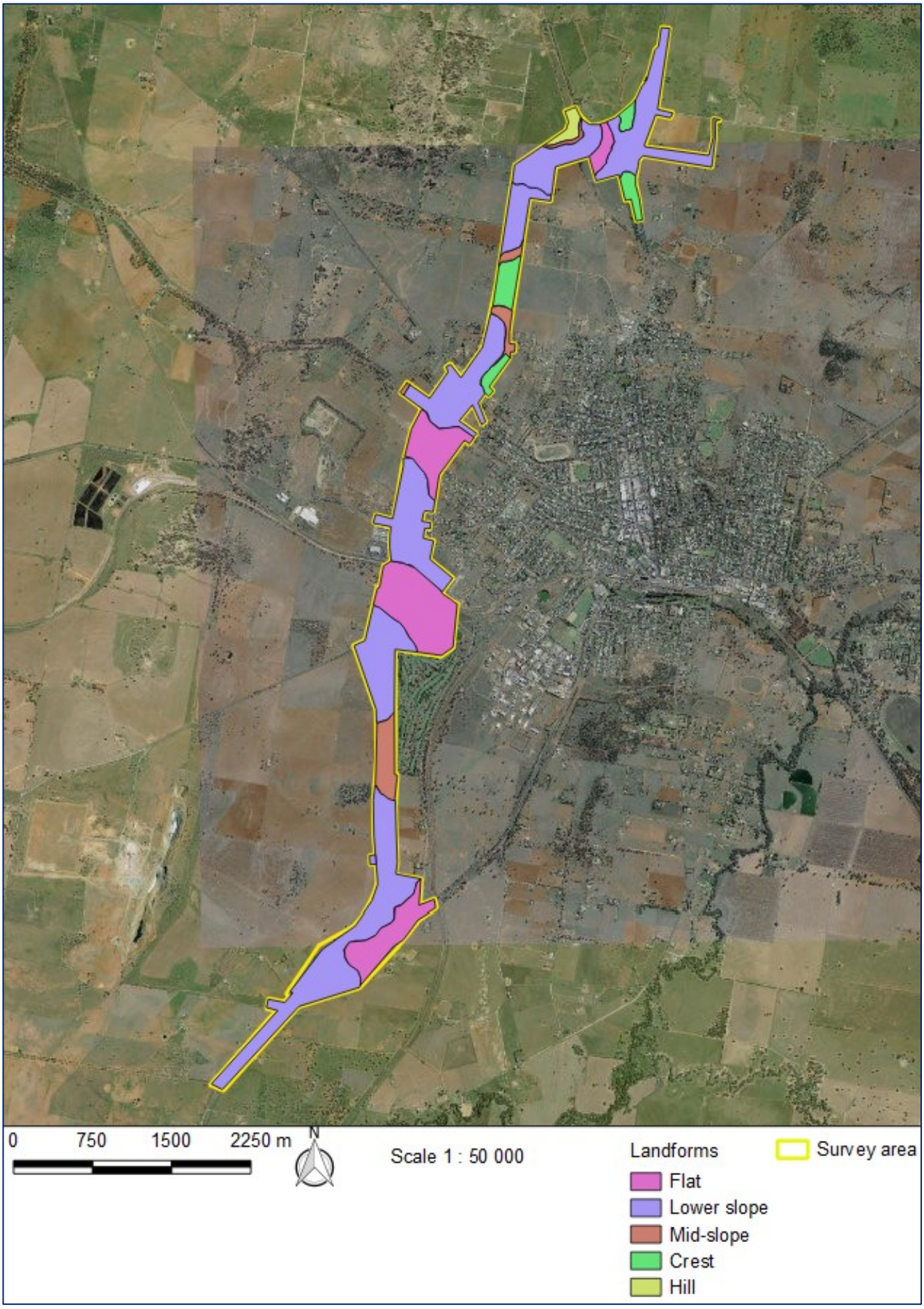

Figure 3-2 Map of landforms within the survey area

3.2 Geology and soils

The New South Wales (NSW) South Western Slopes Bioregion lies wholly in the eastern part of the Lachlan Fold Belt which consists of a complex series of north to north-westerly trending sedimentary and volcanic rocks (OEH 2014). Within this bioregion, common materials include quartz and quartzites, basalt, and granites with generally softer rocks such as shale or slate in the valleys between ranges and occasional limestone outcrops. A large number of mineral deposits have supported the mining industry in this region over the past 150 years (OEH 2014).

The geology of the Goonumbla Hills landscape unit comprises Ordovician and Silurian sandstone, andesite, siltstone and phylite with Tertiary quartz gravel and sands (Mitchell 2002: 60). Sedimentology of the Goonumbla Hills is defined by stony yellow earths, thin brown structured loams on the hills merging with red-brown and red texture-contrast soils on the flats (Mitchell 2002: 60).

The soil of the survey area is variable as it crosses differing landforms. Generally sedimentology was observed to be a red, coarse, sandy loam which was highly friable and has been subject to erosion due to agricultural practices such as ploughing and vegetation clearance making the soil more susceptible to movement down-slope (Plate 4). Stone material evident within exposures was predominantly small pebbly gravel and soft shale-type materials with outcrops of large basalt pieces and coarse quartz (Plate 5).

3.3 Hydrology

The survey area crosses two ephemeral drainage lines within the central portion. There are no permanent waterways present within the survey area. Goobang Creek, the locality's primary waterway and a tributary to the Lachlan River, is located two kilometres east of the southernmost extent of the survey area. The Lachlan River, a permanent water source for the region is located at its closest 26 kilometres north of the survey area.

3.4 Vegetation

The *NSW Master Plant Community Type Classification* has been established as the NSW standard community level vegetation classification for use in site based planning processes and standardised vegetation mapping (OEH 2016). The vegetation communities described in this section are aligned to this classification.

Four plant community types (PCTs) were recorded in the survey area. These plant community types are listed below:

- PCT80/ BVT LA153 Western Grey Box – White Cypress Pine tall woodland on loam soil and alluvial plains of NSW South Western Slopes and the Riverina bioregion
- PCT 70/ BVT LA223 White Cypress Pine woodland on sandy loams in central NSW wheatbelt
- PCT 176/ BVT LA Green Mallee – White Cypress Pine very tall mallee woodland on gravel rises mainly in the Cobar Peneplain bioregion
- PCT 267/ BVT LA218 White Box – White Cypress Pine – Western Grey Box shrub/grass/forb woodland in NSW South Western Slopes bioregion.

Vegetation within the survey area has been highly modified by extensive clearing, grazing and cultivation since the commencement of European settlement in the region. The majority of the study area has been cleared and as such is comprised largely of non-native grass species.

3.5 Climate

Climate statistics from Parkes Airport, which is located around seven kilometres northeast of the survey area, indicates that the area has a mild climate with temperatures ranging from 2.5ºC to 33.5ºC. The locality receives an average rainfall of 650.9 millimetres annually (BoM 2017).

3.6 Land–use history and existing levels of disturbance

Aboriginal people in prehistory are known to have used fire-stick farming, or controlled burns, to alter vegetation and ecosystems to promote the growth of desirable plants (Gammage 2011). Though it cannot be said at this time whether fire-stick farming was undertaken within the survey area, it is becoming increasingly believed that Aboriginal fire regimes were widespread and should be considered as a possible early land-use practice (Gammage 2011).

Land-use history and associated disturbance levels across the survey area associated with historic and more-recent occupation are summarised below (Figure 3-3).

- **Agriculture and pastoralism**. The survey area is primarily comprised of farming and grazing land which has had the following impacts:
    - **Vegetation removal**. The survey area has been subject to significant levels of vegetation removal
    - **Grazing**. The presence of hoofed livestock is likely to have resulted in trampling and compaction of the ground surface. The TSR which comprises a large proportion of the survey area has been subject to both historical and ongoing disturbances associated with livestock movement and grazing; and
    - **Cultivation**. Repeated cultivation of land since the commencement of non-Indigenous settlement in the region will have altered soil profiles, disturbing sub-surface archaeological deposits (Plate 7).
- **Infrastructure provision**
    - **Transport**. Numerous sealed and unsealed roads and tracks intersect the survey area. The current alignment of major roadway, the Newell Highway, is included within the survey area in addition to sealed roads such as Condobolin Road and Westlime Road and the Broken Hill to Stockinbingal railway and Parkes to Narromine railway. The construction of these transport corridors has likely had an impact upon the survey area, and at a minimum has impacted upon the integrity of the surrounding landscape context of the survey area (Plate 8 and Plate 9).
    - **Utilities**. The survey area is crossed by a number of utilities, including transmission lines and underground service cables and gas lines.
    - **Industrial, residential and recreational development**. The survey area is surrounded by low density rural and residential housing and industrial areas. The Parkes Golf Course is located directly adjacent to the central southern section of the survey area.

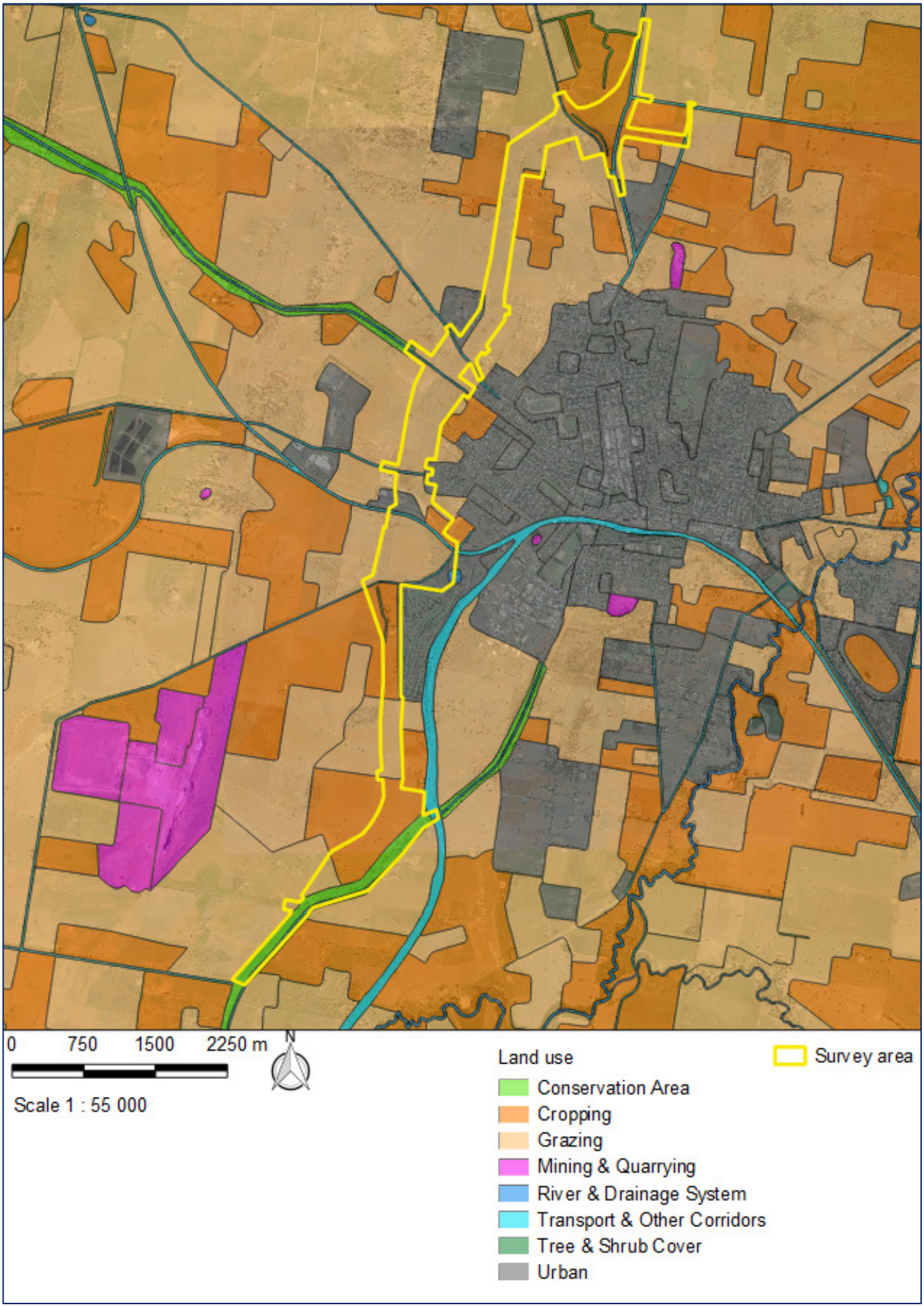

Figure 3-3 Land use within and surrounding the survey area

3.7 Summary of landscape context

The landscape of the survey area is likely to have been hospitable to Aboriginal people, given the temperate climate, accessible topography; however, relative to surrounding landscapes, it does not contain features, such as a permanent water supply, that are most likely to encourage substantial Aboriginal occupation of the landscape. As such, the size and density of sites located within the survey area are likely to be smaller and sparser than those to the east which are in closer proximity to Goobang Creek or the Lachlan River.

The high level of ground surface disturbance across the survey area from activities associated with European occupation such as vegetation clearance, cultivation and grazing would have affected the integrity of any deposit based archaeological sites. As such, unobtrusive sites such as open artefact scatters, if present, are likely to be disturbed. Broad-scale vegetation clearance characteristic of the area reduces the likelihood that culturally or historically modified trees remain *in-situ;* however the presence of a number of standing mature Eucalypts across the survey area increases the possibility of this site type.

4 Aboriginal archaeology background

4.1 Ethno-historic sources of regional Aboriginal culture

At the time of European settlement, the survey area was situated within the territory of people belonging to the Wiradjuri tribal and linguistic group (Tindale 1974). The Wiradjuri tribal area is situated within the Murray Darling Basin, covering three primary physiographic divisions: the riverine plains in the west, the transitional western slopes in between and the highlands or central tablelands in the east (White 1986).

Episodes of early contact between Indigenous and European cultures from the nearby Lachlan Valley (around 30 kilometres south) were documented by the explorers Oxley and Cunningham in May 1817. Later in 1835 came accounts of contact with native groups by Surveyor Mitchell on his expedition, which had set out to explore the Bogan River (Unger nd: 3; Kass 2003: 6). In April 1835, Mitchell's party encountered a group of natives on the outskirts of what is today the town of Parkes. From this meeting, Mitchell learned that what had been named the Hervey Range by Oxley in 1817 was in fact known to the locals as 'Goobang', which derived from the Aboriginal word *Coleong Coobung*, which meant place of many wattles (Kass 2003: 9).

When Mitchell's party left their camping spot, several natives reportedly followed them, one of whom speared a large kangaroo, while others used new tomahawks to extract honey from tree branches. It is recorded that the natives accompanied the expedition for four days before retreating upon the appearance of further natives. This was interpreted by Mitchell as the original group of natives having reached their tribal boundary (Unger nd: 5).

Ethnographic information gleaned from this expedition noted the primary meat portion of their diet consisted of possum, kangaroo and emu; women fished using a moveable dam of twisted dry grass to corral fish so they could be picked out of the water and collected freshwater mussels; and starchy plant roots were eaten (Kass 2003: 6):

As in most parts of NSW, foreign diseases were a precursor to white settlement and the population encountered by early settlers was already impacted by this. Tales of early white settlement include stories of clashes including massacres of the natives and revenge attacks.

4.2 Regional archaeological context

4.2.1 Research-based studies

The most relevant research-based studies over the central west were undertaken by Pearson (1981) and Koettig (1985). Although centred a little further east and north of the township of Parkes, these studies together still provide baseline data for placing past Aboriginal sites within a regional landscape context. The following is a summary of the salient points learned from these studies:

Pearson (1981) worked primarily in the Upper Macquarie region, the western boundary of his study area being Wellington. The general proximity of his study area makes the findings of this work relevant. The majority of Pearson's field coverage was directed by information from informants and was thus skewed toward large or obtrusive sites, which had been recognised by local residents. Pearson excavated three rock shelter sites (Botobolar 5, and Granites 1 and 2) which provided a regional record of Aboriginal occupation dating back to around 5 000 years before present. Pearson's analysis of the patterns of Aboriginal occupation involved an examination of site location characteristics in four sample areas.

According to Pearson, archaeological sites could be divided into two main categories, occupation sites and non-occupation sites (which included grinding grooves, scarred or carved trees, ceremonial and burial sites etc.). An analysis of the location of these sites led him to build a model for site prediction along the following lines (Pearson 1981: 101):

- Site distance to water varied from 10 to 500 metres, but in general larger sites are found closer to water
- Good soil drainage and views over watercourses are important site location criteria
- Most sites were located in contexts which would originally have supported open woodlands
- Burial sites and grinding grooves were situated as close to habitation areas as geological constraints would allow
- Ceremonial sites such as earth rings ('bora grounds') were located away from campsites
- Stone arrangements were also located away from campsites in isolated places and tended to be associated with small hills or knolls or were on flat land
- Quarry sites were located where stone outcrops with desirable working qualities were recognised and were reasonably accessible; and
- Based on ethno-historic information, Pearson suggests that Aboriginal campsites were seldom used for longer than three nights and that large archaeological sites probably represent accumulations of material over a series of short visits.

The location of non-occupation sites was dependent on various factors relating to site function. For example, grinding grooves only occur where there is appropriate outcropping sandstone, but as close to the occupation site as possible. Modified trees were variably located with no obvious patterning, other than proximity to watercourses, where camps were more frequently located.

Although a useful study, Koettig (1985: 49–50) considered Pearson's findings as preliminary, mainly due to the unsystematic nature of the recording of most sites used in the analysis. In her view, this would have skewed both site type (obvious manifestations) and location (areas of disturbance), as such biasing the sample. Further the sample size of both the Wellington and other areas were considered too small to yield significant results.

Koettig (1985) undertook a comprehensive study of evidence relating to Aboriginal occupation within the Dubbo area, including five kilometres around the city limits. As a result of the desktop component of this study, Koettig determined there was need for systematic survey to ensure that all topographic landform units and different stream order associations were explored in terms of site type and location. This field work included detailed recording of various site types, ensuring the presence of comparative, quantifiable data. The field survey was undertaken by dividing the broader Dubbo study area into five sample survey areas covering the three major physiographic zones, but was constrained by time and an inability to access privately owned land.

As a result of this study, Koettig (1985: 81–82) concluded that:

- Aboriginal sites may be expected throughout all the landscape units surveyed
- The most frequently occurring site types were open artefact scatters, scar trees and grinding grooves; and
- The location of sites and their relative size were determined by various factors, predominantly environmental and social. Although social factors cannot be explained through archaeological research, some of the environmental issues may be. These are:
    - Proximity to water: the largest campsites were located close to permanent water, nonetheless, sites were found all over the landscape including hills and ridges away from obvious water
    - Geological formation: Certain sites require specific conditions, such as grinding grooves occur where appropriate sandstone outcrops, quarries are found where suitable stone resources are accessible, burials tend to be found in sandy sediments such as alluvial flats etc.; and
    - Availability of food resources: The widest range of potential foods was found along the main water courses due to the supply of permanent water. Some foods would have been seasonal and required foraging away from water courses.

In predicting intensity of occupation, Koettig suggests that larger and more constantly occupied sites are likely to occur along permanent watercourses, while less intense and sporadic occupation evidence is seen along ridge tops or temporary water sources such as creek headwaters. The predictive model for site location developed as a result of this study can be summarised as follows:

- All site types can be found along watercourses
- Stone arrangements occur most frequently on knolls or prominent landscape features
- Larger campsites are most frequent along permanent watercourses, near springs or wetlands, although small campsites may be found anywhere. Because occupation was more intensive along major watercourses, more site complexes will be found there
- Modified trees may be found anywhere there are remnant stands of native trees
- Campsites would become smaller and more sporadic near the headwaters of creeks
- Grinding grooves are most frequent in association with appropriate sandstone
- Quarries may be found wherever there are reliable sources of suitable stone; and
- Shell lenses (midden material) would only be found along the rivers or 4th order streams.

In 1996, Kelton completed research based assessment of Aboriginal scarred trees and other archaeological sites in the Lachlan Valley region. Kelton highlighted that sites found within the Lachlan Valley reflect diversity and different levels of past Aboriginal occupation, hunter-gatherer lifestyle and technology, as well as varying forms of resource extraction. Research into site registrations in the Lachlan Valley display that those with the greatest frequency are open campsites and scarred trees. Around 220 Aboriginal scarred and carved trees were recorded in the Lachlan Valley by 1996, commonly found on yellow box, grey box, river red gum, fuzzy box and bimble box (Kelton 1996). According to Kelton, scarred trees can be expected to occur over almost all landform units, however, frequency tends to increase with proximity to water. Kelton also noted differences in the types of culturally modified trees concluding that scars result from what may be considered ‘normal’ routine domestic purposes associated with the hunter-gatherer lifestyle, and carving which results from more culturally complex traditions, including the marking of burials and or ceremonial sites (also known as Bora Grounds). The second most predominate site, the open campsite, was noted at 210 locations in 1996 (Kelton 1996). Within the Lachlan Valley, open campsites tend to be located in close proximity to reliable water sources such as rivers, creeks, billabongs and lakes, and gilgai formations, playa lakes, ephemeral drainages, and usually at elevated terrace locations, or along non-flood prone, elevated ground nearby these formations.

In 1998, English *et al* undertook survey of Goobang National Park which includes the Hervey Ranges, located 18 kilometres northeast of the current survey area, and described a settlement pattern similar to the ones described above (English *et al* 1998: 196). A 2001 report issued by the NSW National Parks and Wildlife Service (NPWS) details the findings of this survey, shedding some insight to the nature of settlement patterns in the region and noting the importance of the Hervey Ranges. These investigations note a widespread use of the resources in the Hervey Ranges with the watercourses of the lower slopes and undulating plains seeing the most extended and repeated occupation. It also records the importance of the Hervey Ranges to the Wiradjuri as a traveling route, landmark and its possibility of having important ceremonial value.

More recently in 2016, OzArk was engaged by the Central West Local Land Service (CW LLS) to formulate and test a predictive model for Aboriginal site locations within TSRs across the CW LLS area. The closest area surveyed to the current survey area was five kilometres to the east along Goobang Creek. A total of 59 sites were recorded during the fieldwork component of the assessment across 32 TSRs (OzArk 2016a). 26 (44 per cent) of the recorded sites are scarred trees, 22 (37 per cent) are artefact scatters and 11 (19 per cent) are isolated finds. Background research, formulation of the predictive model for site location and the survey to test the predictive model concluded that:

- The majority of sites will be recorded within Channel and Floodplains, and Slopes landscapes (as defined by Mitchell 2002)
- Sites in Channel and Floodplains landscapes are likely to be scarred trees, while those in Slopes landscapes are likely to be artefact scatters

- The majority of sites will be recorded in TSR Hierarchy 1 locations[1]; and
- Of these, a majority of sites will be recorded within 'TSR Hierarchy 1 locations within Channel and Floodplain landscapes.

4.2.2 Development driven studies

Wiradjuri archaeological heritage in the Parkes/Peak Hill region has also been documented through many development-related heritage assessment projects. The following sections review studies undertaken over this region, which collectively help to provide a backdrop for the type of sites likely to occur within the survey area.

Northparkes Mine

A large development within the local region is Northparkes Mine (NPM), situated 24 kilometres northwest of the current survey area and 23 kilometres southwest of Peak Hill, close to the headwaters of the Bogan River. Assessment of this area began in 1986 with a survey over the Goonumbla Mining Lease as it was then known (Stone 1986). A total of 16 sites were recorded as a result of this assessment consisting of 14 open artefact scatters, of which one was associated with a modified tree, and one further isolated find. Overall, these sites were noted as being small and in poor condition, either disturbed by ploughing or erosion. Fifteen of these sites were located along the Bogan River or one of the two tributaries assessed during the study. Seven of the sites were within one kilometre of the confluence of Goonumbla Creek and the Bogan River.

Subsequent survey at NPM was undertaken (Nicholson 1990) to assess new proposed impacts to an area not previously assessed by Stone (1986). The study area comprised flat to gently undulating land at the north-eastern boundary of the mining lease over previously cleared paddocks that had been either ploughed or grazed. Dense grass reduced visibility and hence site detection, and as a result, the survey was focussed on fence lines and the areas around dams which provided limited windows of visibility and resulted in coverage of around 4 per cent of the impact area. No archaeological sites were recorded as a result of this assessment. The lack of sites was not considered surprising due to the distance from permanent water and the type of landscape assessed.

Again, to facilitate continuation of operations at NPM, an Aboriginal heritage assessment was required over areas proposed as extensions to the existing mining operations, predominantly over portions of Limestone National Forest and nearby agricultural lands (Appleton 1996). The survey area was noted as comprising about 60 per cent cypress pine, although it was likely to have been box dominated dry sclerophyll open woodland in prehistory. The area contains an elevated depression in the northern portion and undifferentiated gentle slopes down towards Goonumbla Creek in the southern portion. Prior land-use impacts within the survey area were noted as including logging, grazing, and in some locations, ploughing. Survey effort was focussed on areas around such features as erosion scars, tracks and despite the variable visibility, survey coverage was assessed as effective. Four archaeological sites were recorded as a result of this assessment, three being isolated finds and one being a possible modified tree. The overall paucity of archaeological material was interpreted as relating to the fact that the study area was dry sclerophyll woodland with no specific water source or other resources that would concentrate Wiradjuri occupation and was more likely used for activities such as foraging.

In 2006 reinvestigation was again required (Paton 2006). The aims of this assessment included the relocation and assessment of previously recorded sites, survey of areas to be impacted by the current proposal and the delineation of zones of potential archaeological sensitivity within the study area. The study area was noted as being highly modified with the only area not completely cleared and disturbed being that of the Limestone National Forest, despite it having been logged in the past. Surveying was

[1] A TSR Hierarchy 1 location is defined in OzArk 2016a: it consists of TSRs within 200 m either side of a major waterway.

undertaken in transects which targeted the zones. Overall survey coverage of the proposed impact areas was determined as high, being 45–50 per cent. Three new sites were recorded as a result of this assessment, one small open site and two isolated finds. In terms of zones of archaeological sensitivity, Paton divided the mine site into four zones:

- Zone 4 — zero sensitivity (disturbed by mining impacts)
- Zone 3 — very low sensitivity (flat waterless terrain – 35 per cent of study area)
- Zone 2 — low sensitivity (Limestone National Forest – 10 per cent of study area); and
- Zone 1 — medium sensitivity (Goonumbla Creek – 5 per cent of study area).

It was noted that the Zone 1 area provides potential for sites close to the water course on flat, elevated terrain. These are most likely to be surface scatters although there is an assessed low potential for stratified sub-surface archaeological deposits.

In 2008 OzArk carried out archaeological test and salvage excavations in Zone 1 where a new conveyor was planned to be built (OzArk 2008). The aim of the excavation program was to determine the presence and nature of archaeological deposits in this part of Zone 1 so that management recommendations concerning the building of the conveyor could be made. The research methodology stated that if results of the test program warranted, limited salvage was to be undertaken. As part of the excavation program, a spoil heap was sieved to retrieve cultural material. This spoil heap had been created when a pad for a drilling rig was accidentally cleared in 2007. As this area was located within Zone 1, the sieving of the piled soil was included in the research design of the excavation program as the Wiradjuri community wished to retrieve artefacts potentially within it.

The results of the excavation programme and accompanying geomorphological assessment indicated that Zone 1 was impacted in the past by both agricultural land use and mining infrastructure, and was assessed as being disturbed over most of the area investigated by the excavation program. These disturbances included the building of roads, installation of overhead electricity lines, underground water mains and ploughing for crops. In addition, the area has been cleared of native vegetation. This disturbance was noted in the excavated pits, which were shallow (around 10–20 centimetres before the B-Horizon (clay) was reached) and the shallow top-soils were impregnated with intrusive rock (brought in as road surfaces), recent charcoal (from vegetation clearing) and no archaeological stratigraphy was noted in any pits. Artefact densities across the area were low and although artefacts were recorded it was extremely difficult to determine if any of these were from *in situ* deposits, although it was assessed to be unlikely. Artefacts recovered from the excavations were typical of the region and consisted mostly of unmodified flakes.

HW17 Newell Highway, Trewilga realignment

OzArk (2012) was commissioned by Roads and Maritime to conduct an Aboriginal heritage assessment of several sections of the Newell Highway between Parkes and Peak Hill, immediately west of Trewilga and 33 kilometres north of the current survey area. One Aboriginal site (Trewilga–Open Site 1 [T-OS1] with Potential Archaeological Deposit [PAD]) was re-recorded as part of the 2012 assessment and was noted as extending the full width of the proposed impact corridor, both north and south of Ten Mile Creek. The PAD associated with this site was thought to include the presence of further artefactual material, despite the fact that the site was assessed as being disturbed by ploughing. The PAD was subject to a three-day test-excavation program from 26 March–28 March 2013 (OzArk 2013b). No *in situ* archaeological deposits were encountered in the excavation, with the few artefacts retrieved coming from disturbed contexts. As such, no further investigation or sub-surface salvage program was recommended. The findings of the investigation indicated that there was a very low density artefact scatter at T-OS1.

Other development driven projects

To the north of Parkes, two modified trees were recorded (#43-2-0017 and #43-2-0018) next to Goobang Creek near where it is crossed by the Parkes-Wellington Road, about 7.2 kilometres northeast of the current survey area. Further south along this road, is another modified tree recorded as a result of the same assessment (#43-2-0016), about four kilometres east of the current survey area. These trees were all recorded privately and not part of any formal assessment.

An assessment for a 66kV electricity easement from Parkes to Peak Hill undertaken in 1977 (Moore 1977) recorded one Aboriginal site near Trewilga, a basalt quarry site (#35-6-0002), 33 kilometres north of the current survey area. Intact bi-facial hand axes were recorded at the quarry, along with numerous broken axes and flakes.

Brayshaw (1993) undertook an archaeological survey for a proposed water pipeline from the Northparkes Mine. The study area began at the northern edge of Parkes and extended for 22 kilometres northwest of Parkes along the Bogan Road, and continued for about 27 kilometres to the south of Parkes. Two open camp sites and an isolated find were identified. One is a small open camp site located 3.1 kilometres north of the Bogan Road turnoff (#43-3-0019). The recorded artefact assemblage was a quartz flaked piece with retouch and use wear on one edge which was situated within a disturbed context next to an unnamed ephemeral drainage line. The second open camp site is located south of this by several hundred metres, on the Bogan Road verge. The isolated find (IF), an indurated mudstone flake, was located five kilometres south of Parkes near Bartley's Creek, also within a disturbed context. The sites were recorded 2.5 kilometres and four kilometres north of the current survey area.

A further two modified trees were recorded along the Newell Highway north of Parkes, (#43-3-0065 and #43-3-0066). These were identified during assessment for the proposed realignment of the Newell Highway north of Parkes (Appleton 2003). Both trees are box species (possibly fuzzy or apple box).

Within the confines of the Tomingley Gold Project study area (between Peak Hill and Tomingley, 70 kilometres north of the current survey area), an Environmental Impact Statement was prepared in 1995 for the proposed reprocessing of tailings from the original McPhail Mine (Cook 1995). No physical heritage assessment was undertaken in the face of this proposal due to the conclusion that the site of the tailings had already been substantially disturbed during original mining operations hence leaving a low likelihood for the presence of archaeological remains (Cook 1995: 21). The fact that the site contained no surface water and no evidence of 'native activity' (Cook 1995: 21) was also mentioned. Further disturbance is noted to have occurred to the land upon which the proposal was focussed, in the form of bulldozing by the Rural Land Protection Board in 1987 for the purpose of removing noxious weeds and rabbit habitat.

Carved tree "Parkes" (#43-3-0002) was recorded by David Bell as a result of a research survey of Aboriginal carved trees (Bell 1979). The survey *Aboriginal Carved Trees in NSW – A Survey Report (Parts 1 and 2)* was funded by a grant given to NPWS by the Australian Heritage Commission (Bell 1980: 1). Appendix C (Bell 1979: 85) lists the carved tree as a possible burial and is now located at the Australian Museum (E5514). The site was recorded 2.3 kilometres east of the current survey area.

Scarred Trees MD33, MD49 and MD50 (#43-4-0018, #43-4-0019 and #43-3-0058) were recorded in 1997 by Navin Officer Heritage Consultants as a result of archaeological assessment of the *Proposed Route of the Marsden-Dubbo Natural Gas Pipeline* near the Newell Highway south of Parkes (Navin Officer 1997). The sites are located 2.5 kilometres south of the current survey area.

Open site "Parkes 1" (#43-3-0062) and isolated find "Parkes 2-IF" (#43-3-0063) were recorded following an additional 2004 survey *"Archaeological Survey at Parkes"* completed by Jillian Comber on behalf of Country House and Land Sales (2004b). Open site "Parkes 1" (#43-3-0062) consists of two artefacts, a basalt core and a possible sandstone hammerstone, along with seven nodules of white ochre. The site covers an area of 150 metres by 80 metres and is situated around one kilometre west of Goobang Creek. "Parkes 2-IF" is an isolated broken river cobble with a ground edge. The sites are located three kilometres east of the current survey area.

The site of Snake Rock Aboriginal Area (Lambert 2004), located 57 kilometres northeast of the current survey area, has been described by the local Aboriginal community as a symbolic marker for the pathway network that Aboriginal people used in crossing 'Country' in pre-European times and during the more recent past for resource gathering, trade, kinship and ceremonial activities. The site includes rock art erroneously seen as a snake, as well as rock shelters, artefacts and grinding grooves.

Scarred Tree "PIE-ST1" (#43-3-0104) was recorded in 2013 by OzArk following an archaeological assessment completed for the *Parkes Industrial Estate* (OzArk 2013), located 700 metres east of the current survey area. PIE-ST1 is a standing Grey Box, around 15 metres tall in very good, healthy condition, displaying a single regular ovoid shaped scar oriented to the south (OzArk 2013: 30).

4.2.3 Conclusion

Previous research and development driven studies within the Parkes region has shown artefact scatters and scarred trees are the most likely site types to be encountered. Culturally modified trees present as the dominant site type for the region. The previous studies have shown in a number of cases that culturally modified trees are more likely to be located close to the drainage lines, however, as noted by Kelton (1985), they can be expected to occur over almost all landform units. Artefacts are most likely to have been manufactured from mudstone, basalt and quartz. Artefact scatters are more likely to be located nearby to creek and drainage lines, particularly on flat or gently sloping landforms, or on the crests saddles and benches of ridge and spur landforms. Quarries for the procurement of raw materials used to manufacture stone tools are possible if suitable sources of outcropping stone exist however this site type is recorded in a low frequency. Quarries for this area are more likely to be basalt quarries.

4.3 Local archaeological context

4.3.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the survey area. The results of this search are summarised in Table 4-1 and presented in detail in Appendix B.

Table 4-1 Aboriginal heritage: desktop-database search results.

Name of database searched	Date of search	Extent of search	Comment
Commonwealth Heritage Listings	13.01.2017	Parkes LGA	No Aboriginal places listed on either the National or Commonwealth heritage lists are located within the survey area
National Native Title Claims Search	13.01.2017	NSW	No Native Title Claims cover the survey area.
OEH AHIMS	12.01.2017	25 x 20 km centred on the survey area with no buffer. GDA Zone 55 Eastings: 596900 – 616900 Northings: 6319700 – 6344700.	70 AHIMS sites were located within the designated search area. Two sites within the survey area.
Local Environment Plan (LEP)	13.01.2017	Parkes LEP of 2012	None of the Aboriginal places listed occur near the survey area.

A search of the OEH administered AHIMS database returned 70 records for Aboriginal heritage sites within the designated search area (GDA Zone 55, Eastings: 596900–616900, Northings: 6319700–6344700 with a buffer of 10 meters). Table 4-2 outlines the frequency of previously recorded site types returned in the AHIMS search and Figure 4-1 shows the location of these previously recorded sites that are registered with AHIMS.

Table 4-2 AHIMS site types and frequencies

Site Type	Number	% Frequency
Artefact	36	51.43
Modified tree (carved or scarred)	32	45.71
Stone quarry	1	1.43
Modified tree; artefact	1	1.43
Total	**70**	**100%**

AHIMS sites #43-3-0059 and #43-3-0061 are recorded as being located within the survey area (Figure 4-2). The two scarred trees were recorded by Jillian Comber in 2004 as a result of the *Parkes Hub Archaeological Survey*. This assessment was completed on behalf of PSC for the National Logistics Hub to be located in west Parkes (Comber 2004a). Three Grey Box eucalypts displaying multiple cultural scars were recorded (#43-3-0059, #43-3-0060 and #43-3-0061) all to the west of Parkes (Comber 2004a: 12–13), at its closest 1.5 kilometres west of the current survey area. While the coordinates provided by AHIMS plot #43-3-0059 and #43-3-0061 within the survey area, a review of the location described in the 2004 report and site cards show that the provided coordinates are incorrect and the sites are actually located outside the survey area[2] (Figure 4-1 and 4-2).

Site #43-3-0059 was recorded as being located on the corner of Reedsdale and Painter Streets, on the southern side on Painter Street (Comber 2004a: 13). The tree on which the scar was recorded was noted as being dead but still standing with a nail present at the top of the scar. Subsequent archaeological assessments (OzArk 2014) in the area have been unable to locate #43-3-0059 and it is suspected that this item may have been felled. The corrected location of the site as shown on the site card also places the site 192 metres northeast of the current AHIMS coordinates and when it was extant, it would have been located outside the eastern boundary of the survey area (Figure 4-2 and 4-3).

Site #43-3-0061 is described as containing two scars, with one being on the upper limb and one on the trunk of the tree, and being located south-west of Parkes on London Road on the northern road verge, around 50 metres from a dam (Comber 2004a: 12). The location of the tree was verified using a map provided in the site card. The site card map also shows the site is actually located on the southern verge of the London Road, around 2.2 kilometres northwest of the location provided by the AHIMS registration (Figure 4-2 and 4-4).

[2] OzArk has submitted updated site cards to AHIMS to correct the location of #43-3-0059 and #43-3-0061.

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Figure 4-1 Location of AHIMS sites in relation to the survey area

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Figure 4-2 Location of AHIMS sites #43-3-0059 and #43-3-0061 in relation to the survey area

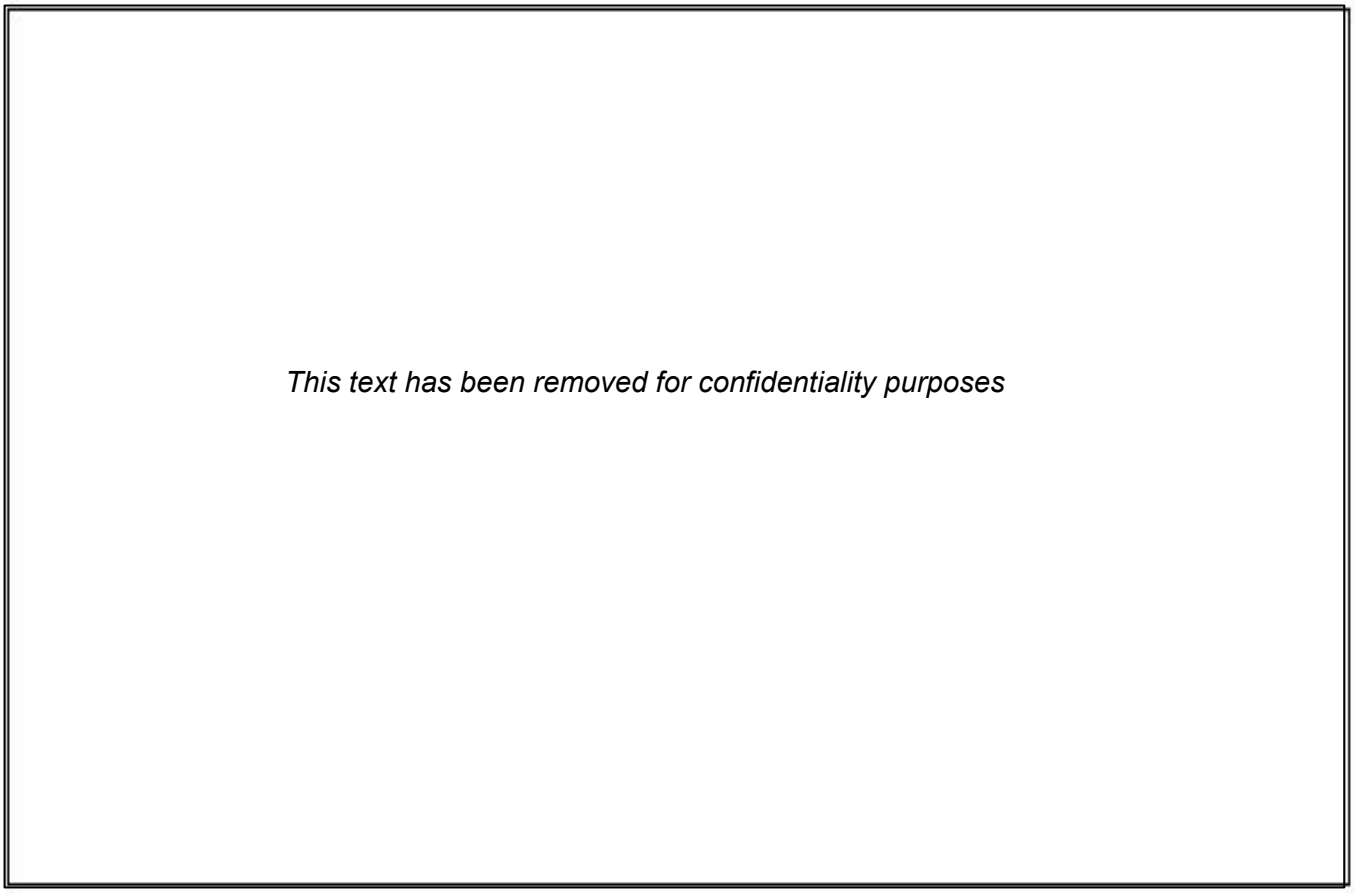

Figure 4-3 Differing location of #43-3-0059 between AHIMS and information on the site card

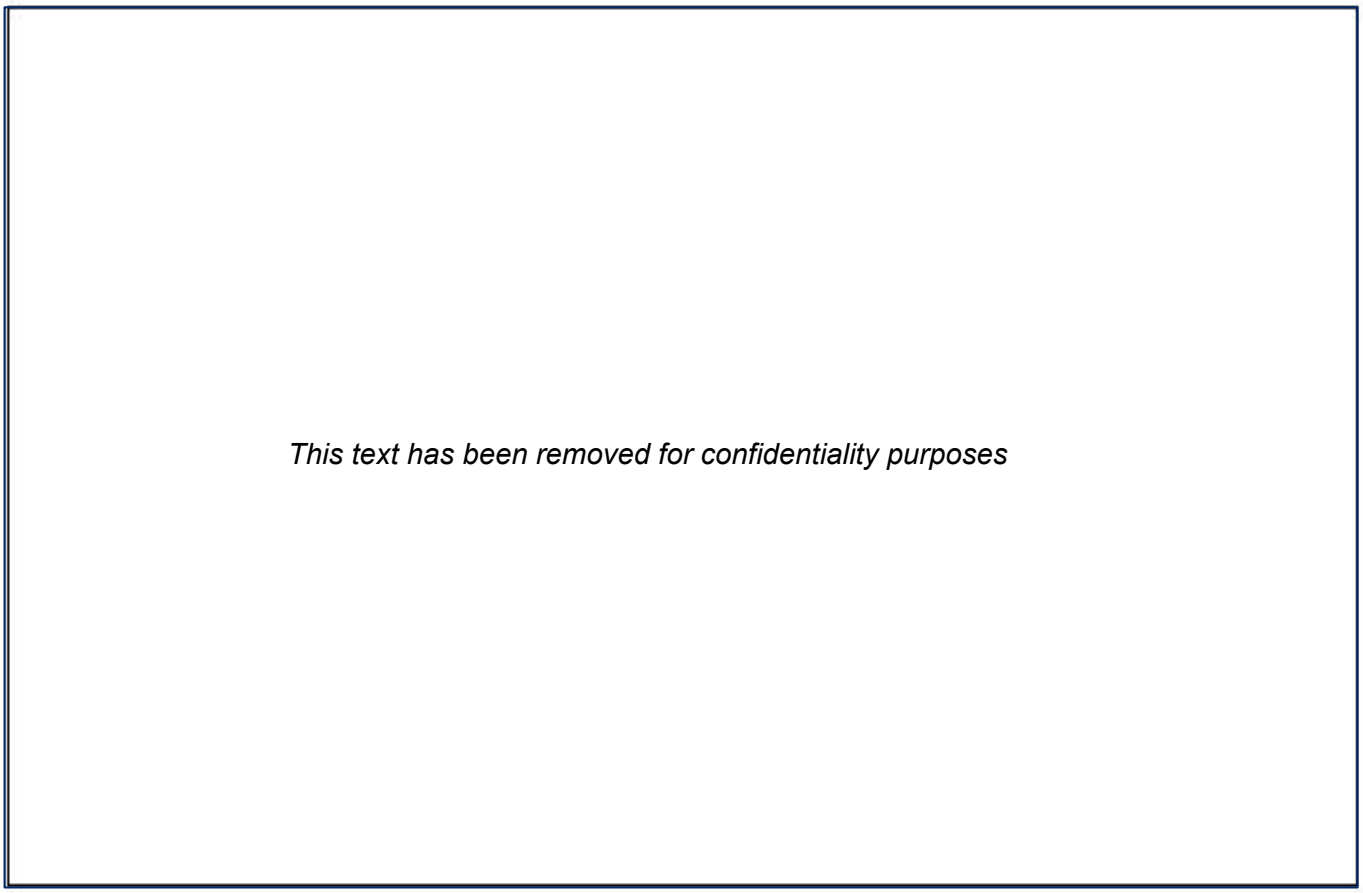

Figure 4-4 Differing location of #43-3-0061 between AHIMS and information on the site card

4.4 Predictive model for site location

Across Australia, numerous archaeological studies in widely varying environmental zones and contexts have demonstrated a high correlation between the permanence of a water source and the permanence and/or complexity of Aboriginal occupation. Site location is also affected by the availability of and/or accessibility to a range of other natural resources including: plant and animal foods; stone and ochre resources and rock shelters; as well as by their general proximity to other sites/places of cultural/mythological significance. Consequently, sites tend to be found along permanent and ephemeral water sources, along access or trade routes or in areas that have good flora/fauna resources and appropriate shelter.

In formulating a predictive model for Aboriginal archaeological site location within any landscape it is also necessary to consider post-depositional influences on Aboriginal material culture. In all but the best preservation conditions very little of the organic material culture survives today. Generally it is the more durable materials such as stone artefacts, stone hearths, shell, and some bones that remain preserved in the current landscape. Even these however may not be found in their original depositional context since they may be subject to either:

- The effects of wind and water erosion/transport – both over short and long time scales
- The historical impacts associated with the introduction of European farming practices including: grazing and cropping; land degradation associated with exotic pests such as and the installation of farm related infrastructure including water-storage, utilities, roads, fences, stockyards and residential quarters. Scarred trees may survive for up to several hundred years but rarely beyond.

Knowledge of the environmental contexts of the survey area and a desktop review of the known local and regional archaeological record, the following predictions are made concerning the probability of those site types being recorded within the survey area:

- Isolated finds may be indicative of random loss or deliberate discard of a single artefact, the remnant of a now dispersed and disturbed artefact scatter, or an otherwise obscured or sub-surface artefact scatter. They may occur anywhere within the landscape but are more likely to occur in topographies where open artefact scatters typically occur
- As isolated finds can occur anywhere, particularly within disturbed contexts, it is predicted that this site type could be recorded within the survey area
- Open artefact scatters are defined as two or more artefacts, not located within a rock shelter, and located no more than 50 metres away from any other constituent artefact. This site type may occur almost anywhere that Aboriginal people have travelled and may be associated with hunting and gathering activities, short or long term camps, and the manufacture and maintenance of stone tools. Artefact scatters typically consist of surface scatters or sub-surface distributions of flaked stone discarded during the manufacture of tools, but may also include other artefactual rock types such as hearth and anvil stones. Less commonly, artefact scatters may include archaeological stratigraphic features such as hearths and artefact concentrations which relate to activity areas. Artefact density can vary considerably between and across individual sites. Small ground exposures revealing low density scatters may be indicative of background scatter rather than a spatially or temporally distinct artefact assemblage. These sites are classed as 'open', that is, occurring on the land surface unprotected by rock overhangs, and are sometimes referred to as 'open camp sites'.

  Artefact scatters are most likely to occur on level or low gradient contexts, along the crests of ridgelines and spurs, and elevated areas fringing watercourses or wetlands. Larger sites may be expected in association with permanent water sources.

  Topographies which afford effective through-access across, and relative to, the surrounding landscape, such as the open basal valley slopes and the valleys of creeks, will tend to contain more and larger sites, mostly camp sites evidenced by open artefact scatters.

    - Artefact scatters are present as the dominant site type for the locality and one of the dominant site types for the region (Sections 4.2 and 4.3). However, as the majority of the survey area is within undulating landforms distant to permanent water, this site type is not predicted to be common. It is likely that any sites associated with such landforms are likely to have a low artefact density and a low complexity of tool types as the sites are either one-off events or only infrequently used. These site types also have a high likelihood of being disturbed from a variety of land use practices.

- Aboriginal scarred trees contain evidence of the removal of bark (and sometimes wood) in the past by Aboriginal people, in the form of a scar. Bark was removed from trees for a wide range of reasons. It was a raw material used in the manufacture of various tools, vessels and commodities such as string, water containers, roofing for shelters, shields and canoes. Bark was also removed as a consequence of gathering food, such as collecting wood boring grubs or creating footholds to climb a tree for possum hunting or bark removal. Due to the multiplicity of uses and the continuous process of occlusion (or healing) following removal, it is difficult to accurately determine the intended purpose for any particular example of bark removal. Scarred trees may occur anywhere old growth trees survive. The identification of scars as Aboriginal cultural heritage items can be problematical because some forms of natural trauma and European bark extraction create similar scars. Many remaining scarred trees probably date to the historic period when bark was removed by Aboriginal people for both their own purposes and for roofing on early European houses. Consequently the distinction between European and Aboriginal scarred trees may not be clear.
    - Culturally modified trees, particularly scarred trees, are present as a dominant site type for the locality and region (Sections 4.2 and 4.3) and hence are possible within the survey area where mature trees of scar bearing type exist. While the likelihood of recording this site type increases with proximity to water, Kelton (1996) found that modified trees can be found within all landforms.
- Quarry sites and stone procurement sites typically consist of exposures of stone material where evidence for human collection, extraction and/or preliminary processing has survived. Typically these involve the extraction of siliceous or fine grained igneous and meta-sedimentary rock types for the manufacture of artefacts. The presence of quarry/extraction sites is dependent on the availability of suitable rock formations.
    - This site type could be recorded within the survey area should suitable rock outcroppings be available.
- Burials are generally found in soft sediments such as aeolian sand, alluvial silts and rock shelter deposits. In valley floor and plains contexts, burials may occur in locally elevated topographies rather than poorly drained sedimentary contexts. Burials are also known to have occurred on rocky hilltops in some limited areas. Burials are generally only visible where there has been some disturbance of sub-surface sediments or where some erosional process has exposed them.
    - Although it is possible that this site type could be found within the survey area, it is considered a rare site type especially given the disturbance that has occurred within the survey area. The survey area also does not comprise soil types generally associated with burials such as sandy deposits and alluvial soils.

5 Application of the due diligence Code of Practice

5.1 Defences under the NPW Regulations 2009

The first step before application of the Due Diligence Code of Practice process itself is to determine whether the proposed activity is a “low impact activity” for which there is a defence in the NPW regulations 2009. The exemptions are listed in Section 7.5 of the Regulations (DECCW 2010a: 6).

The activities associated with this proposal do not fall into any of these exemption categories. As such, the Due Diligence Code of Practice process must be applied.

Also relevant to this process is the assessed levels of previous land-use disturbance.

The regulations (DECCW 2010a: 18) define disturbed land as follows:

> *Land is disturbed if it has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and observable.*
>
> *Examples include ploughing, construction of rural infrastructure (such as dams and fences), construction of roads, trails and tracks (including fire trails and tracks and walking tracks), clearing vegetation, construction of buildings and the erection of other structures, construction or installation of utilities and other similar services (such as above or below ground electrical infrastructure, water or sewerage pipelines, stormwater drainage and other similar infrastructure) and construction of earthworks.*

Investigations undertaken for the PEI identified a number of areas within the survey area that can be regarded as ‘disturbed land’ due to existing disturbances that have changed the land’s surface in a ‘clear and observable manner’. These disturbances are associated with vegetation clearing and agricultural activities, including ploughing and the building of rural infrastructure, the building of sealed and graded roads and associated table drains, the construction of a railway line, and associated infrastructure and residential and business infrastructure.

Under the Due Diligence Code of Practice, these areas are removed from the Due Diligence Code of Practice process and no further investigation of the areas is required.

The portions of the survey area assessed as being ‘disturbed land’ are shown in Figure 5-1 and 5-2. The remaining portions of the survey area are not considered ‘disturbed land’ and were the subject of visual inspection following the Due Diligence Code of Practice.

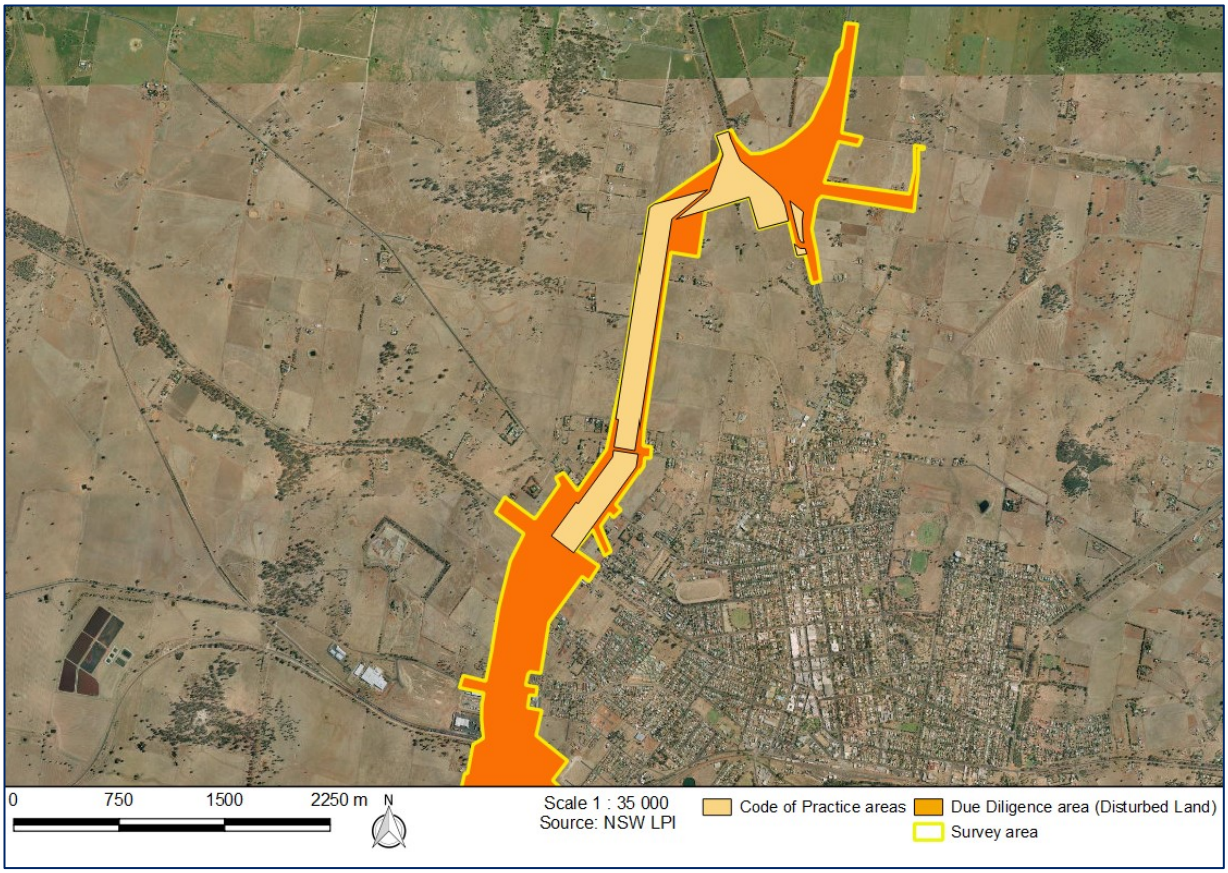

Figure 5-1 Aerial showing portions of the northern survey area assessed under the Due Diligence Code of Practice and the Code of Practice

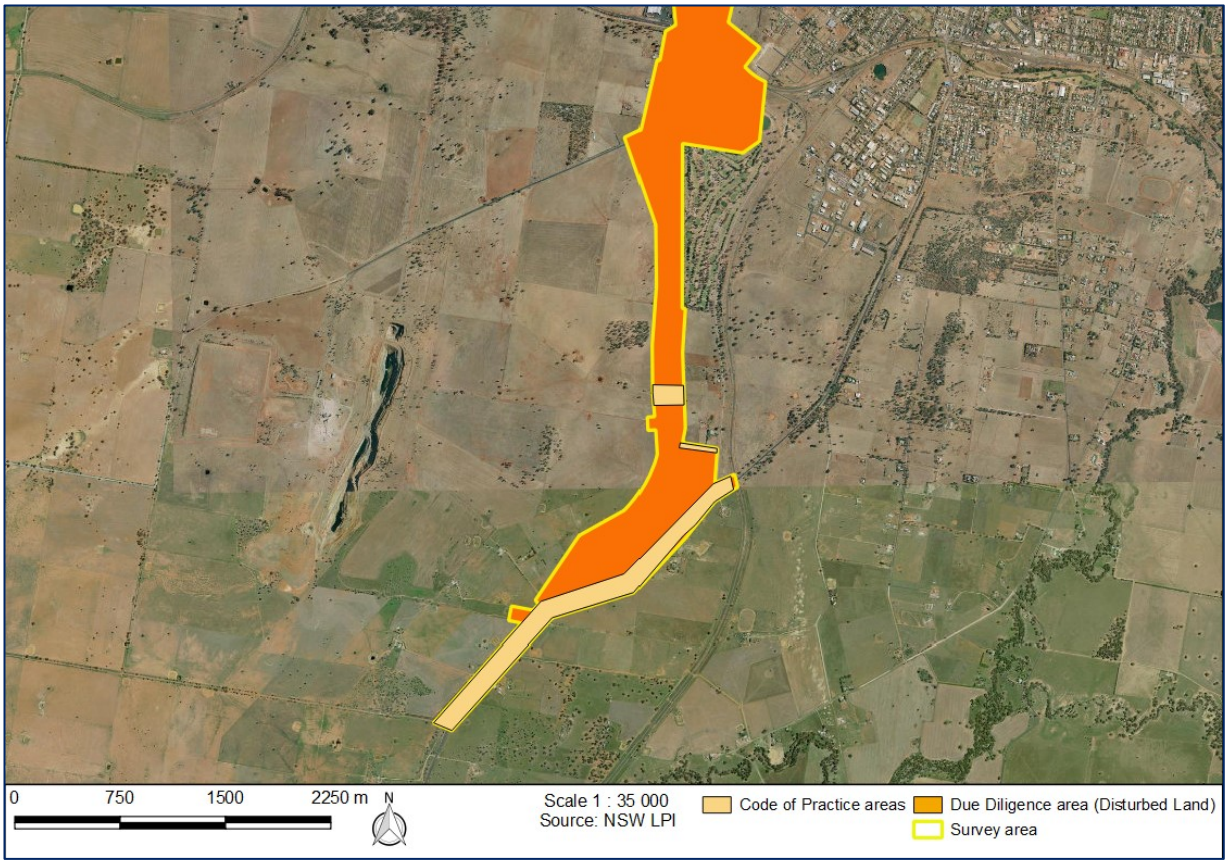

Figure 5-2 Aerial showing portions of the southern survey area assessed under Due Diligence Code of Practice and the Code of Practice

6 Results of Aboriginal archaeological assessment

6.1 Sampling Strategy and Field Methods

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). Those portions of the survey area assessed as 'disturbed land' under the Due Diligence Code of Practice (Figure 5-1 and 5-2) were subject to spot checks in order to confirm the high levels of disturbance. Any mature, native vegetation in these areas was individually assessed to determine whether or not they possessed any cultural modification.

Those portions of the survey area assessed under the Code of Practice (Figure 5-1 and 5-2) were inspected by full pedestrian survey with surveyors' spaced five metres apart in areas of high exposure. Where no exposure was present, surveyors were spaced between 10 to 15 metres apart. The location of AHIMS site #43-3-0059 was inspected in order to determine whether or not the scarred tree was still within the landscape. The location of #43-3-0061 was also inspected, however, the desktop assessment concluded the site was recorded at the wrong location on AHIMS (Section 4.3.1)[3].

Figure 6-1 shows the GPS tracking data from the survey, including pedestrian transects and vehicle reconnaissance. The pedestrian transects shown in Figure 6-1 were undertaken by one person, however, it should be noted that one archaeologist and three Aboriginal site officers completed the survey and the actual survey coverage was greater than that indicated in this figure.

[3] OzArk has submitted updated site cards to AHIMS to correct the location of #43-3-0059 and #43-3-0061.

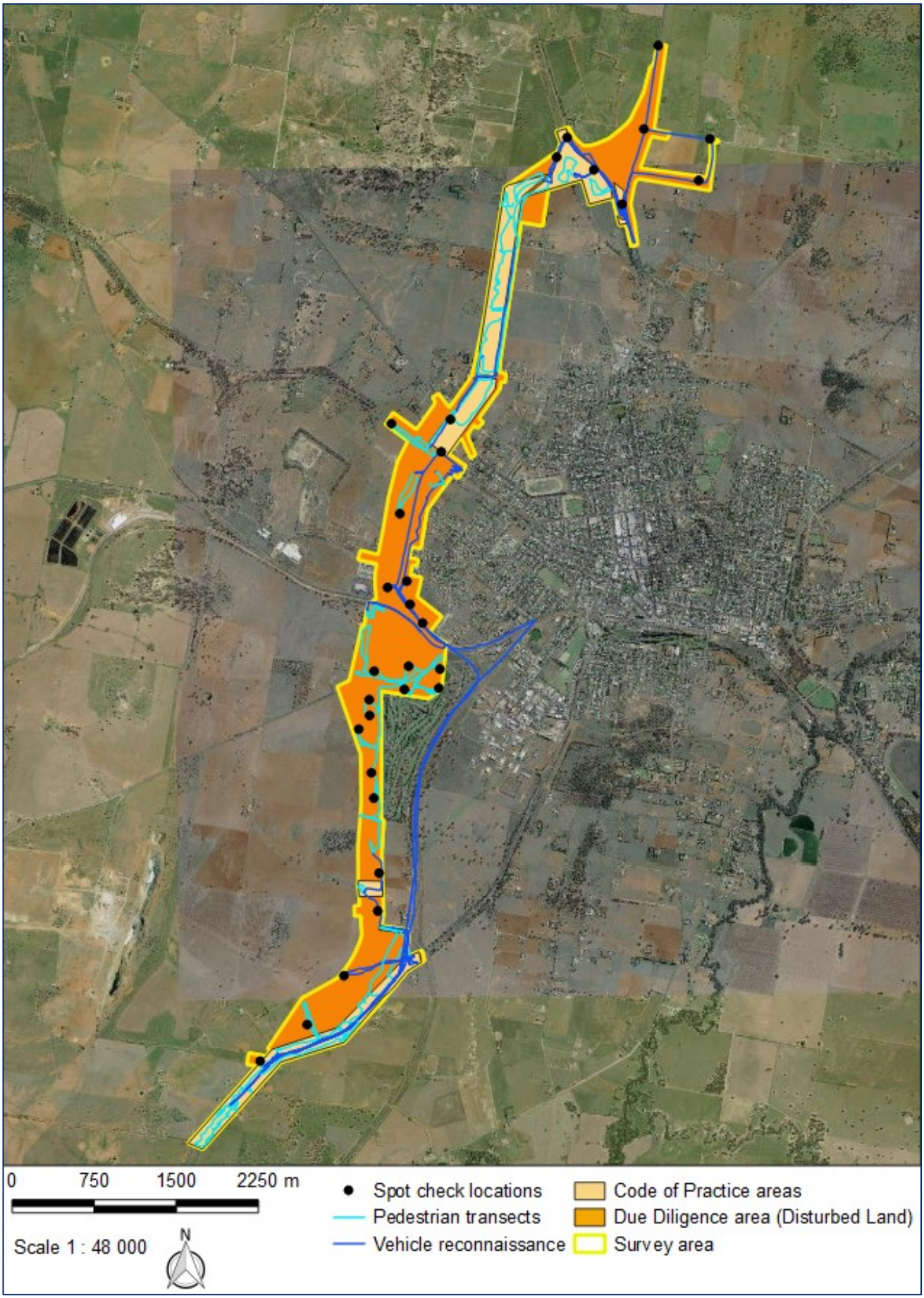

Figure 6-1 Aerial showing spot check locations, pedestrian transects and vehicle reconnaissance across the survey area

6.2 Project constraints

There were no constraints to the successful completion of the survey. Access at some locations was restricted, however, these locations did not require inspection as they were assessed as 'disturbed land' under the Due Diligence Code of Practice guidelines due to the existing levels of disturbance (such as ploughing and residential development) and contained no trees of scar bearing age or type.

6.3 Effective survey coverage

Two of the key factors influencing the effectiveness of archaeological survey are ground surface visibility (GSV) and ground surface exposure (GSE). These factors are quantified in order to ensure that the survey data provides adequate evidence for the evaluation of the archaeological materials across the landscape. For the purposes of the current assessment, these terms are used in accordance with the definitions provided in the Code of Practice (DECCW 2010b).

GSV is defined as:

> *…the amount of bare ground (or visibility) on the exposures which might reveal artefacts or other archaeological materials. It is important to note that visibility, on its own, is not a reliable indicator of the detectability of buried archaeological material. Things like vegetation, plant or leaf litter, loose sand, stone ground or introduced materials will affect the visibility. Put another way, visibility* (GSV) *refers to 'what conceals'* (DECCW 2010b: 39).

GSE is defined as:

> *…different to visibility because it estimates the area with a likelihood of revealing buried artefacts or deposits rather than just being an observation of the amount of bare ground. It is the percentage of land for which erosion and exposure was sufficient to reveal archaeological evidence on the surface of the ground. Put another way, exposure* (GSE) *refers to 'what reveals'* (DECCW 2010b: 37).

Effective survey coverage over the survey area was variable due to GSE incidence or the amount of GSV away from exposures. Table 6-1 and Table 6-2 examine the effective survey coverage within the survey area in more detail. It can be seen from Table 6-1 that the lower slope landform was the most effectively surveyed (12 per cent) landform within the survey area. Exposures within the landform were provided by recent cultivation, existing access tracks, ant hills and less dense vegetation cover (Plate 1 to Plate 9). The GSV was lower within the flat and hill landforms (at 60 per cent and 40 per cent, respectively) and there fewer areas of exposure present. Although the low GSV did not allow a full investigation of the ground surface in these landform types, there were sufficient exposures (access tracks, fence lines and ant mounds) to allow the archaeological potential of the landform to be assessed. For example, Table 6-2 shows that although flat landforms within the survey area had an effective survey coverage of 3 per cent, this did not prevent an Aboriginal site being recorded in this landform type which were noted as having low archaeological potential (albeit the site is a culturally modified tree whose recording is not entirely predicated on GSV or GSE).

Figure 3-2 shows the location of landform types within the survey area. These landform types equate to the survey units shown in Table 6-1.

Table 6-1 Survey coverage data[4]

Survey unit	Landform	Survey unit area (sq m)	GSV%	GSE%	Effective coverage area (sq m) (= survey unit area x GSV% x GSE%)	Effective coverage % (= effective coverage area / survey unit area x 100)
1	Lower slope	140,000	80	15	16,800	12%
2	Flat	56,000	60	5	1,680	3%
3	Mid-slope	12,500	80	10	1,000	8%
4	Crest	11,000	70	10	770	7%
5	Hill	3,500	40	5	70	2%

Table 6-2 Landform summary—sampled areas

Landform	Landform area (sq m)	Area effectively surveyed (sq m) (= effective coverage area)	% of landform effectively surveyed (= area effectively surveyed / landform x 100)	Number of sites
Lower slope	140,000	16,800	12%	1
Flat	56,000	1,680	3%	1
Mid-slope	12,500	1,000	8%	0
Crest	11,000	770	7%	0
Hill	3,500	70	2%	0

6.4 Aboriginal sites recorded

Two Aboriginal sites, both scarred trees, were recorded as a result of the survey. Table 6-3 provides details of each recorded site and Figure 6-2 shows the location of each site in relation to the survey area. Additional details on each site is presented below.

Table 6-3 Aboriginal sites recorded during the survey

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[4] Table 6-1 and Table 6-2 only take into account those areas covered by pedestrian survey.

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Figure 6-2 Location of recorded Aboriginal sites in relation to the survey area

Barkers Road-ST1

Site Type: Scarred tree

GPS Coordinates: *This text has been removed for confidentiality purposes*

Location of Site: *This text has been removed for confidentiality purposes*

Description of Site: Barkers Road-ST1 consists of a box tree displaying one elongated scar (Table 6-4 and Figure 6-4). The tree has a circumference of 250 centimetres at the position of the scar and is alive. The scar displays steel axe marks on the dry face of the scar which is heavily weathered.

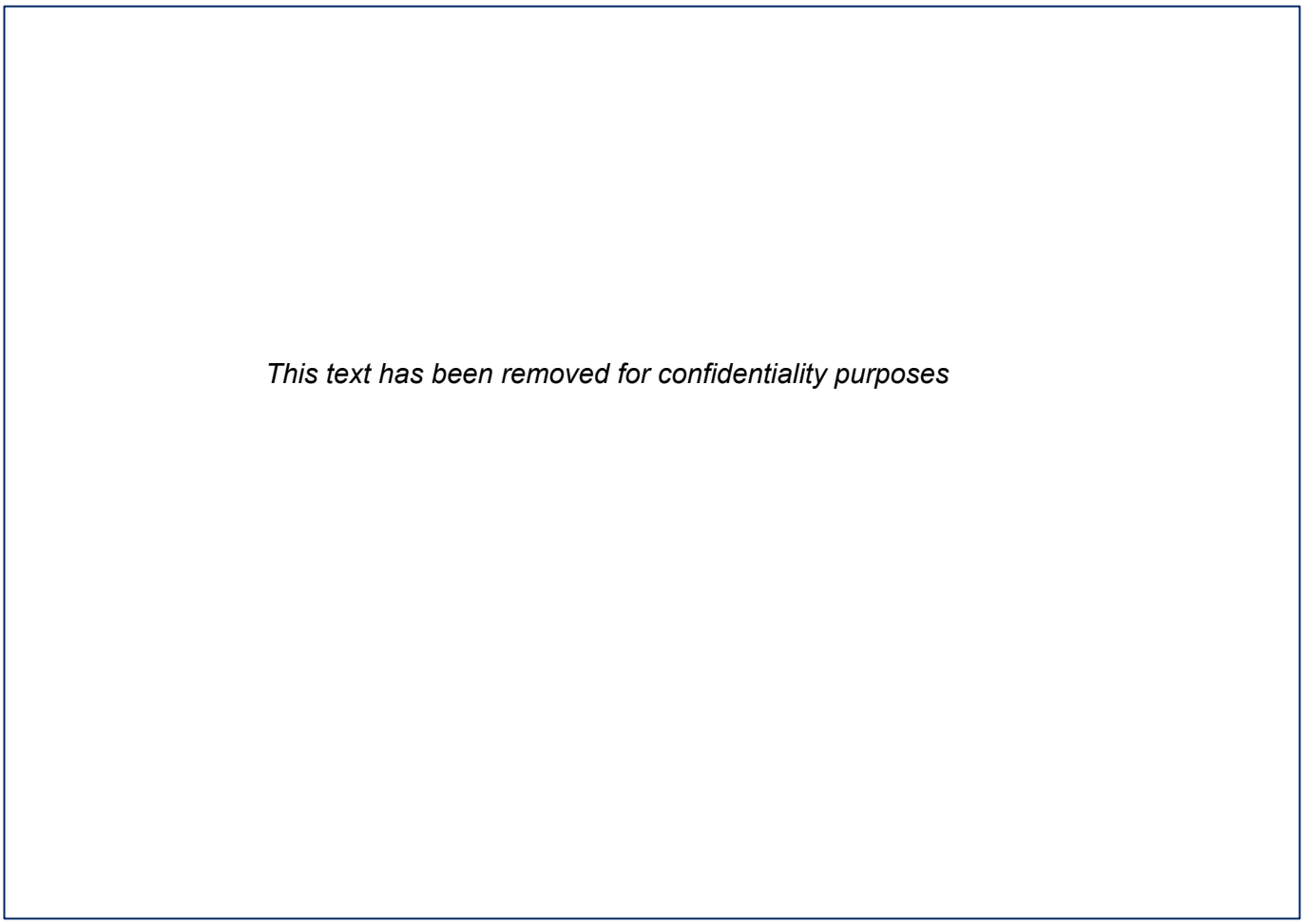

Figure 6-3 Location of Barkers Road-ST1 in relation to Barkers Road and the Newell Highway

Table 6-4 Barkers Road-ST1 scar attributes

Attribute	Dimensions/observation
Scar Length	171 centimetres
Scar Width	20 centimetres
Scar Depth	15 centimetres
Regrowth	12 centimetres
Scar Shape	Elongated
Orientation	West
Condition of scar	Good

1. View of Barkers Road-ST1. View east northeast

2. Close up view of Barkers Road-ST1 scar

3. Close up view of steel axe marks

Figure 6-4 Barkers Road-ST1. View of site and up close view of scars

Westlime Road-ST1

Site Type: Scarred tree

GPS Coordinates: *This text has been removed for confidentiality purposes*

Location of Site: *This text has been removed for confidentiality purposes*

Description of Site: Westlime Road-ST1 consists of a box tree displaying one elongated scar (Table 6-5 and Figure 6-6). The tree has a circumference of 270 centimetres at the position of the scar and is alive. The scar displays no stone or steel axe marks.

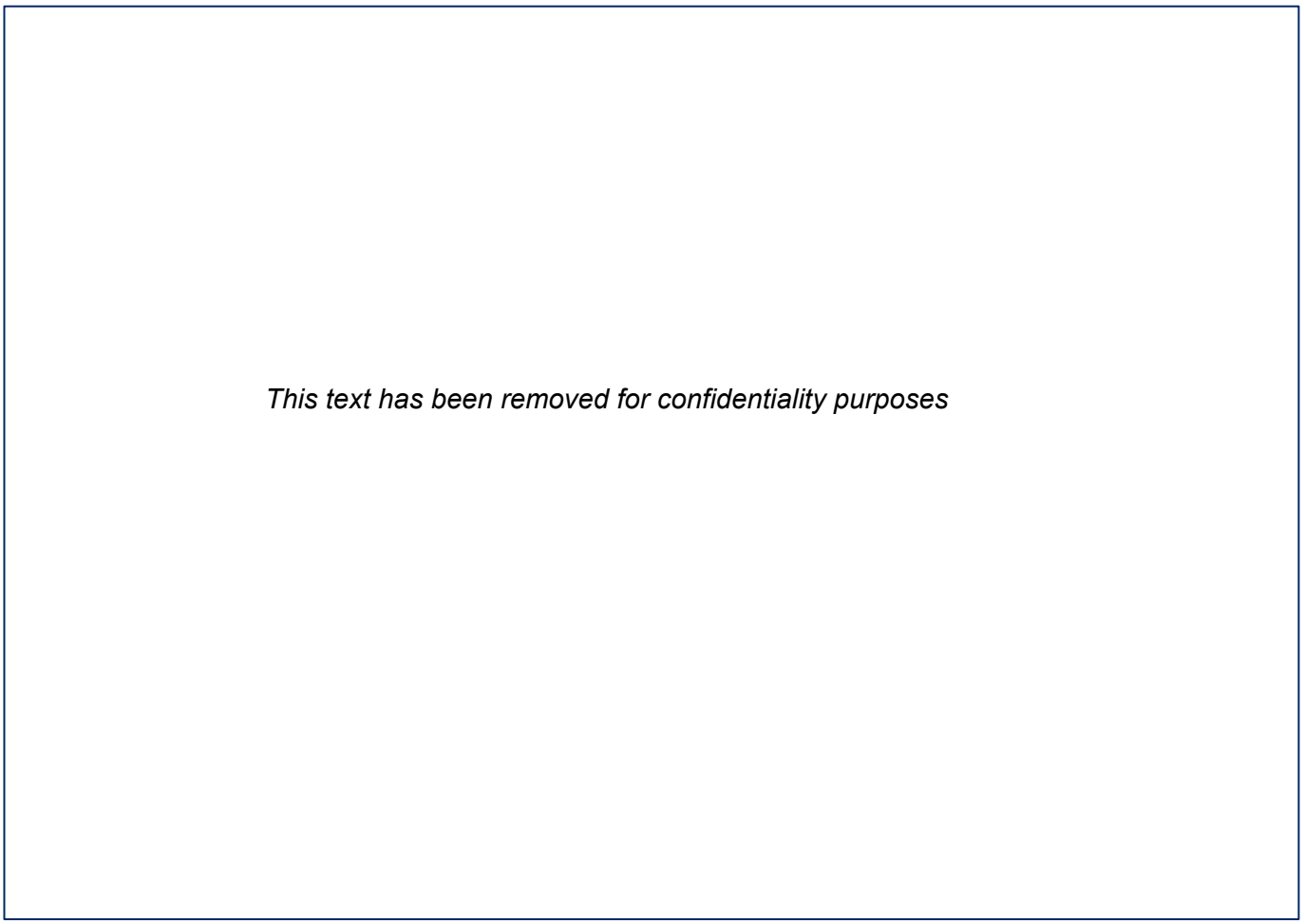

Figure 6-5 Location of Westlime Road-ST1 in relation to Westlime Road and the Condobolin Road

Table 6-5 Westlime Road-ST1 scar attributes

Attribute	Dimensions/observations
Scar Length	180 centimetres
Scar Width	25 centimetres
Scar Depth	6 centimetres
Regrowth	7 centimetres
Scar Shape	Elongated
Orientation	North east
Condition of scar	Good

1. View of Westlime Road-ST1. View southwest

2. Close up view of Westlime Road-ST1 scar

Figure 6-6 Westlime Road-ST1. View of site and up close view of scars

6.5 Previously recorded Aboriginal sites located

Previously recorded AHIMS site, #43-3-0059, was recorded by Comber in 2004 immediately to the east of the survey area *This text has been removed for confidentiality purposes* (Section 4.3 and Figure 4-3). Attempts were made ground-truth the location of the scarred tree during the survey. The location provided by the AHIMS register and the location described on the site card were both inspected. Despite having photos of the scarred tree, it was unable to be located at either location (Figure 6-7). The site, which was recorded as being dead but standing at the time of recording, was noted by OzArk (2014) as likely being no longer extant as a result of natural deterioration or possibly being felled without knowledge of its registration[5] (Section 4.3.1).

1. Site #43-3-0059 at the time of recording. View to the north. (Source: Comber 2004a: 31)

2. Site card location of site #43-3-0059. View to the northeast

3. AHIMS register location of site #43-3-0059. View to the southwest

Figure 6-7 Site #43-3-0059 showing photos at the time of the recording in 2004 and the locations ground-truthed in 2017

[5] OzArk will submit an updated site card for #43-3-0059 to update the condition of the site.

The AHIMS register location of AIHMS site #43-3-0061 was also inspected during the survey in order to further confirm that the site is not located within the survey area. Figure 6-8 below, shows the location of AHIMS site #43-3-0061 as provided by AHIMS within a cleared and ploughed paddock.

1. AHIMS register location of site #43-3-0061. View to the east

Figure 6-8 AHIMS register location of site #43-3-0061

6.6 Aboriginal community input

Anthony Wilson, Tonia Robinson and Lyn Bell representing the PHLALC were present throughout the survey and provided significant input. There were no objections to the manner in which the survey was implemented or completed.

A number of scarred trees were observed through the survey area, with a large majority of these displaying irregular scar shapes. The attending Aboriginal site officers believed that all scars present on these trees, apart from those recorded as Aboriginal sites (Section 6.4), were the result of natural trauma resultant from branch tears.

Three potential grinding stones were noted by the Aboriginal site officers within the TSR in the northern portion of the survey area. The potential grinding stones were identified as being shale by the attending archaeologist, a material not utilised by Aboriginal people for grinding purposes due to its platy nature which is susceptible to easy breakage. It was concluded that marks observed on the rocks were either natural or a result of machinery.

6.7 Discussion

The recording of two scarred trees within the survey area accords with the predictive model set out in Section 4.4 which indicated that due to the landforms of the survey area, the presence of mature, native vegetation, and the presence of previously recorded scarred trees on similar landforms, that there was a likelihood of recording scarred trees. Although previously recorded scarred trees present in the locality appear to have a close relationship with waterways, Kelton (1996; Section 4.2.1) noted that while the frequency of scarred trees tends to increase with proximity to water, they can be expected to occur on almost all landform units. This is consistent with the results of the current survey as newly recorded sites Barkers Road-ST1 and Westlime Road-ST1 are not located in close proximity to water.

A number of additional trees bearing scars were also identified throughout the survey area which does not comprise the newly recorded sites. These scars were not regarded to be Aboriginal in origin by OzArk and the attending Aboriginal site officers (Section 6.6). The scars were not considered to be cultural in origin because they were irregular in shape, relatively small, on trees considered to be of a

younger age, at an unlikely height and displaying low levels of weathering of the dry face. These scars were determined to be from natural causes including the result of branch tears and faunal damage.

The absence of lithic sites including artefact scatters and isolated finds is unsurprising given that high potential landforms, such as watercourses and well-drained terraces, are not present within the survey area. As described in the regional and local archaeological contexts provided in Sections 4.2 and 4.3.1**,** and the predictive model for site location set out in Section 4.4, watercourses formed an important focus for traditional Aboriginal activities. Due to the absence of watercourses in the survey area and the lack of stone artefact site recordings, this correlation between water and occupation sites has been confirmed. The absence of stone artefact sites also accords with the results of the 2016 study completed by OzArk (OzArk 2016). This study concluded that artefact scatters are most likely to be recorded predominately within Slopes landscapes, followed closely by Channel and Floodplain landscapes (OzArk 2016). Neither of these landscapes are present within the current survey area and this also may explain the lack of stone artefact site recordings.

6.8 Assessment of significance

6.8.1 Introduction

The appropriate management of cultural heritage items is usually determined on the basis of their assessed significance as well as the likely impact of any proposed developments. Scientific, cultural and public significance are identified as baseline elements of significance assessment, and it is through the combination of these elements that the overall cultural heritage values of a site, place or area are resolved.

Social or cultural value

This area of assessment concerns the importance of a site or features to the relevant cultural group: in this case the Aboriginal community. Aspects of social value include assessment of sites, items, and landscapes that are traditionally significant or that have contemporary importance to the Aboriginal community. This importance involves both traditional links with specific areas, as well as an overall concern by Aboriginal people for their sites generally and the continued protection of these. This type of value may not be in accord with interpretations made by the archaeologist: a site may have low archaeological value but high social value, or vice versa.

Archaeological/scientific value

Assessing a site in this context involves placing it into a broader regional framework, as well as assessing the site's individual merits in view of current archaeological discourse. This type of value relates to the ability of a site to answer current research questions and is also based on a site's condition (integrity), content and representativeness.

The overriding aim of cultural heritage management is to preserve a representative sample of the archaeological resource. This will ensure that future research within the discipline can be based on a valid sample of the past. Establishing whether or not a site can contribute to current research also involves defining 'research potential' and 'representativeness'. Questions regularly asked when determining significance are: can this site contribute information that no other site can? Is this site representative of other sites in the region?

Aesthetic value

This refers to the sensory, scenic, architectural and creative aspects of the place. It is often closely linked with the social values. It may consider form, scale, colour, texture and material of the fabric or landscape, and the smell and sounds associated with the place and its use (Australia ICOMOS 2013).

Historic value

Historic value refers to the associations of a place with a historically important person, event, phase or activity in an Aboriginal community. Historic places do not always have physical evidence of their historical importance (such as structures, planted vegetation or landscape modifications). They may have 'shared' historic values with other (non-Aboriginal) communities.

Places of post-contact Aboriginal history have generally been poorly recognised in investigations of Aboriginal heritage. Consequently the Aboriginal involvement and contribution to important regional historical themes is often missing from accepted historical narratives. This means it is often necessary to collect oral histories along with archival or documentary research to gain a sufficient understanding of historic values.

6.8.2 Assessed significance of the recorded sites

Social or cultural value

The social value of Aboriginal sites is generally determined through consultation with Aboriginal people. Sites Barkers Road-ST1 and Westlime Road-ST1 which were recorded within the survey area are accorded **high social and cultural value** because they provide a tangible link to Aboriginal ancestors and cultural practices in accordance with the views of Aboriginal community representatives from PHLALC. It can be said that the specific sites recorded in the survey area are not currently the focus of spiritual, political, national or other cultural sentiment, however, Aboriginal heritage is of great value to many people and the sites therefore have social value.

Archaeological/scientific value

Sites Barkers Road-ST1 and Westlime Road-ST1 are representative examples of the region's most common site type. Due to the frequency of this site type within the region and locality, the archaeological significance of Barkers Road-ST1 and Westlime Road-ST1 is somewhat reduced. Furthermore, neither tree is associated with landforms displaying a high level of sub-surface archaeological potential. Barkers Road-ST1 contains a scar made using a steel axe which shows continuity of cultural traditions during the post-contact period.

While the two trees strengthen the evidence for a picture of widespread Aboriginal modification of trees throughout the region, their common manifestation, lack of unique features and lack of associated archaeological deposits means that the sites are unlikely to greatly contribute to our knowledge of past Aboriginal activities or settlement distribution in the region. To this end, Barkers Road-ST1 and Westlime Road-ST1 have been assessed as having **low scientific value**.

Aesthetic value

Barkers Road-ST1 and Westlime Road-ST1 have been assessed as having **low aesthetic value**. Despite scars on trees being typically less difficult for the layperson to interpret than stone artefact remains, the sites are located nearby areas which have been significantly disturbed via agriculture and/or development.

Historic value

Westlime Road-ST1 has been assessed as holding **no historic value**, with no apparent relationship to known historic Aboriginal sites.

Barkers Road-ST1 displays steel axe marks which displays continued use of traditions post-contact. This site has been assessed as having **low historic value**.

Table 6-6 summarises the assessment of heritage significance for the two recorded sites.

Table 6-6 Aboriginal heritage significance assessment

Site name	Social or cultural value	Archaeological/ scientific value	Aesthetic value	Historic value
Barkers Road-ST1	High	Low	Low	Low
Westlime Road-ST1	High	Low	Low	None

6.9 Likely impact to Aboriginal heritage from the proposal

Scarred trees Barkers Road-ST1 and Westlime Road-ST1 are located within the survey area, however, they are able to be avoided by the proposal (Table 6-7). Barkers Road-ST1 is located at its closest 24 metres northeast of the proposal, while Westlime Road-ST1 is located 107 metres to the east. Management and mitigation measures are set out in Section 7 in order to avoid any inadvertent impact to the recorded sites.

Table 6-7 Aboriginal heritage impact assessment

Site name	Type of harm (direct/indirect/none)	Degree of harm (total/partial / none)	Consequence of harm (total/partial/no loss of value)
BR-ST1	None	None	No loss of value
WR-ST1	None	None	No loss of value

7 Management and mitigation: Aboriginal heritage

7.1 General principles for the management of Aboriginal sites

Appropriate management of cultural heritage items is primarily determined on the basis of their assessed significance as well as the likely impact of the proposed development. Section 6.8.2 and Section 6.9 describe, respectively, the heritage significance of the recorded sites and the likely impact arising from the proposal. The following management options are general principles, in terms of best practice and desired outcomes, rather than mitigation measures against individual site disturbance.

- **Avoid impact** by altering the development proposal or in this case by avoiding impact to a recorded Aboriginal site. If this can be done, then a suitable curtilage around the site must be provided to ensure its protection both during the short-term construction phase of development and in the long-term use of the area. If plans are altered, care must be taken to ensure impact do not occur to areas not previously assessed.
- **If impact is unavoidable**, then approval to disturb sites must be sought from OEH and will depend on many factors including the site's assessed significance. Aboriginal community consultation will also need to occur adhere to Stage 4 of the PACHCI. If granted, the local Aboriginal communities may wish to collect or relocate any evidence of past Aboriginal occupation (Aboriginal object), whether temporarily or permanently, if necessary. The fate of all artefacts remains within the statutory control of the OEH. A care and control permit may be issued to local Aboriginal groups or, with Aboriginal community consent, to other parties, for educational or display purposes.

7.2 Management and mitigation of recorded Aboriginal sites

The proponent is able to avoid impact to newly recorded sites Barkers Road-ST1 and Westlime Road-ST1. In addition to this, no previously recorded sites will be impacted by the proposal. Management measures are required in order to ensure inadvertent impacts do not affect the sites recorded in this assessment. Management of these sites will include:

1. An exclusion zone which is a minimum of 10 metres in diameter will be installed around Barkers Road-ST1 and Westlime Road-ST1 to ensure impacts are avoided during construction (Figure 7-1 and 7-2). High-visibility fencing can be used and **Table 7-1** provides the coordinates of the buffer zone around each site.
2. Site inductions will be provided to workers on the project to inform them of the location of the recorded sites and their legislative protection under the NPW Act.

Figure 7-1 View of Barkers Road-ST1 with a 10 metre buffer

Figure 7-2 View of Westlime Road-ST1 with a 10 metre buffer

Table 7-1 Activity exclusion/buffer zone at sites Barkers Road-ST1 and Westlime Road-ST1

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8 Historic heritage assessment: background

8.1 Brief history of Parkes

Exploration of the Parkes district began in 1817 when John Oxley explored the Lachlan district and the watershed between the Bogan and Lachlan Rivers north of Trundle, which was followed on by Sturt in 1829 when the Bogan River was again recorded (Kass 2003: 9). In 1833, further investigation was being undertaken of the Bogan River by Surveyor Dixon, followed by Surveyor Mitchell in 1835. Mitchell found white squatters were already entering the area in the 1830s, despite being outside the Limits of Settlement. Parkes was founded in 1985 as the settlement of Currajong, but was later known as Bushmans during the gold rush.

Thomas Kite is recognised as the first squatter of the area, taking up land at Burrawang, later to become known as Coobang Station and by 1836, the government had despatched a commissioner to manage grazing in lands beyond the Limits. This opened up the area to European settlement and large land parcels were taken up along the Lachlan River (Kass 2003: 10). Properties listed in an 1850's traverse of the area included locations on Bartleys Creek. By the 1880s pastoral runs were established along all the major watercourses, including Billabong, Goobang and Bindogundra Creeks, although the *Crown Lands Act* (1883) made changes to tenure of the land and selectors whittled away the pastoral properties (Kass 2003: 11).

Sheep and cattle grazing was complimented and diversified by the establishment of a dairy on Billabong Creek in 1900, which became the Country Freezing Co. in 1924, changing somewhat local agriculture as farmers took up more dairy cattle to serve the butter factory. Further breeds of sheep were also introduced.

Transport was originally by hoof for all stock, which entered the Lachlan through Bathurst. The discovery of gold in Forbes in 1861 shifted transport routes from the Wellington Valley to run to Forbes and from Orange through Cudal to Eugowra, which was the route of the Cobb and Co coaches. Due to the pastoral nature of the early Parkes economy, TSRs through Parkes were the major transport connectors and formed the basis of the road network which remains extant today.

Gold fever hit the Bushmans area (later named Parkes) in the later 1860s, although the lodes proved to be shallow and by the early 1870s some of the miners had moved on. The later 1870s saw further mining exploration and led to influxes of miners from other areas. This started a mining era for Parkes which was more long-lived than the booms of other towns and lasted until 1910.

Once Parkes was linked to Sydney by the railway line in 1893, and as the rail line extended west, it became a focal centre for the bulk movement of wheat which became an economic focus as gold interest waned in the 1920s. The completion in 1927 of the last link in the Stockinbingal to Broken Hill railway line increased the importance of Parkes as a rail centre. At the height of the steam era in Parkes, in 1955, the NSW Government Railways employed 270 men with 26 steam locomotives based at Parkes. In 1981, 29 diesel electric locomotives were based at Parkes, and railway staff totalled 165 men. Seven million tonnes of freight were moved through Parkes in all directions in 1981 (Tindall 1982). The round hose built at Parkes in 1928 for steam locomotive servicing was easily adapted for diesel maintenance.

8.2 Local context

8.2.1 Desktop database searches conducted

A desktop search was conducted on the following databases to identify any potential previously-recorded heritage within the survey area. The results of this search are summarised in Table 8-1 and are presented in Appendix C.

Table 8-1 Historic heritage: desktop-database search results

	Date of search	Type of search	Comment
National and Commonwealth Heritage Listings	20.2.17	Parkes Shire LGA	No places listed on either the National or Commonwealth heritage lists are located within the survey area.
NSW State Heritage Register (SHR)	20.2.17	Parkes Shire LGA	One item of relevance to the survey area – SHR 01220 Parkes Railway Station Group.
NSW State Heritage Inventory (SHI)	20.2.17	Parkes Shire LGA	One item of relevance to the survey area – Parkes Railway Station Group and Parkes Railway Precinct – State Government Register.
Local Environment Plan (LEP)	20.2.17	Parkes LEP of 2011	One item of relevance to the survey area – Item I6 Parkes Railway Station Group.

A search of the Heritage Council of NSW administered heritage databases and the Parkes LEP of 2011 returned one record for known historical heritage sites within the designated search areas (shown in Table 8-1). The Parkes Railway Station Group is listed on the SHR as item #01220 (Section 8.2.2). The Parkes Railway Station Group is also listed in the Parkes LEP and the SHI.

8.2.2 Parkes Railway Station Group

Construction of the Parkes Railway Station begun in 1881 and was opened on 18 December 1893 as a result of the expansion of the passenger service in the country. The Parkes Railway Station Group listing includes major structures and associated items of the railway station. These structures are described in Table 8-2. The SHR listing boundary is Hartigan Avenue and May Street to the north, Forbes Street to the west as it crosses the rails, the southern property boundary and to the east the East Street level crossing (Figure 8-1 and 8-2).

Table 8-2 Description of Parkes Railway Station Group structures and items

Building	Year	Description
Station building	1893	Station building presents as an altered example of a standard roadside building. The building was originally a five room gabled building with a central waiting room, a Station Mater's office and a parcel office. The building comprises a shed and lamp room wing on the western side with bathrooms on the eastern side. Historic plans show three brick chimneys and gable vents and the front verandah which is still present. Timber finials to gable ends are also still present on the detached wings. The main roof form is hipped. The building underwent alterations in 1926 and again in 1947. The alterations extended the building on either end to incorporate external wings into the main building. The alterations were completed in such a way to retain its Victorian character.
Platform	1893	Comprised of brick with an asphalt surface. Extended in 1928.
Refreshment room	Between 1910 and 1928	Large single-storey structure
Footbridge	1935	Warren truss footbridge on steel trestles and channel iron stair stringers.
Signal box	1944	Two-storey elevated fibro signal box with a hipped pyramid roof clad in concrete tiles.

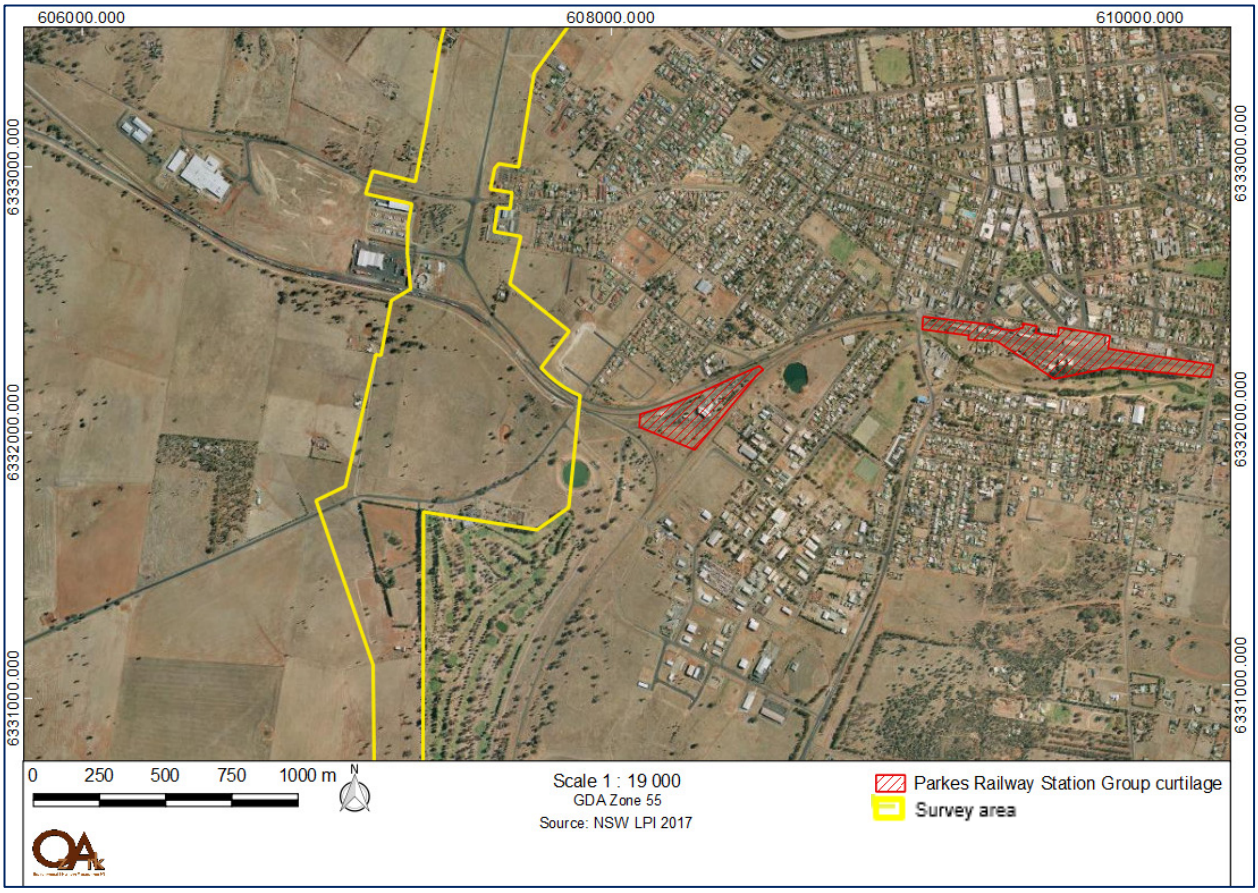

Figure 8-1 Location of the Parkes Railway Station Group curtilage in relation to the survey area

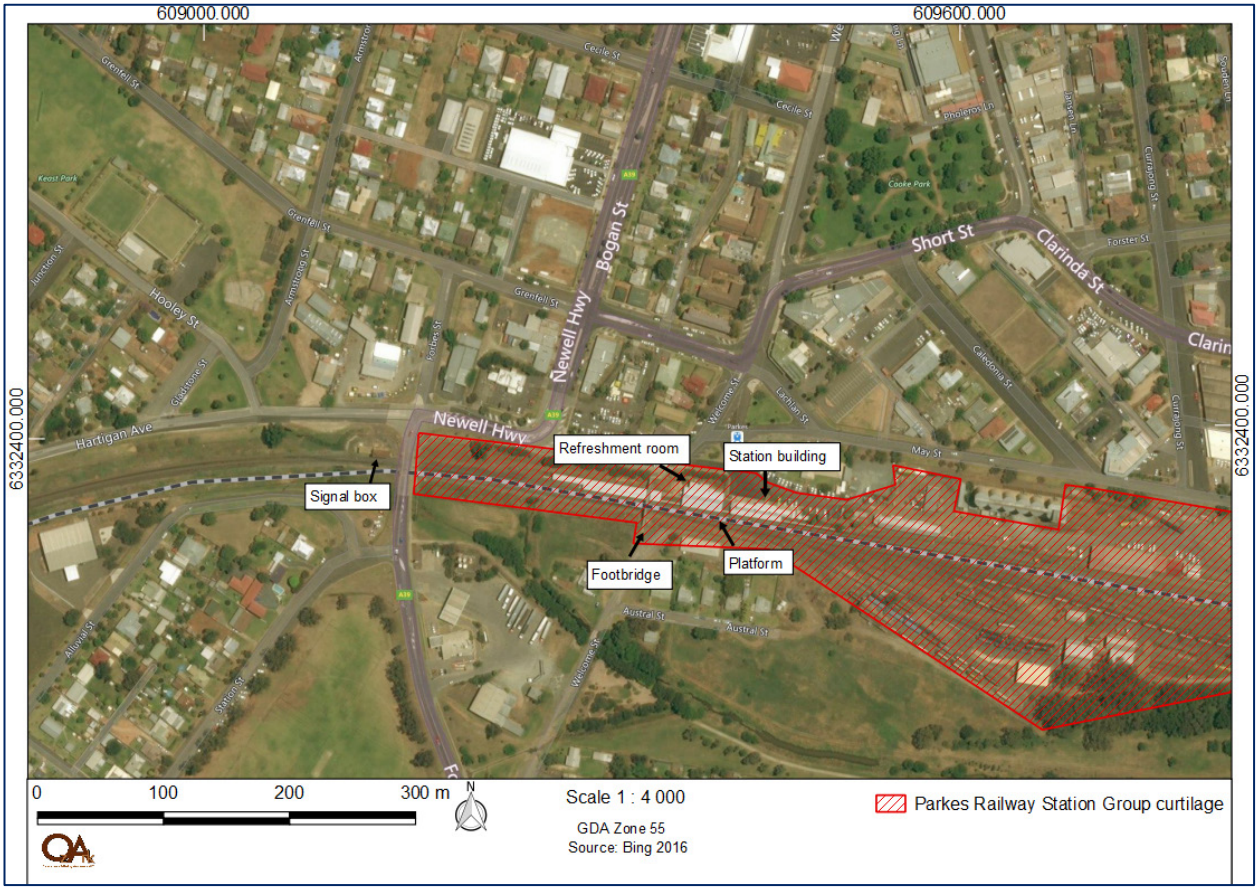

Figure 8-2 Location of the buildings described in Table 9-2

8.3 Survey methodology

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). The historic heritage field survey was completed concurrently with the Aboriginal heritage field assessment. GPS coordinates and photographs were taken of all heritage items. Refer to Section 6.1 for more detail.

8.4 Project constraints

There were no constraints to the successful completion of the survey.

9 Results of historic heritage assessment

9.1 Historic heritage sites

Six newly recorded historic heritage sites, Reedsdale Road-HS01 to Reedsdale Road-HS06, were recorded during the historic heritage assessment (Figure 9-1). Table 9-1 details the recorded historic sites are described in greater detail below.

Table 9-1 Historic sites recorded during the survey

Site name	GDA Zone 55	Site type
Reedsdale Road-HS01	608453E 6336095N	Gold mine (shafts)
Reedsdale Road-HS02	608607E 6336075N	Rubbish tip
Reedsdale Road-HS03	608321E 6335163N	Plough blade
Reedsdale Road-HS04	608342E 6335148N	Ceramic pipe
Reedsdale Road-HS05	608269E 6334881N	Metal pipe
Reedsdale Road-HS06	608237E 6334856N	Metal frame

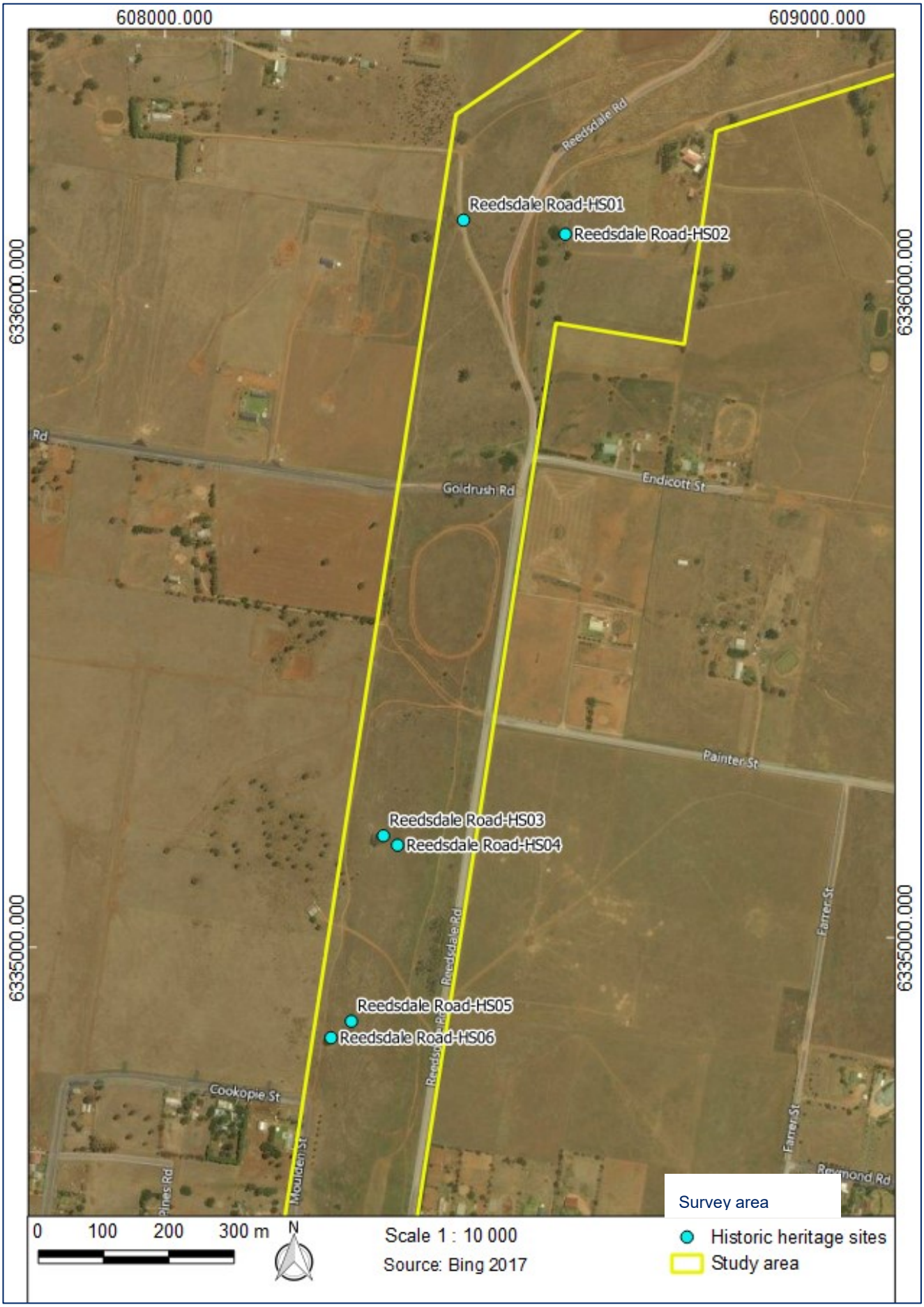

Figure 9-1 Location of Reedsdale Road-HS01 to HS06 in relation to the survey area

Reedsdale Road-HS01

Site Type: Gold mine (shafts)

GPS Coordinates: GDA Zone 55 608453E 6336095N

Location of Site: Reedsdale Road-HS01 is located within Lot 7044 DP1059946, a designated TSR, along Reedsdale Road. The site is located on a crest and is bound to the west by Lot 5 DP831031 (Figure 9-1 and 9-2).

Description of Site: Reedsdale Road-HS01 is a disused gold mine with six visible shafts. The majority of the identified shafts appear to have either been backfilled with sediment or not excavated deep enough for use. One of the shafts appears to have been utilised in attempts of gold procurement, however, it did not contain any other features which would allow for its interpretation as a gold mine shaft. The shafts have more recently been utilised by locals for the dumping of unwanted materials including water tanks and farm infrastructure (Figure 9-3).

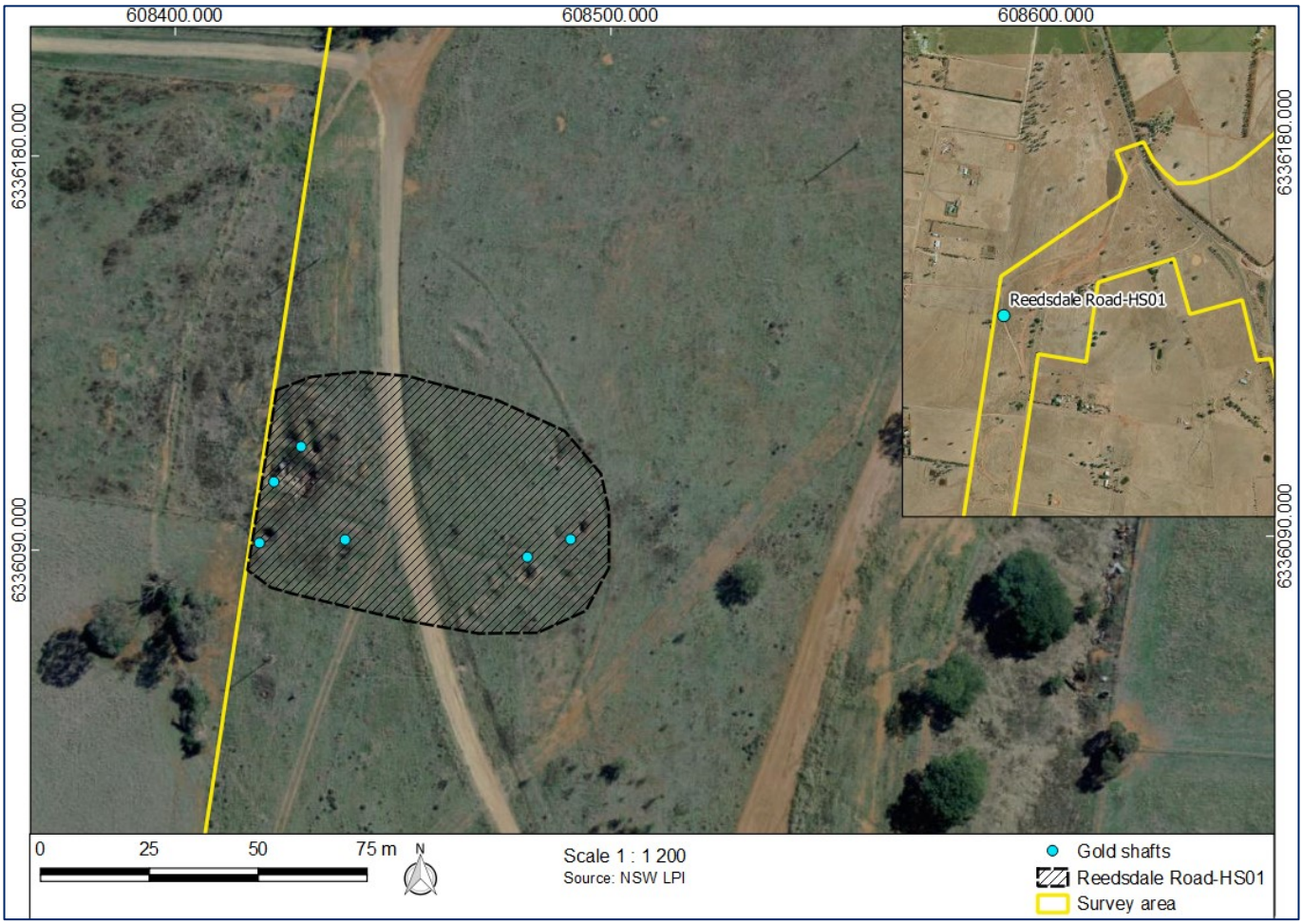

Figure 9-2 Location of Reedsdale Road-HS01 in relation to the survey area

1. View of Reedsdale Road-HS01 on a low crest landform. View north

2. Close up view of one shaft

3. Close up view of one shaft and rubbish fill

4. Close up view of one shaft and rubbish fill

Figure 9-3 Reedsdale Road-HS01. View of site and sample view of shafts

Reedsdale Road-HS02

Site Type: Rubbish tip

GPS Coordinates: GDA Zone 55 608607E 6336075N

Location of Site: Reedsdale Road-HS02 is bounded to the west by Lot 7044 DP1059946, a designated TSR, and to the east by Lot 1 DP838430, a rural residential property (Figure 9-1 and 9-4).

Description of Site: Reedsdale Road-HS02 comprises an old rubbish tip, possibly dating to around the 1940s. The rubbish tip contains old vehicles, including Chevrolet and Holden models, and agricultural infrastructure which has been left along outcropping shale bedrock (Figure 9-5). According to local accounts, the tip was utilised by locals where necessary car parts or infrastructure could be acquired. Today, the vehicles and infrastructure are heavily rusted and in poor condition.

Figure 9-4 Location of Reedsdale Road-HS02 in relation to the survey area

1. View of Reedsdale Road-HS02 along an outcropping shale bed. View north

2. Close up view of rubbish fill. View south

3. Close up view of rubbish fill. View south

4. Close up view of rubbish fill. View southeast

Figure 9-5 Reedsdale Road-HS02. View of site and sample view of historic items

Reedsdale Road-HS03

Site Type: Plough blade

GPS Coordinates: GDA Zone 55 608321E 6335163N

Location of Site: Reedsdale Road-HS03 is located within Lot 7044 DP1059946, a designated TSR, along Reedsdale Road. The site is west of Reedsdale Road and east of Lot 841 DP750152 (Figure 9-1).

Description of Site: Reedsdale Road-HS03 consists of a single plough blade which has been dislodged from a piece of larger machinery (Figure 9-7).

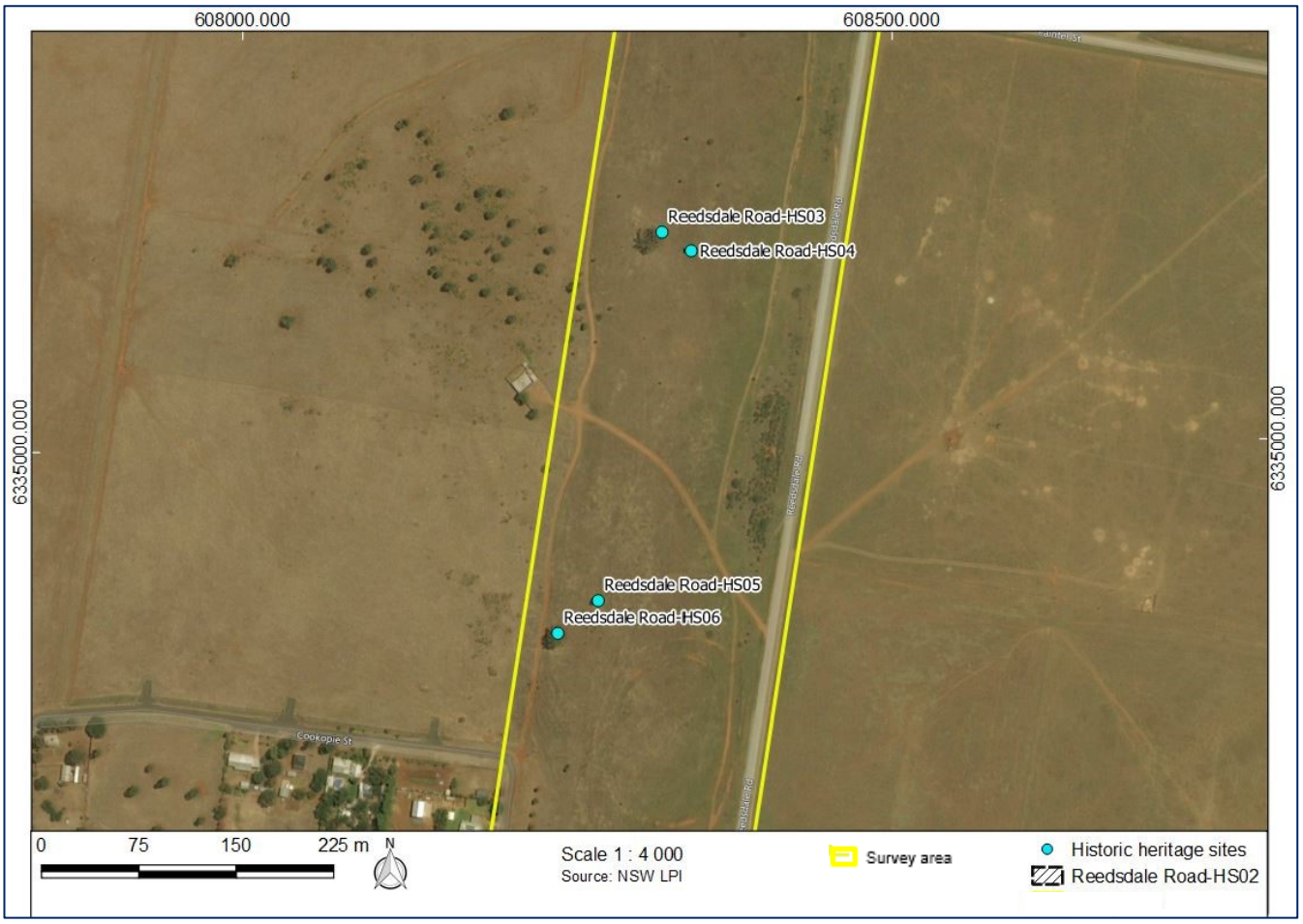

Figure 9-6 Location of Reedsdale Road-HS03 to HS06 in relation to the survey area

1. View of Reedsdale Road-HS03

Figure 9-7 Reedsdale Road-HS03. View of historic item

Reedsdale Road-HS04

Site Type: Ceramic pipe

GPS Coordinates: GDA Zone 55 608342E 6335148N

Location of Site: Reedsdale Road-HS04 is located within Lot 7044 DP1059946, a designated TSR, along Reedsdale Road. The site is west of Reedsdale Road and east of Lot 841 DP750152 (Figure 9-1).

Description of Site: Reedsdale Road-HS04 consists of a conjoined piece of terracotta pipe which features four parallel indentations at the proximal end (Figure 9-8).

1. View of Reedsdale Road-HS04

Figure 9-8 Reedsdale Road-HS04. View of historic item

Reedsdale Road-HS05

Site Type: Metal pipe

GPS Coordinates: GDA Zone 55 608269E 6334881N

Location of Site: Reedsdale Road-HS05 is located within Lot 7044 DP1059946, a designated TSR, along Reedsdale Road. The site is west of Reedsdale Road and east of Lot 1086 DP750152 (Figure 9-1).

Description of Site: Reedsdale Road-HS05 is a metal pipe feature, likely used for agricultural purposes. The pipe has a nut and bolt at the proximal end (Figure 9-9).

1. View of Reedsdale Road-HS05

2. Close up view of Reedsdale Road-HS05

Figure 9-9 Reedsdale Road-HS05. View of historic item

Reedsdale Road-HS06

Site Type: Metal frame

GPS Coordinates: GDA Zone 55 608237E 6334856N

Location of Site: Reedsdale Road-HS06 is located within Lot 7044 DP1059946, a designated TSR, along Reedsdale Road. The site is west of Reedsdale Road and east of Lot 1086 DP750152 (Figure 9-1).

Description of Site: Reedsdale Road-HS06 is a rectangular frame made from metal, likely used for agricultural purposes (Figure 9-10).

1. View of Reedsdale Road-HS06

Figure 9-10 Reedsdale Road-HS06. View of historic item

9.2 Assessment of historic heritage significance

9.2.1 Assessment of significance—general principles

The current assessment will evaluate the heritage significance of the historic heritage sites identified within the survey area in accordance with the NSW Heritage Office guidelines for *Assessing Heritage Significance* (Heritage Office 2001). A historic heritage site must satisfy at minimum one of the following criterion to be assessed as having heritage significance:

Criterion (a): *An item is important in the course, or pattern, of NWS'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).*

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* (Australia ICOMOS 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.

9.2.2 Assessment of significance of historic items

Table 9-2 to Table 9-4 assess the heritage significance of each recorded site in accordance with the NSW Heritage Office guidelines and the *Burra Charter* (Australia ICOMOS 2013).

Table 9-2 Assessment of heritage significance – Reedsdale Road-HS01

Criteria	Comments	Significance
a	The site is related to the gold mining in the township of Parkes, which in itself is important to the history of the locality, but the site has little integrity and no remaining features to indicate past use.	Local
b	The site cannot be tied to an individual or group of persons.	Nil
c	While the shafts are still present within the site, they no longer bear any infrastructure which would allow the layperson to identity their past use. The sites also no longer demonstrate creativity or craftsmanship.	Nil
d	The site has no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	The site is unlikely to yield further data into gold mining in the township of Parkes or the region.	Nil
f	Gold mining sites are represented within the region. Unlike Reedsdale Road-HS01, there are sites in the locality which provide better representations of how gold mining practices were undertaken.	Nil
g	The site comprises unremarkable examples of its type and demonstrates little new information about gold mining in NSW.	Nil

Table 9-3 Assessment of heritage significance – Reedsdale Road-HS02

Criteria	Comments	Significance
a	The sites are not an important item in the cultural history of the Parkes region.	Nil
b	The site cannot be tied to an individual or group of persons.	Nil
c	The items within the site are in poor condition and do not provide a good example of creativity or craftsmanship.	Nil
d	The site has no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	The site is unlikely to yield further data.	Nil
f	The site displays vehicles and materials used in the region from the early nineteenth century. Vehicles in better condition are still exist throughout the country and in museums where the public can appreciate them.	Nil
g	The site comprises unremarkable examples of its type and demonstrates little new information about vehicle production in NSW.	Nil

Table 9-4 Assessment of heritage significance – Reedsdale Road-HS03 to HS06

Criteria	Comments	Significance
a	The sites are not an important item in the cultural history of the Parkes region.	Nil
b	The sites cannot be tied to an individual or group of persons.	Nil
c	The sites are not intact and as such do not demonstrate significant creativity or craftsmanship. Neither are they a complete representation of local design styles.	Nil
d	The sites have no strong associations with a group for social, cultural, or spiritual reasons.	Nil
e	As integrity of the sites is low, they are not likely to yield further data.	Nil
f	Rural infrastructure featured in the sites is very common throughout NSW and the region. The sites are not rare.	Nil
g	As integrity of the site is poor, it is not a complete or important representation of a cultural or natural place.	Nil

9.3 Discussion

The overall low level of heritage significance attached to the new recordings can be attributed to several factors:

1. Prior community heritage studies. Previous historic heritage assessment completed on behalf of PSC have captured the majority of prominent, historically significant places in the district. The likelihood that previously unidentified and unrecorded, yet highly significant, places would be documented during the current study was thus low
2. The nature of settlement in the district. As an agricultural/pastoral region, the survey area exhibits very low housing densities. The likelihood that previously unknown structures would be documented away from the known and existing buildings is thus low. In the event that other historic heritage places do exist within the survey area, it is likely that only relatively unobtrusive foundation remnants would have been extant

3. The nature of agricultural and pastoral activities. Aside from modifications to the environment (most visibly, vegetation clearing), enclosure of land, and the establishment of farm infrastructure, farming leaves few traces in the form of artefacts dispersed throughout the area. Artefacts, when located, are more likely to consist of dropped/discarded equipment rather than extensive conurbations of artefacts. Such items are relatively unobtrusive and their identification is subject to factors such as ground surface visibility.

The sites and items recorded during the current assessment are representative of the farming heritage in the district. In contrast to more prominent items identified on the LEP and SHR, Reedsdale Road-HS03 to HS06 are remnants of past agricultural activities and have a utilitarian character which is variously represented in rural contexts throughout Australia.

The disused gold shafts represented within the survey area are physical examples of the expansion—and decline—of gold mining in the region. Gold mining began in Parkes in the later 1860s and continued until 1910. While gold mining was longer-lived in Parkes than other towns, Reedsdale Road-HS01 no longer displays any features which could relate it to its former use, apart from the presence of the shafts. Of the six shafts identified, only one appears to have been excavated to a reasonable depth while the remaining shafts have either been filled in with soil or rubbish from surrounding properties making it difficult to determine exactly how deep they once were.

9.4 Likely impacts to historic heritage from the proposal

Table 9-5 details the whether the newly recorded historic heritage sites will be impacts by the proposed road alignment.

Table 9-5 Historic heritage impact assessment

Site name	Will this site be impacted?
Reedsdale Road-HS01	Possible
Reedsdale Road-HS02	Yes
Reedsdale Road-HS03	Yes
Reedsdale Road-HS04	Yes
Reedsdale Road-HS05	Yes
Reedsdale Road-HS06	Yes

Historic heritage site Reedsdale Road-HS01 is located within the survey area, however, it is located in an area where the proposal should be able to avoid impact to the site (Table 9-5). Management and mitigation measures are set out in Section 10 in order to avoid any inadvertent impact to the recorded site. However, should Reedsdale Road-HS01 not be able to be avoided by the proposal, Section 10 also outlines mitigation measures in accordance with the Heritage Act.

10 Management and mitigation: historic heritage

10.1 General principles for the management of historic sites

Appropriate management of heritage items is primarily determined on the basis of 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.

10.2 Management and mitigation of recorded historic sites

Section 8.2 highlights that the Parkes Railway Station Group is listed within the SHR and the Parkes LEP of 2011. As a result of the listing, a SoHI is required when proposed work have potential to have an impact on the heritage significance of a listed item (SoHI 2002). The SoHI will focus on the impacts to the aesthetic value of the site (Section 11).

Reedsdale Road-HS01 has been assessed as having local heritage significance (Section 9.2.2) and is protected by the Heritage Act (Section 8.2.1). As noted in Section 9.4 Reedsdale Road-HS01 should be able to be avoided by the proposal, however, it is recommended that the site be fenced off during the construction phase of the proposal. Management of this site will include:

1. An exclusion zone should be installed around the extent of Reedsdale Road-HS01 to ensure impacts are avoided during construction (Figure 10-1). High-visibility fencing can be used and Table 7-1 provides the coordinates.
2. Site inductions will be provided to workers on the project to inform them of the location of the recorded sites and their legislative protection under the Heritage Act.
3. Should impacts to this site be required, then a SOHI would need to be prepared. This would determine whether the site should be subject to a photographic archival recording.

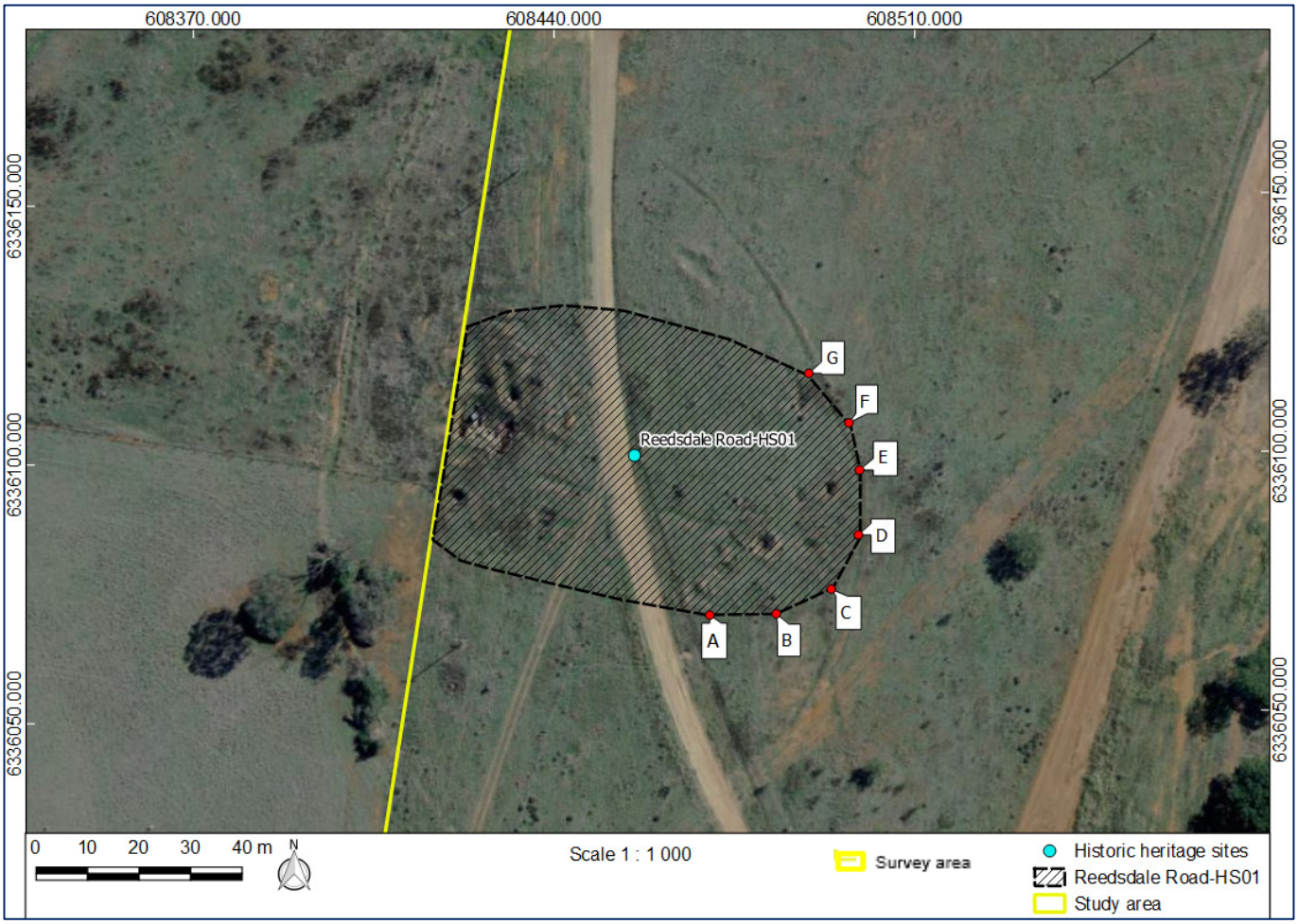

Figure 10-1 View of Reedsdale Road-HS01 with proposed exclusion zone points

Table 10-1 Activity exclusion zone at Reedsdale Road-HS01

Point	Datum	Zone	Easting	Northing
A	GDA	55	608468	6336069
B	GDA	55	608482	6336069
C	GDA	55	608492	6336074
D	GDA	55	608498	6336084
E	GDA	55	608497	6336097
F	GDA	55	608496	6336106
G	GDA	55	608488	6336115

11 Statement of Heritage Impact (SOHI)

11.1 Statutory obligations

The Parkes Railway Station Group is listed on the on the SHR as item #01220 and the Parkes LEP and the SHI (Section 8.2).

The NSW Heritage Manual poses a series of questions which comprise the minimum information to form a 'Statement of Heritage Impact', which is required to properly address proposals on or nearby heritage items that would result in any impact. In terms of the Parkes Railway Station Group, this SoHI has been completed to assess and address any aesthetic impacts resulting from the building of a bridge over Hartigan Avenue.

How is the impact of the new development on the heritage significance of the item or area to be minimised?

The proposed Newell Highway Upgrade Project will include the construction of three bridges. One of the proposed bridges will be built over the Hartigan Avenue crossing to accommodate vehicle movement. The proposed bridge will be built around 730 metres to the west of the SHR curtilage designated to the Parkes Railway Station Group and will be 15.3 metres high. The proposed location of the bridge will not reduce the aesthetic impact as it will not obstruct views between the two designated Parkes Railway Station Group areas.

Why is the new development required to be adjacent to or nearby a heritage item?

The proposal to be constructed around 730 metres to the west of the Parkes Railway Station Group. The development is required to accommodate vehicle movement over the Orange to Broken Hill railway line to avoid delays currently experienced at the existing rail level crossing.

How does the curtilage allowed around the heritage item contribute to the retention of its heritage significance?

The proposed bridge will have no physical interaction with the curtilage designated for the Parkes Railway Station Group. As such, the proposed bridge will allow for the retention of the current heritage significance of the Parkes Railway Station Group.

How does the new development affect views to, and from, the heritage item? What has been done to minimise negative effects?

The distance between the proposed bridge and the SHR curtilage designated for the Parkes Railway Station Group is considered to be sufficient not affect views to, and from, the Parkes Railway Station Group. It is also assessed that if the proposed bridge is visible from the Parkes Railway Station Group, this will not impact upon the aesthetic value of the historic place as existing urban infrastructure i.e. mills, are already present.

Is the development sited on any known, or potentially significant archaeological deposits? If so, have alternative sites been considered? Why were they rejected?

The proposed bridge is not sited on any known significant archaeological deposits associated with the Parkes Railway Station Group. The impact footprint of the proposed bridge will be on landforms at a distance from the Parkes Railway Station Group and landforms which have already been impacted by agricultural practices and the construction of transport infrastructure, including Hartigan Avenue and Westlime Road.

Is the new development sympathetic to the heritage item? In what way (considering form, siting, proportions, design)? And will the additions visually dominate the heritage item? How has this been minimised?

The proposed bridge is located at a distance from the historic place so there will be no direct impact on the aesthetics of the historic place and the heritage values of the historic place will not be compromised. As such the design of the bridge is not required to be sympathetic to the character of the historic place.

Will the public, and users of the item, still be able to view and appreciate its significance?

The public, and users of the Parkes Railway Station Group, will still be able to appreciate its heritage significance. The proposed bridge will not affect views to, and from, the SHR item, and most importantly, will not affect views between the two designated curtilage areas associated with the Parkes Railway Station Group.

11.2 Conclusion

The bridge proposed to be constructed as part of the proposal will not impact on the aesthetic values of the Parkes Railway Station Group. The proposal is located a considerable distance from the SHR designated curtilage area and will not obscure views to, and from, the heritage item. As such, the proposal can be undertaken without any further consideration to the SHR listed place.

12 Recommendations

12.1 Aboriginal heritage

Under Section 89A of the NPW Act it is mandatory that all newly-recorded Aboriginal sites be registered with OEH AHIMS. As a professional in the field of cultural heritage management it is the responsibility of OzArk to ensure this process is undertaken.

To this end it is noted that **two Aboriginal sites** were recorded during the assessment. OzArk has submitted site cards to update the location and condition of AHIMS sites #43-3-0059 and #43-3-0061.

The following recommendations are made on the basis of these impacts and with regard to:

- Legal requirements under the terms of the NPW Act whereby it is illegal to damage, deface or destroy an Aboriginal place or object without the prior written consent of OEH
- The findings of the current investigations undertaken within the survey area; and
- The interests of the Aboriginal community.

Recommendations concerning the survey area are as follows:

- An Aboriginal Heritage Management Plan (AHMP) should be prepared in accordance with the Procedure for Aboriginal cultural heritage consultation and investigation (Roads and Maritime, 2012) and Standard Management Procedure – Unexpected Heritage Items (Roads and Maritime, 2015) and implemented as part of the Construction Environmental Management Plan (CEMP). This should provide specific guidance on measures and controls to be implemented for managing impacts on Aboriginal heritage. The AHMP should be prepared in consultation with all relevant Aboriginal groups
- A buffer zone (10 metres around each site as a minimum; Section 7.2) should be created around Barkers Road-ST1 and Westlime Road-ST1 to ensure they are avoided during construction. High-visibility fencing should be used
- Outside of Barkers Road-ST1 and Westlime Road-ST1 there are no constraints to the proposal. All land-disturbing activities must be confined to within the assessed survey area shown in Figure 1-3. Should the parameters of the proposed work extend beyond the assessed area, then further archaeological assessment may be required
- All construction personnel should be made aware of the location of Barkers Road-ST1 and Westlime Road-ST1 and inductions should be provided as to the location of the recorded sites and their legislative protection under the NPW Act
- The *Standard Management Procedure - Unexpected Heritage Items* (Roads and Maritime, 2015; Appendix C) should be followed if an unknown or potential Aboriginal object/s, including skeletal remains, is found during construction. This applies where Roads and Maritime does not have approval to disturb the object (s) or where a specific safeguard for managing the disturbance (apart from the Procedure) is not in place.

12.2 Historic heritage

The following recommendations are made on the basis of these impacts and with regard to:

- Legal requirements under the terms of the Heritage Act
- Guidelines presented in the *Burra Charter* (Australia ICOMOS 2013)
- The findings of the current assessment; and
- The interests of the local community.

Recommendations concerning the survey area are as follows:

1. A Non-Aboriginal Heritage Management Plan (NAHMP) will be prepared and implemented as part of the CEMP. This should provide specific guidance on measures and controls to be implemented to avoid and mitigate impacts to Non-Aboriginal heritage
2. The location of the disused gold mine shafts (Reedsdale Road-HS01) should be included on site sensitivity plans and a no-go exclusion zone will be established before construction starts. If any part of the site cannot be avoided by the proposal, the site will be subject to a photographic archival recording
3. Sites Reedsdale Road-HS02 to Reedsdale Road-HS06 are located within the survey area, however, these items and places have been assessed as having no heritage significance and they do not have statutory protection under the Heritage Act (Section 9.2.2). As such, the proposal can proceed at these locations without further requirements
4. The proposal has been assessed as having no impact to the heritage values of the Parkes Railway Station Group. As such, the proposal can take place in the vicinity of this historic place without any further assessment of requirements
5. All land-disturbing activities must be confined within the assessed survey area. Should project impacts change such that the area to be impacted is altered then additional assessment may be required
6. All contractors undertaking the work should be made aware of the legislative protection of historic heritage sites in the event unknown heritage items ae encountered during the work. Accordingly, site inductions would be provided to workers on the project to inform them of the location of the recorded sites and their legislative protection under the *Heritage Act 1977*
7. Under the *Heritage Act 1977*, it is an offense to disturb, destroy or remove historic relics without the prior consent of the NSW Heritage Division. Accordingly, the *Standard Management Procedure - Unexpected Heritage Items* (Roads and Maritime, 2015) will be followed if any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. Work will only re-commence once the requirements of that Procedure have been satisfied. (Appendix D).

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Plates

Plate 1: View of a gently sloping landform at the southern extent of the survey area

Plate 2: View of a moderately sloping landform within a ploughed paddock with remnant vegetation

Plate 3: View at the top of a crest landform in the northern portion of the survey area

Plate 4: View of the red, sandy soils present. Note the high GSV

Plate 5: View of quartz gravels present within ploughed paddock

Plate 6: View of remnant vegetation along the road corridor of the existing Newell Highway alignment

Plate 7: View of a ploughed paddock. Note the exposure provided by the farm access track

Plate 8: View of the Orange to Broken Hill railway line

Plate 9: View north across Condobolin Road

Appendix A

RMS clearance letter

Transport Roads & Maritime Services

16/08/2018
Jonathon Blizzard
Senior Environment Officer

Dear Jonathon

Preliminary assessment results for Parkes bypass additional study area, Based on Stage 1 of the *Procedure for Aboriginal cultural heritage consultation and investigation* (PACHCI).

The project, Parkes bypass additional study area was assessed as being unlikely to have an impact on Aboriginal cultural heritage.

The assessment is based on the following due diligence considerations:

- The project is unlikely to harm known Aboriginal objects or places.
- The AHIMS search **did not** indicate moderate to high concentrations of Aboriginal objects and places inside the study area.
- The study area **does not** contain landscape features that indicate the presence of Aboriginal objects, based on the Office of Environment and Heritage's *Due diligence Code of Practice for the Protection of Aboriginal objects in NSW* and the Roads and Maritime Services' procedure.
- The cultural heritage potential of the study area appears to be reduced due to past disturbance.(Previous Rural and Road activities)
- There is an absence of sandstone rock outcrops likely to contain Aboriginal art.

Safe Guards: Please be vigilant for further potential Aboriginal objects when construction commences.

Your project may proceed in accordance with the environmental impact assessment process, as relevant, and all other relevant approvals.

If the scope of your project changes, you must contact me and your regional environmental staff to reassess any potential impacts on Aboriginal cultural heritage.

If any potential Aboriginal objects (including skeletal remains) are discovered during the course of the project, all works in the vicinity of the find must cease. Follow the steps outlined in the Roads and Maritime Services' **Unexpected Heritage Item Procedure**.

For further assistance in this matter do not hesitate to contact me.

Yours sincerely

Aboriginal Cultural Heritage Advisor – Western Region

Roads and Maritime Services

Level 1, 51-55 Currajong Street Parkes NSW 2870 | PO Box 21 Parkes NSW 2870
T 02 68611658 | F 02 68611414 | E jeffery.charlton@rms.nsw.gov.au 13 22 13

Appendix B

AHIMS extensive search result

Office of Environment & Heritage NSW

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2

Client Service ID : 261970

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
43-3-0059	PH3-1	AGD	55	608250	6335800	Open site	Valid	Modified Tree (Carved or Scarred) : -		98808,102769
	Contact	Recorders	Ms Jillian Comber					Permits		
43-3-0060	PH2	AGD	55	606000	6332150	Open site	Valid	Modified Tree (Carved or Scarred) : 3		98808,102769
	Contact	Recorders	Ms Jillian Comber					Permits		
43-3-0061	PH1-1	AGD	55	607200	6329350	Open site	Valid	Modified Tree (Carved or Scarred) : 1		98880
	Contact	Recorders	Ms Jillian Comber					Permits		
43-2-0016	Tottenham Road;	AGD	55	613900	6334700	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102769
	Contact	Recorders	Warren Bluff					Permits		
43-3-0893	PM-ST3	GDA	55	601956	6320882	Open site	Partially Destroyed	Modified Tree (Carved or Scarred) : ,Artefact :		102488
	Contact Peak Hill LALC	Recorders	Doctor Jodie Benton,Orange Environmental and Heritage Management					Permits		
43-3-0894	Parkes-Manildra Open Site 16 (PM-OS16)	GDA	55	606382	6326345	Open site	Partially Destroyed	Artefact : -		102488
	Contact Peak Hill LALC	Recorders	Doctor Jodie Benton					Permits		
43-3-0111	PZN 1A1	GDA	55	609867	6344393	Open site	Valid	Artefact : -		
	Contact	Recorders	Miss Nicola Rocha					Permits		
43-4-0018	MD 33	AGD	55	609720	6329450	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr Kelvin Officer					Permits		
43-4-0019	MD 50	AGD	55	609900	6328380	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Mr Kelvin Officer					Permits		
43-3-0011	LV 4;	AGD	55	604721	6329837	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0012	LV 5;	AGD	55	604721	6329837	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411

Report generated by AHIMS Web Service on 12/01/2017 for Chris Lovell for the following area at Datum :GDA, Zone : 55, Eastings : 596900 - 616900, Northings : 6319700 - 6344700 with a Buffer of 0 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 70

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Office of Environment & Heritage NSW

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2

Client Service ID : 261970

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0013	LV 6;	AGD	55	604731	6329832	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0014	LV 7;	AGD	55	604731	6329832	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0015	LV 8;	AGD	55	604731	6329832	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0016	LV 9;	AGD	55	604175	6329849	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0017	LV 11;	AGD	55	603902	6329318	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	1327,1411,102769
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0018	site 1;	AGD	55	608250	6335800	Open site	Valid	Artefact : -	Open Camp Site	2584,98332,102769
	Contact	Recorders	Helen Brayshaw					Permits		
43-3-0019	site 2;	AGD	55	607520	6340060	Open site	Valid	Artefact : -	Open Camp Site	2584,98332,102769
	Contact	Recorders	Helen Brayshaw					Permits		
43-3-0030	Millwood;	AGD	55	603350	6327200	Open site	Valid	Artefact : -	Isolated Find	102769
	Contact	Recorders	L Kingham					Permits		
43-2-0017	Kirrabee Lodge;	AGD	55	615500	6331600	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	102769
	Contact	Recorders	Warren Bluff					Permits		
43-2-0018	Goobang Creek;	AGD	55	616800	6330000	Open site	Valid	Modified Tree (Carved or Scarred) : -	Scarred Tree	
	Contact	Recorders	Warren Bluff					Permits		
43-3-0002	Parkes;	AGD	55	609622	6332556	Open site	Valid	Modified Tree (Carved or Scarred) : -	Carved Tree	65

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Office of Environment & Heritage NSW

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2
Client Service ID : 261970

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	AS0515					Permits		
43-3-0003	Goobang Creek/WF 15;Avocavale;	AGD	55	598330	6327520	Open site	Valid	Artefact : -	Open Camp Site	975,102769
	Contact	Recorders	Mr Allan Lance					Permits		
43-3-0004	Goobang Creek /WF 16;Avocavale;	AGD	55	598150	6327570	Open site	Valid	Artefact : -	Open Camp Site	975,102769
	Contact	Recorders	Mr Allan Lance					Permits		
43-3-0006	Cranked Creek/WF17;Kyneton;	AGD	55	597800	6321990	Open site	Valid	Artefact : -	Open Camp Site	975,102769
	Contact	Recorders	Mr Allan Lance					Permits		
43-3-0008	LV 1;	AGD	55	605530	6330587	Open site	Valid	Modified Tree [Carved or Scarred] : -	Scarred Tree	1327,1411,102769
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0009	LV 2;	AGD	55	604896	6329861	Open site	Valid	Modified Tree [Carved or Scarred] : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0010	LV 3;	AGD	55	604805	6329860	Open site	Valid	Modified Tree [Carved or Scarred] : -	Scarred Tree	1327,1411
	Contact	Recorders	Mary Dallas Consulting Archaeologists					Permits		
43-3-0110	Parkes Solar IP6	GDA	55	603300	6335607	Open site	Valid	Artefact : -		
	Contact	Recorders	Mr Matthew Barber;NGH Heritage - Pyrmont					Permits		
43-3-0062	Parkes 1	AGD	55	610300	6331300	Open site	Valid	Artefact : 2		102769
	Contact	Recorders	Ms Jillian Comber					Permits		
43-3-0063	Parkes 2- IF	AGD	55	610250	6331300	Open site	Valid	Artefact : 1		102769
	Contact	Recorders	Ms Jillian Comber					Permits		
43-3-0080	Parkes P1	GDA	55	603525	6336275	Open site	Valid	Modified Tree [Carved or Scarred] : -		102769
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
43-3-0081	MP2	GDA	55	600858	6336084	Open site	Valid	Artefact : 1		102769
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
43-3-0082	P2	GDA	55	603464	6336084	Open site	Valid	Modified Tree [Carved or Scarred] : 1		102769
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
43-3-0083	PIP1	GDA	55	600000	6336400	Open site	Valid	Artefact : 1		102769
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		

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Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2
Client Service ID : 261970

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status	SiteFeatures	SiteTypes	Reports
43-3-0090	Ridgey Creek - Parkes	GDA	55	600154	6336585	Open site	Valid	Artefact : -		102769
	Contact Mr.Trevor Robinson	Recorders	Mr.Trevor Robinson					Permits		
43-3-0089	Parked Mandora-Scarred Tree 1 (PM-ST1)	GDA	55	616299	6324129	Open site	Valid	Modified Tree (Carved or Scarred) : -		102488
	Contact	Recorders	OzArk Environmental and Heritage Management					Permits		
43-3-0109	Akuna Road PSC Scarred Tree 1	GDA	55	611442	6330457	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Ms.Morgan Wilcox					Permits		
43-3-0110	Akuna Road PSC Scarred Tree-1 (Duplicate of 43-3-0109)	GDA	55	611142	6330457	Open site	Not a Site	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Ms.Morgan Wilcox					Permits		
43-3-0058	MD49	AGD	55	604930	6325410	Open site	Valid	Modified Tree (Carved or Scarred) :		102769
	Contact	Recorders	Navin Officer Heritage Consultants Pty Ltd					Permits		
43-3-0065	PST 3	AGD	55	610672	6342979	Open site	Valid	Modified Tree (Carved or Scarred) : 1		102769
	Contact	Recorders	Mr.John Appleton					Permits		
43-3-0066	PST-4	AGD	55	610564	6342392	Open site	Valid	Modified Tree (Carved or Scarred) : 1		102769
	Contact	Recorders	Mr.John Appleton					Permits		
43-3-0067	PST 2	AGD	55	610030	6343315	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.John Appleton					Permits		
43-3-0072	Parkes TSR	AGD	55	603540	6322660	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact T Russell	Recorders	Mr.Graeme Towney					Permits		
43-3-0073	scar tree 73	AGD	55	602054	6320561	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact T Russell	Recorders	Mr.Graeme Towney					Permits		

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Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2
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SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Reports
43-3-0074	TSK74	AGD	55	602051	6320587	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact: T Russell	Recorders: Mr.Graeme Towney						Permits:		
43-3-0104	PIE-ST1	GDA	55	600082	6329633	Open site	Valid	Modified Tree (Carved or Scarred) : -		132964
	Contact:	Recorders: Ms.Morgan Wilcox						Permits:		
43-3-0135	GSF-5 Isolated Artefact	GDA	55	600148	6336485	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0112	Parkes Solar IF7	GDA	55	600130	6336182	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0113	Parkes Solar IF5	GDA	55	599931	6335372	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0114	Parkes Solar IF4	GDA	55	601575	6335464	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0115	Parkes Solar IF3	GDA	55	600700	6334824	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0116	Parkes Solar IF2	GDA	55	600844	6334824	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0117	Parkes Solar IF1	GDA	55	600530	6334822	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0120	GSF-7 Isolated Artefact	GDA	55	602600	6336515	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0121	GSF-6 Isolated Artefact	GDA	55	600148	6336485	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0122	GSF-15 Artefact Cluster	GDA	55	602582	6335080	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0123	GSF-13 Isolated Artefact	GDA	55	602582	6335080	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0124	GSF-12 Isolated Artefact	GDA	55	601729	6336217	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0125	GSF-11 Isolated Artefact	GDA	55	601729	6336217	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0126	GSF-10 Isolated Artefact	GDA	55	602016	6336479	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		

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Extensive search - Site list report

Your Ref/PO Number : 1515 Parkes Bypass2
Client Service ID : 261970

SiteID	SiteName	Datum	Zone	Eastings	Northings	Context	Site Status	SiteFeatures	SiteTypes	Reports
43-3-0127	GSF-9 Isolated Artefact	GDA	55	602085	6336961	Open site	Valid	Artefact :		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0119	Parkes Solar IF6a	GDA	55	600380	6335937	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Matthew Barber,MGH Heritage - Fyshwick						Permits:		
43-3-0128	GSF-8 Artefact Cluster	GDA	55	603165	6336407	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0129	Millers Lookout Quarry	GDA	55	603128	6335827	Open site	Valid	Stone Quarry : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0130	GSF-15 Isolated Artefact	GDA	55	602067	6335240	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd						Permits:		
43-3-0131	GSF-4 Isolated Artefact	GDA	55	600192	6336259	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd,Acc						Permits:		
43-3-0132	GSF-3 Artefact Cluster	GDA	55	600336	6336242	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd,Acc						Permits:		
43-3-0133	GSF-2 Isolated Artefact	GDA	55	600579	6336165	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd,Acc						Permits:		
43-3-0134	GSF-1 Isolated Artefact	GDA	55	600838	6336348	Open site	Valid	Artefact : -		
	Contact:	Recorders: Mr.Doug Williams,Mr.Doug Williams,Access Archaeology and Heritage Pty Ltd,Acc						Permits:		

Report generated by AHIMS Web Service on 12/01/2017 for Chris Lovell for the following area at Datum :GDA, Zone : 55, Eastings : 596900 - 616900, Northings : 6319700 - 6344700 with a Buffer of 0 meters. Additional Info : Archaeological assessment. Number of Aboriginal sites and Aboriginal objects found is 70

This information is not guaranteed to be free from error omission. Office of Environment and Heritage (NSW) and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Appendix C

Historic heritage search results

Australia's National Heritage List (NSW)

Summary: No items relevant to the survey area.

Australia's Commonwealth Heritage List (NSW)

Summary: No items relevant to the survey area.

NSW State Heritage Register

Summary: One item of relevance to the survey area – SHR 01220 Parkes Railway Station Group.

Item name	Address	Suburb	LGA	SHR
Parkes Railway Station Group	May Street	Parkes	Parkes	01220

Parkes Railway Station Group

Name of Item	Parkes Railway Station group
Type of Item:	Complex/Group
Group/Collection:	Transport – Rail
Category:	Railway Platform/ Station
Location:	Lat: -33.1422449940 Long: 148.1732352020
Primary Address:	May Street, Parkes, NSW 2870
Local Govt. Area:	Parkes
Boundary:	The listing boundary is Hartigan Avenue and May Street to the north, Forbes Street to the west as it crosses the rails, the southern property boundary to the east the East Street level crossing.

All addresses

Street address	Suburb/town	LGA	Parish	County	Type
May Street	Parkes	Parkes			Primary Address
Parkes-Broken Hill railway	Parkes	Parkes			Alternate Address
Street Address	Suburb/town	LGA	Parish	County	Type
May Street	Parkes	Parkes			Primary Address
Parkes-Broken Hill railway	Parkes	Parkes			Alternate Address
Street Address	Suburb/town	LGA	Parish	County	Type
May Street	Parkes	Parkes			Primary Address

Owner/s

Organisation name	Owner category	Date ownership updated
RailCorp	State Government	05 Nov 98

Statement of significance

Parkes Railway Precinct is of state significance as an important major railway junction that is associated with the earliest development of railway infrastructure in the west of NSW in the late 19th century. The precinct features a fine, albeit altered, example of a Victorian station building dating from the opening of the precinct in 1893. The precinct includes a locomotive depot with a partial roundhouse and remains of the former goods yard and a range of items typically found at many large railway complexes in NSW from the late 19th and 20th centuries including the footbridge, jib crane and dock platform, which all contribute to the significance of Parkes as a major railway junction. The Roundhouse is significant as only one of seven surviving structures. The footbridge is notable as the last riveted Warren truss footbridge constructed for the NSW network.

Date Significance Updated: 19 Jul 13

Description

Construction years:	**1881-1893**
Physical Description:	MAJOR STRUCTURES - Managed by RailCorp Station Building - type 4, brick standard roadside third class building (1893) and brick Platform. MAJOR STRUCTURES - Managed by ARTC Railway Refreshment Room - brick (c1928) Signal Box - type O, elevated fibro (1944) Roundhouse Precinct (1942) Locomotive Servicing Facilities including Turntable Goods Shed Silver City Comet Shed and associated structures OTHER ITEMS - Managed by ARTC Dock Platform - remains at western end Footbridge - steel Warren truss (1935) Jib Crane The brick barracks building (c1912), former Railway Institute building (1962) and the repair siding shed are now owned and managed by Pacific National. STATION BUILDING and PLATFORM (1893) The station building is an altered example of an 1893 standard roadside building. Originally the building was a five room gabled building which featured a central waiting room with a Station Master's office and parcel office to the western side flanked by a shed and lamp room wing, with a ladies and gents waiting room to the east flanked by a bathroom wing. Historic plans show three brick chimneys and gablet vents and a front verandah to the entry which all still exist. Timber finials to gable ends still exist on the original detached wings. The building underwent alterations in 1926 and further alterations in 1947 which extended the building to either end to incorporate the previous external wings in to the form of the main building and also altering the use of most rooms. The extensions were undertaken in a sympathetic manner including matching windows and an extended platform awning to match the existing. As such the building presents as a cohesive building that still retains its Victorian character. The brick platform dates from 1893 and was extended c1928 and features modern asphalt surfacing. RAILWAY REFRESHMENT ROOMS (c1928) From historic plans it appears prior to the current building being erected on this site, that there were previously two small structures used as temporary Railway Refreshment rooms and accommodation for the staff. In 1923, a 12x 6m marquee built of Birkmyre cloth with framing and flooring was erected as a refreshment room (Forsyth, 2008).

Construction years:	**1881-1893**
	Plans from c1928 show the demolition of the previous structures and the erection of the existing brick building on the same site. Further historic plans show minor alterations in 1939 and a further extension to the west in 1943. The building is unusual in that it appears to be comprised of two different buildings with a gabled part fronting on to the platform with a cantilevered awning, and a rear kitchen wing with a brick parapet with projecting string course. SIGNAL BOX (1944) Two-storey elevated fibro signal box with low hipped pyramid roof clad in concrete tiles. The signal box is no longer in use. FOOTBRIDGE (1935) A steel riveted through Warren truss footbridge on steel trestles and channel iron stair stringers with Kembla markings on steel sections. The existing footbridge replaced an earlier footbridge which had been relocated from Liverpool in 1923. The bridge is noted as the last riveted truss footbridge constructed for the NSW network.
Modifications and Dates:	Numerous additions and changes occurred throughout the 20th century including erection of a rest house (1912), wheat silo (1920), Traffic District Headquarters located at Parkes (1920), purchase of existing residences for Station Master and Steam Shed Inspector, (1920 and 1922), conversion of existing Station Master's residence to railway refreshment room accommodation (1923), new footbridge relocated from Liverpool (1923), erection of temporary railway refreshment rooms (1923), alterations and additions to the station building (c.1927) rail motor shed erected (1927), new railway refreshment rooms opened (1928), relocated footbridge and signal Box (1928) and a new roundhouse built (1928). Later alterations to the site included a new footbridge (1935), an elevated coal bunker built (1941), roundhouse and facilities enlarged for defence works, including new 360kL tank and stand, boiler plant, water columns, 75' diameter turntable replacing 60' (1944), new Institute Building opened (1962), and new goods shed built (1964).
Further Information:	Note: The type O, elevated, fibro signal box (1944) is managed by ARTC but falls outside the listing boundary.
Current Use:	Operational railway station managed by RailCorp; roundhouse leased to Silverton
Former Use:	Railway station, yard, and locomotive facility.

History

Historical Notes:	A railway Shop Order was issued on 7 December 1912 for the construction of a 'permanent 'Rest House' at Parkes (Enginemans or crew barracks). This reference indicates that a 'temporary' Rest House or Barracks was provided there much earlier, more likely at or near the time of opening, in the 1898 period. The style of barracks usually provided in the 1890's, up until the early 1900's at many locations in the state, usually consisted of what was known as 'Engine Driver's' and 'Guards Accommodation'. These buildings were of a railway standards design and resembled a moderately -sized hip roofed cottage. They usually had two or three bedrooms at the front of the building, a kitchen and meal room toward the rear, with a bathroom and laundry at the rear. The toilet was usually a separate building out in the yard. In this situation, a train crew (driver, fireman and guard) would all sleep in the one room, three iron bedsteads being provided. These buildings were provided at many locations at the time, and it was quite likely that one was built at Parkes, and remained there until the 1911 period. No evidence of the location of any such temporary structure was found at or near the present barracks building.

Historic themes

Australian theme (abbrev)	New South Wales theme	Local theme
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Public tramline system
3. Economy-Developing local, regional and national economies	Transport-Activities associated with the moving of people and goods from one place to another, and systems for the provision of such movements	Providing and using pedestrian tracks and ways
4. Settlement-Building settlements, towns and cities	Accommodation-Activities associated with the provision of accommodation, and particular types of accommodation – does not include architectural styles – use the theme of Creative Endeavour for such activities.	Housing public servants and officials

Assessment of significance

SHR Criteria a) [Historical significance]	The place has historic significance to demonstrate the late 19th and early 20th century development of the NSW railways as a major junction station that expanded in conjunction with the development of branch lines throughout western NSW. The station building dates from the opening of the line at Parkes in 1893, and along with other related structures has the ability to provide evidence of a late 19th century and early 20th century working railway precinct. The complex of related railway structures at Parkes are significant as evidence of a major junction station which continues to be a key station in the in the NSW network.
SHR Criteria c) [Aesthetic significance]	The station building is a fine, albeit modified, example of a late Victorian station building with later sympathetic additions that retain the original Victorian character and detailing of the building. The adjoining railway refreshment room dating from 1928 is a good example of a large single storey refreshment room. The two buildings form a coherent group of related railway structures complemented by their large decorative platform awnings.
SHR Criteria d) [Social significance]	The social significance of the place has not been formally assessed through community consultation but no specific strong or special social associations within the local community have been identified through the existing evidence.
SHR Criteria e) [Research potential]	No research values have been identified that are not readily found at other similar railway sites in NSW.
SHR Criteria f) [Rarity]	The site has rarity significance as the roundhouse is one of only seven similar structures in NSW, although better examples exist. The footbridge is notable as the last riveted Warren truss footbridge constructed on the NSW network.
SHR Criteria g) [Representativeness]	The site has representative significance for its collection of railway structures including the station building, railway refreshment rooms, signal box, footbridge, crane, locomotive depot and other related items that collectively demonstrate widespread 19th and early 20th century railway customs, activities and design in NSW, and are representative of similar items that are found at other railway sites in NSW.
Integrity/Intactness:	The station buildings including the 1920s and 1940s additions have a high level of integrity.
Assessment Criteria:	Items are assessed against the StateHeritage Register (SHR) Criteria to determine the level of significance. Refer to the Listings below for the level of statutory protection.

Procedures /exemptions

Section				
21(1)(b)	Conservation Plan submitted for endorsement	Parkes Engineman's Barracks CMP	The CMP is for the Barracks building, which is a contributory element to SHR item #1220 'Parkes Railway Station Group'	Dec 19 2000
57(2)	Exemption to allow work	Standard Exemptions	SCHEDULE OF STANDARD EXEMPTIONS HERITAGE ACT 1977 Notice of Order Under Section 57 (2) of the Heritage Act 1977 I, the Minister for Planning, pursuant to subsection 57(2) of the Heritage Act 1977, on the recommendation of the Heritage Council of New South Wales, do by this Order: 1. revoke the Schedule of Exemptions to subsection 57(1) of the Heritage Act made under subsection 57(2) and published in the Government Gazette on 22 February 2008; and 2. grant standard exemptions from subsection 57(1) of the Heritage Act 1977, described in the Schedule attached. FRANK SARTOR Minister for Planning Sydney, 11 July 2008 To view the schedule click on the Standard Exemptions for Works Requiring Heritage	Sep 5 2008

Listings

Heritage listing	Listing title	Listing number	Gazette date	Gazette number	Gazette page
Heritage Act - State Heritage Register		01220	02 Apr 99	27	1546
Heritage Act - s.170 NSW State Agency Heritage Register					

Data source

The information for this entry comes from the following source:

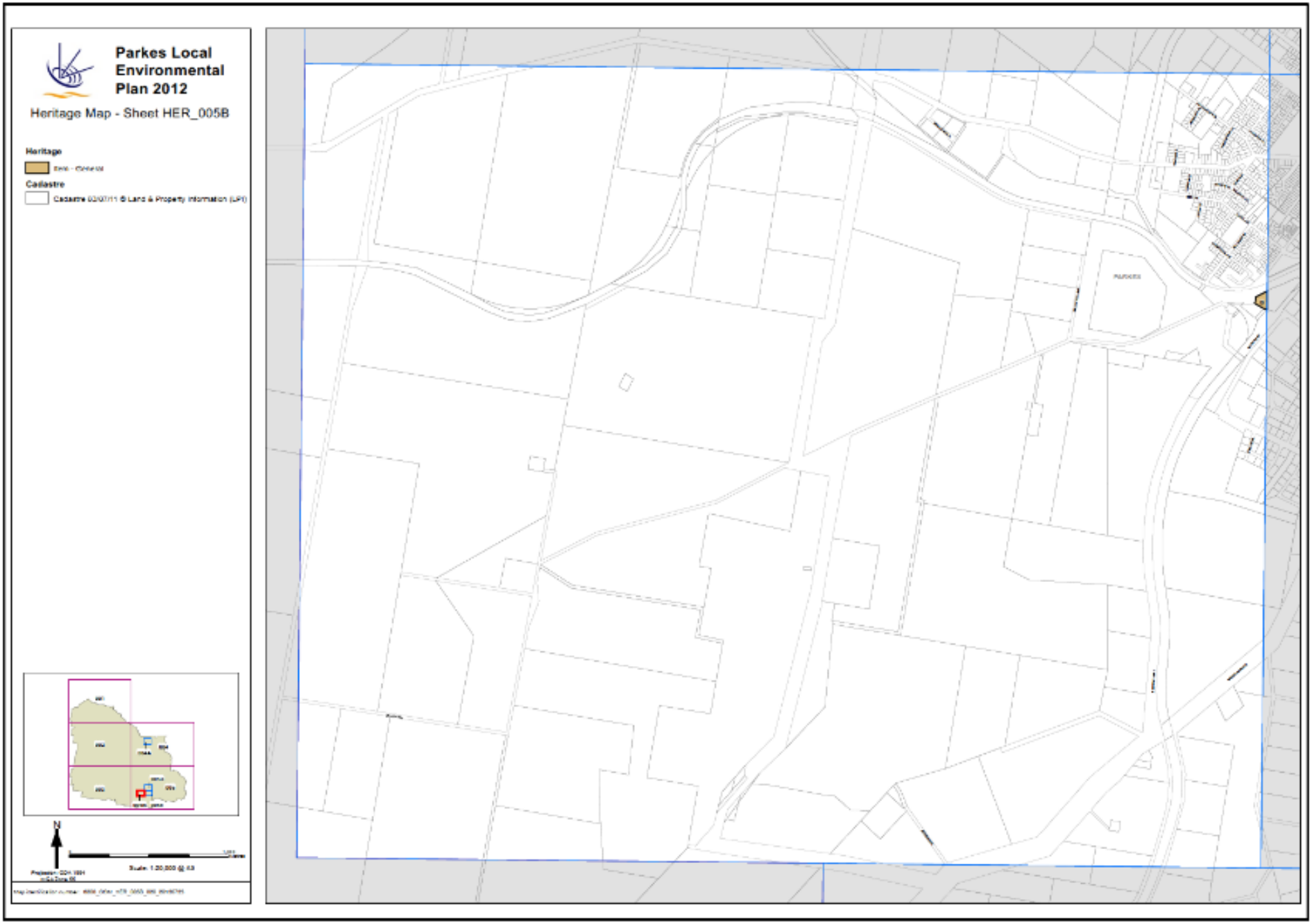
Name: Heritage Office

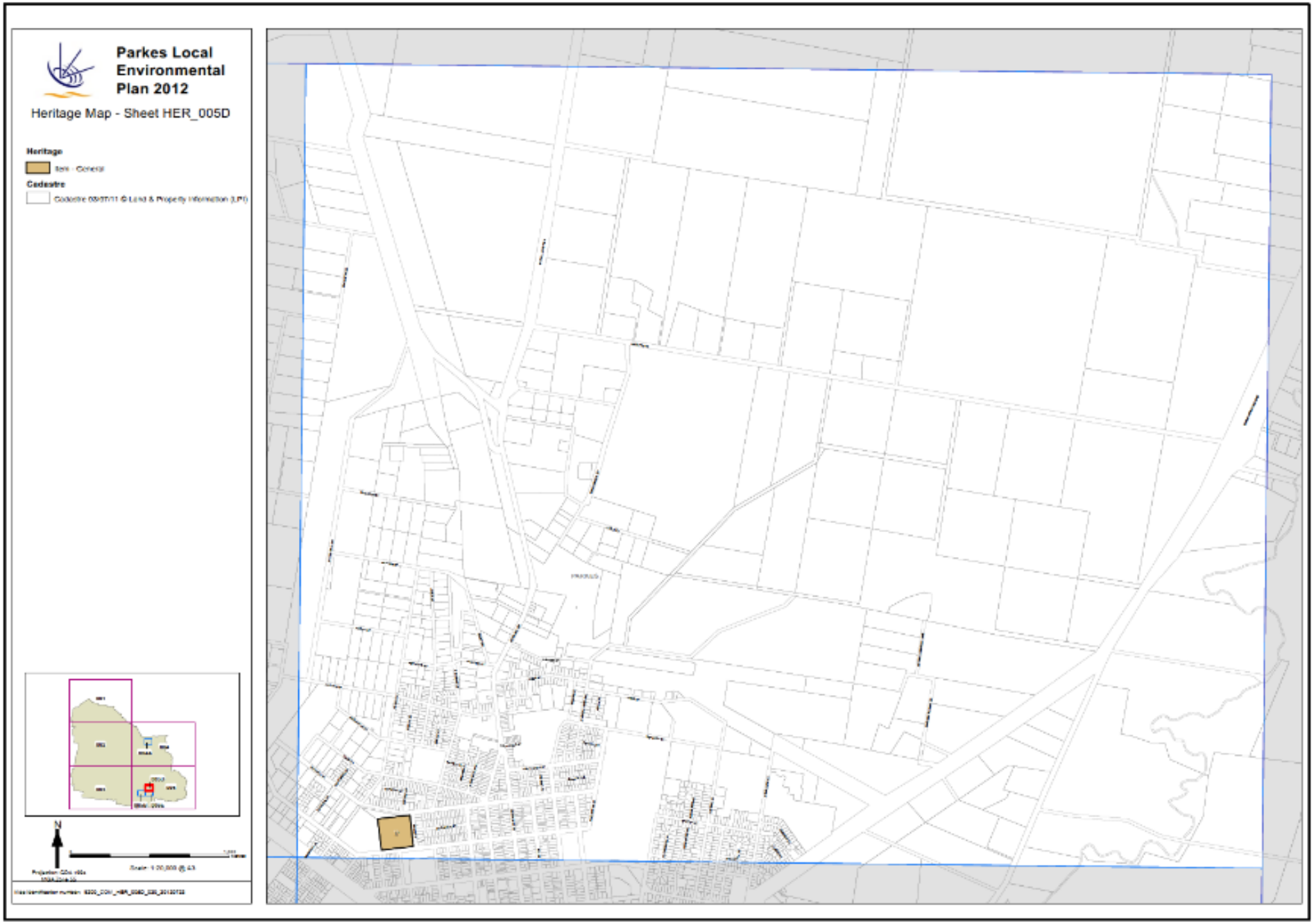
Database Number: 5012129

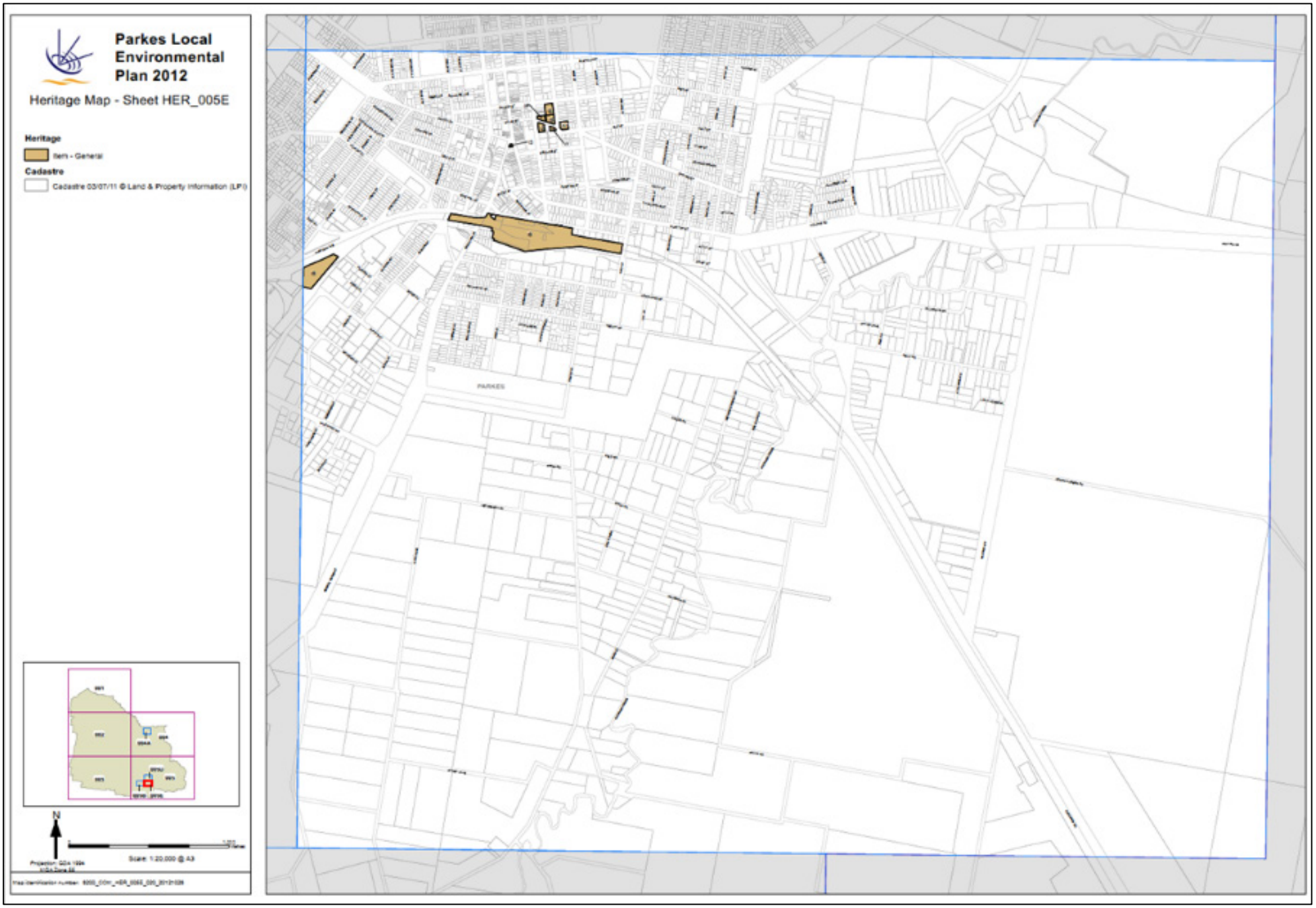
Parkes Local Environmental Plan 2012 (Schedule 5 Environmental Heritage)

Summary: One item of relevance to the survey area – Item I6 Parkes Railway Station Group.

Locality	Item name	Address	Property description	Significance	Item no.
Parkes	Parkes Railway Station Group	Parkes–Broken Hill Railway	Lots 1, 3 and 4, DP 1007651; Lot 1, DP 1006841; Lot 10, DP 1007652; Lot 4, DP 758827; Lot 1, DP 819875; Lot 1, DP 134055; Lot 1, DP 1069298	State	I6


Parkes Local Environmental Plan 2012
Heritage Map - Sheet HER_005B
Heritage
Cadastre
N


Parkes Local Environmental Plan 2012
Heritage Map - Sheet HER_005D
Heritage
Item - General
Cadastre
N


Parkes Local Environmental Plan 2012
Heritage Map - Sheet HER_005E
Heritage
Item - General
Cadastre
Cadastre 03/07/11 © Land & Property Information (LPI)
PARKES
N
Scale: 1:20,000 @ A3

Appendix D

Unexpected heritage items procedure

7. Unexpected heritage items procedure

Table 1: Specific tasks to be implemented following the discovery of an unexpected heritage item.

Aboriginal Cultural Heritage Advisor (ACHA); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Regional Environment Staff (RES); Registered Aboriginal Parties (RAPs); Senior Environmental Specialist (Heritage) (SES(H)); Team leader – Roads and Maintenance Division (TL - RMD); Works supervisor – Roads and Maintenance Division (WS - RMD).

Step	Task	Responsibility	Guidance & Tools
1	**Stop work, protect item and inform Roads and Maritime environment staff**		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RMD. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RMD)	All	**Appendix A** (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.	PM or TL-RMD	
1.3	Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.	PM or TL-RMD	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form 418'.	PM or TL-RMD	**Appendix B** (Unexpected Heritage Item Recording Form 418) **Appendix C** (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance & Tools
1.5	Is the item likely to be bone? If **yes**, follow the steps in Appendix E – 'Uncovering bones'. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site. If **no**, proceed to next step.	PM or WS-RMD	**Appendix E** (Uncovering Bones)
1.6	Is the item likely to be: a) A relic? (A relic is evidence of past human activity which has local or state heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse) and/or b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree). If **yes**, proceed directly to Step 1.8 If **no**, proceed to next step.	PM or WS-RMD	**Appendix A** (Identifying heritage items)
1.7	Is the item likely to be a "work", building or standing structure? (This may include tram tracks, kerbing, historic road pavement, fences, sheds or building foundations). If **yes**, can works avoid further disturbance to the item? (E.g. if historic road base/tram tracks have been exposed, can they be left in place?) If **yes**, works may proceed without further disturbance to the item. Complete Step 1.8 within 24 hours. If works cannot avoid further disturbance to the item, works must not recommence at this time. Complete the remaining steps in this procedure.	PM or WS-RMD	**Appendix A** (Identifying heritage items)

Step	Task	Responsibility	Guidance & Tools
1.8	Inform relevant Roads and Maritime Regional Environmental Staff of item by providing them with the completed 'Form 418'.	PM or WS-RMD (RES)	**Appendix D** (Key Environmental Contacts)
1.9	Regional Environmental Staff to advise Project Manager or Works Supervisor whether RMS has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the *Heritage Act*, the *National Parks and Wildlife Act* or the *Planning and Assessment Act*). Does RMS have an approval, permit or appropriate safeguard in place to impact on the item? If **yes**, work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure. If **no**, continue to next step.		
1.10	Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.	PM or WS-RMD	
1.11	Report the item as a 'Reportable Event' in accordance with the Roads and Maritime *Environmental Incident Classification and Reporting Procedure*. Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.	PM or WS-RMD	RMS Environmental Incident Classification and Reporting Procedure
2	**Contact and engage an archaeologist and, where required, an Aboriginal site officer**		
2.1	Contact the Project (on-call) Archaeologist to discuss the location and extent of the item and to arrange a site inspection, if required. The project CEMP may contain contact details of the Project Archaeologist. OR	PM or WS-RMD (A; RES; SES(H))	Also see **Appendix D** (Key Environmental Contacts)

Step	Task	Responsibility	Guidance & Tools
	Where there is no project archaeologist engaged for the works, engage a suitably qualified and experienced archaeological consultant to assess the find. A list of heritage consultants is available on the RMS contractor panels on the Buyways homepage. Regional environment staff and Roads and Maritime heritage staff can also advise on appropriate consultants.		Buyways
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Advisor to arrange for an Aboriginal Sites Officer to assess the find. Generally, an Aboriginal Sites Officer would be from the relevant local Aboriginal land council. If an alternative contact person (ie a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RMD (ACHA; ASO)	
2.3	If requested, provide photographs of the item taken at Step 1.4 to the archaeologist, and Aboriginal Sites Officer if relevant.	PM or WS-RMD (RES)	**Appendix C** (Photographing Unexpected Heritage items)
3	**Preliminary assessment and recording of the find**		
3.1	In a minority of cases, the archaeologist (and Aboriginal Sites Officer, if relevant) may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (*eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'*). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.2	Arrange site access for the archaeologist (and Aboriginal Sites Officer, if relevant) to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	PM or WS-RMD	
3.3	Subject to the archaeologist's assessment (and the Aboriginal Sites Officer's assessment, if relevant), work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to	A/PM/ASO/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	reflect the extent of the newly assessed protective area. No works are to take place within this area once established.		
3.4	The archaeologist (and Aboriginal Sites Officer, if relevant) may provide advice after the site inspection and preliminary assessment that no archaeological constraint exists for the project (*eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'*). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Regional environment staff and/or Roads and Maritime heritage staff can provide contacts for such specialist consultants.	RES/SES(H)	**Appendix D** (Key Environmental Contacts)
3.6	Where the item has been identified as a 'relic', 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	A	
3.7	The regulator can be notified informally by telephone at this stage by the archaeologist, Project Manager (or delegate) or Works Supervisor - RMD. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A/WS-RMD	
4	**Prepare an archaeological or heritage management plan**		
4.1	The archaeologist must prepare an archaeological or heritage management plan (with input from the Aboriginal Sites Officer, where relevant) shortly after the site inspection. This plan is a brief overview of the following: (a) description of the feature, (b) historic context, if data is easily accessible, (c) likely significance, (d) heritage approval and regulatory notification requirements, (e) heritage reporting requirements, (f) stakeholder consultation requirements, (g) relevance to other project approvals and management plans etc.	A/ASO	**Appendix F** (Archaeological/ Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of regional environment staff must review the CEMP, any heritage sub-plans, any conditions of heritage approvals, conditions of project approval (and or Minister's Conditions of Approval) and heritage assessment documentation (eg Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s)	A/RES/PM	**Appendix F** (Archaeological/ Heritage Advice Checklist)

Step	Task	Responsibility	Guidance & Tools
	and/or previously agreed management strategies. The Project Manager and regional environment staff must provide all relevant documents to the archaeologist to assist with this. Discussions should occur with design engineers to consider if re-design options exist and are appropriate.		
4.3	The archaeologist must submit this plan as a letter, brief report or email to the Project Manager outlining all relevant archaeological or heritage issues. This plan should be submitted to the Project Manager as soon as practicable. Given that the archaeological management plan is an overview of all the necessary requirements (and the urgency of the situation), it should take no longer than two working days to submit to the Project Manager.	A	
4.4	The Project Manager or Works Supervisor must review the archaeological or heritage management plan to ensure all requirements can reasonably be implemented. Seek additional advice from regional environment staff and Roads and Maritime heritage staff, if required.	PM/RES/SES(H)/ WS-RMD	
5	**Notify the regulator, if required.**		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required? If **no**, proceed directly to Step 6 If **yes**, proceed to next step.	PM/RES/SES(H)/ WS-RMD	
5.2	If notification is required, complete the template notification letter.	PM or WS-RMD	**Appendix G** (Template Notification Letter)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to regional environment staff and Senior Environmental Specialist (Heritage) for review, and consider any suggested amendments.	PM/RES/SES(H)/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
5.4	Forward the signed notification letter to the relevant regulator (ie notification of relics must be given to the Heritage Division, Office of Environment and Heritage (OEH), while notification for Aboriginal objects must be given to the relevant Aboriginal section of OEH). Informal notification (via a phone call or email) to the regulator prior to sending the letter is appropriate. The archaeological management plan and the completed site recording form must be submitted with the notification letter. For Part 3A and Part 5.1 projects, the Department of Planning and Environment must also be notified.	PM or WS-RMD	**Appendix D** (Key Environmental Contacts)
5.5	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form should be kept on file by the Project Manager or Works Supervisor- RMD and a copy sent to the Senior Environmental Specialist (Heritage).	PM or WS-RMD	
6	**Implement archaeological or heritage management plan**		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with the regulator.	A/PM or WS-RMD (RES)	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with registered Aboriginal parties, obtaining heritage approvals etc, if required.	PM or WS-RMD (RAPs and RES)	PACHCI Stage 3
6.3	Where heritage approval is required contact regional environment staff for further advice and support material. Please note time constraints associated with heritage approval preparation and processing. Project scheduling may need to be revised where extensive delays are expected.	PM/RES/WS-RMD	
6.4	For Part 3A/Part 5.1 projects, assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment. Seek advice from regional environment staff and Environment Branch specialist staff if unsure.	PM/RES	

Step	Task	Responsibility	Guidance & Tools
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	PM or WS-RMD	
6.6	Where statutory approval (or Part 3A/Part 5.1 project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM or WS-RMD	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material is removed from site, where required. Interested third parties (eg museums or local councils) should be consulted on this issue. Contact regional environment staff and Senior Environmental Specialist (Heritage) for advice on this matter, if required.	PM or WS-RMD	
7	**Review CEMPs and approval conditions**		
7.1	Check whether written notification is required to be sent to the regulator before re-commencing work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator.	PM	
7.2	Update the CEMP, site mapping and project delivery program as appropriate with any project changes resulting from final heritage management (eg retention of heritage item, salvage of item). Updated CEMPs must incorporate additional conditions arising from any heritage approvals, and Aboriginal community consultation if relevant. Include any changes to CEMP in site induction material and update site workers during toolbox talks.	PM	
8	**Resume work**		
8.1	Seek written clearance to resume project work from regional environment staff and the archaeologist (and regulator, if required). Clearance would only be given once all archaeological excavation and/or heritage recommendations (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	RES/A/PM/WS-RMD	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage	PM/A/WS-RMD	

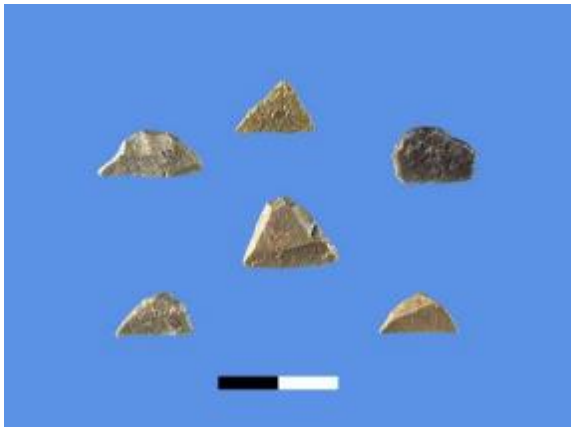
Step	Task	Responsibility	Guidance & Tools
	approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.		
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Environmental Specialist (Heritage). They will ensure all heritage items in Roads and Maritime ownership and/or control are considered for the Roads and Maritime S170 Heritage and Conservation Register.	PM/SES(H)/ WS-RMD	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RMD	

Appendix E

Aboriginal heritage: Artefact identification sheet

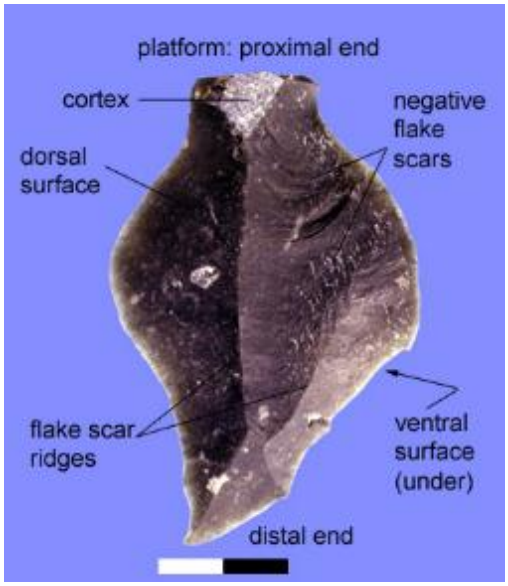
Retouched blades (scale = 1cm)

Flakes

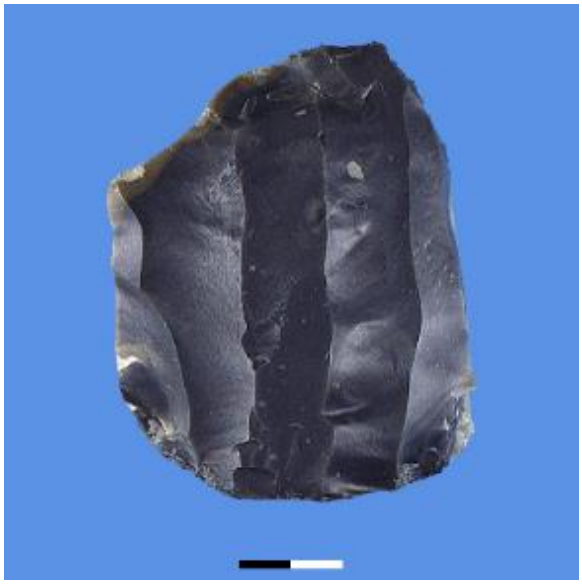


Microliths (scale = 1cm)

Scrapper (scale = 1cm)



Flake characteristics (scale = 1cm)



Core from which flakes have been removed (scale = 1cm)

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13 22 13

Customer feedback
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