

APPENDIX 10 – ABORIGINAL ARCHAEOLOGICAL REPORT

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***Due Diligence Assessment for the Protection
of Aboriginal Objects***

**Proposed Construction of Conservation Fencing and
Associated Infrastructure,
Mallee Cliffs National Park**

**A report prepared for
Australian Wildlife Conservancy
on behalf of NSW Office of Environment and Heritage**

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EXECUTIVE SUMMARY

INTRODUCTION AND OBJECTIVES

The NSW Government and Australian Wildlife Conservancy (AWC) have signed an historic Extinct Mammal Agreement (EMA) under which AWC will deliver scientific and land management services in the Mallee Cliffs National Park. Mallee Cliffs National Park is located in southwest NSW to the east of Wentworth and Mildura.

The EMA (“A project to reintroduce locally extinct mammals”, Agreement number: OEH – 677 -2014) gives effect to a commitment under the NSW Government’s Saving our Species policy. Central to the EMA is a requirement for AWC, on behalf of the NSW Government, to establish a large feral predator-free (fenced) area into which mammal species listed as extinct in NSW will be reintroduced.

EnviroKey Pty Ltd (EnviroKey) has been engaged by AWC to prepare a Review of Environmental Factors (REF) for the proposed construction and operation of the conservation fencing and associated infrastructure.

AWC have engaged On Site Cultural Heritage Management Pty Ltd (On Site CHM) to provide advice about the potential of the proposal to *harm* Aboriginal places and objects pursuant to the *National Parks and Wildlife Act 1974*. In response, On Site CHM have undertaken an Aboriginal heritage assessment consistent with the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects*.

OBJECTIVES

The objectives of this assessment are:

- Conduct an Aboriginal heritage investigation and provide specialist advice about the potential of the proposal to *harm* Aboriginal objects consistent with the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects*
- Provide a report consistent with the requirements under the *National Parks and Wildlife Act 1974* containing recommendations about the management of Aboriginal places and objects that may be affected by the proposal.

This advice will determine whether the proposal has the potential to *harm* Aboriginal objects.

ABORIGINAL CONSULTATION

AWC is undertaking Aboriginal consultation for this project. Following direction from AWC On Site CHM contacted the Dareton Local Aboriginal Land Council (LALC) to invite their participation in this assessment process.

A Native Title search of the project area was also undertaken as part of this assessment process. The recent draft Plan of Management (on public exhibition until August 2017) included the following information (OEH NPWS, 2017:5) regarding Native Title:

The Barkandji Traditional Owners lodged a native title claim over a large area of western New South Wales that included Mallee Cliffs National Park and other NPWS-managed lands. A determination was issued in favour of the Barkandji Traditional Owners on 16 June 2015, but it excluded all NPWS-managed lands. NPWS is, however, committed to negotiating an Indigenous land use agreement (ILUA) with the Barkandji native title holders which will address how the Barkandji People will be involved in managing the parks within the native title area.

SCOPE OF WORKS

The requirement for a due diligence assessment of this proposal arises from the following factors:

- The proposed works will disturb the ground surface (on land that is not disturbed land).
- The activity or proposal occurs in areas where certain landscape features may indicate the presence of Aboriginal objects (the proposal occurs within Mallee Cliffs National Park).

The following scope of works was undertaken with the above factors in mind. The scope of this assessment has included a due diligence process consisting of:

Desktop Study

- Conduct searches of heritage registers and the Aboriginal Heritage Information Management Systems (AHIMS)
- Review relevant background environmental research
- Assess the integrity of the land with regard to current and previous land use and how that might affect the archaeological potential of the project area
- Provide an assessment of the archaeological potential of the project area

Field Investigation

- Undertake archaeological investigations across the proposed project area consistent with the ***Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*** to identify Aboriginal places and objects protected under the *NSW National Parks and Wildlife Act 1974*
- Where appropriate, identify areas of potential archaeological deposit where Aboriginal objects may occur in a subsurface context and may not be visible on the surface

- Detailed recording of identified Aboriginal objects and places

Reporting

- Preparation of a report in accordance with OEH guidelines describing the results of the investigation and processes above
- Preliminary assessment of significance for identified Aboriginal places and objects (as appropriate)
- Provide appropriate recommendations regarding the management of Aboriginal places and objects including requirements for further works and or AHIPs
- Prepare detailed mapping as necessary identifying the location of the Aboriginal sites or sensitive areas of high potential
- Preparation of AHIMS site cards for any new sites discovered

REGIONAL ARCHAEOLOGICAL STUDIES

The 1998 POM for Mallee Cliffs National Park claimed that at that time no Aboriginal sites had been documented within the park. The 2017 Draft POM similarly notes that only one Aboriginal hearth site has been recorded in the park (OEH NPWS, 2017:5). Both these documents argue that as there was no permanent water or raw stone material sources in the mallee sandridge country it is likely that this area was visited less frequently by Aboriginal people in the past. This is especially in contrast to the resource rich Murray River corridor located to the south (OEH NPWS, 2017:5).

On a regional scale, it is argued that Aboriginal sites in the Mallee scrubland, which were located a considerable distance from the only permanent water source in the region – the Murray River – are typically located near non-permanent water sources such as soaks or clay pans. These sites are usually located on sand dunes and contain only terrestrial fauna and stone artefacts. In contrast, the majority of Aboriginal occupation is thought to have been confined along the Murray River corridor (NSW NPWS, 1998:20). This type of site pattern is thought to indicate the ‘seasonal’ land use of the Mallee by Aboriginal groups where they would only travel into the area following rainfall which would have filled outlying claypans.

SURVEY AND RESULTS

A total of 41.9 kilometres of survey were conducted for the proposed fence line and operations base. The survey traversed 100% of the linear length of the proposed fence line and did not locate any Aboriginal objects or sites within the project area. No specific areas of Potential Archaeological Deposit (PAD) were identified or discernible. The absence and scarcity of stone across the project area was notable in itself.

A single historic site was located along the northern most boundary of the fence line. A number of historic elements, such as telegraph insulators on wooden poles, were also noted

along Centre Fire trail. These elements are however outside the proposed fence line area and will not be impacted by the proposed works.

CONCLUSIONS

Despite an extensive archaeological survey within the Mallee Cliffs National Park as part of this project, no traces of Aboriginal occupation evidence were located. While the absence of Aboriginal occupation evidence may, or may not, correlate with the absence of non-permanent water sources, the results of this study certainly do not argue against the current archaeological propositions.

On the basis that this survey did not identify any Aboriginal archaeological evidence or encounter any non-permanent water sources, the entire project area is assessed as having a low potential to contain Aboriginal objects (*very unlikely*).

AWC has since added internal access tracks to the project scope. A desktop review of the Mallee Cliffs National Park shows no non-permanent water sources or drainage lines where the archaeological sensitivity or potential may be higher. Therefore, unless any of the proposed internal access tracks traverse near such a water source, these areas would also be considered to have a low potential to contain Aboriginal objects (*very unlikely*).

MANAGEMENT RECOMMENDATIONS

The following management recommendations are based on the above conclusions and are in accordance with Step 4 of the *Due Diligence Code* (2010:13). Step 4 states that where either desktop assessment or visual inspection indicates that there are (or are likely to be) Aboriginal objects in the area of the proposed activity, more detailed investigation and impact assessment will be required.

Where the desktop assessment or visual inspection does not indicate that there are (or are likely to be) Aboriginal objects, the proposed activity can proceed with caution without an AHIP application.

On the basis of this assessment for Aboriginal objects and their protection under the *NSW National Parks and Wildlife Act* it is recommended that:

1. This proposal does not require any further assessment relevant to Aboriginal sites or objects protected under the *NSW National Parks and Wildlife Act*. The project area has been subject to intensive archaeological survey and assessed as having a low potential, (*or very unlikely*) to contain Aboriginal sites or objects. No AHIP or supporting ACHA is required to undertake the proposed works.

2. Planning for the internal access tracks should identify and avoid any discrete non-permanent water sources such as soaks or clay pans not identifiable through desktop assessment by at least 200 metres. If this is not possible the particular internal access tracks should be subject to further archaeological survey and assessment.
3. AWC and their contractors should be aware that in the event that Aboriginal objects are discovered during the proposed works, all works in that area should cease and the AWC should contact the Office of Environment and Heritage, an Aboriginal community representative or a qualified archaeologist to seek some determination of the discovery and how to proceed.
4. In the unlikely event that skeletal remains are discovered during earthworks, all works should cease and protocols consistent with Requirement 25 in the *Code of Practise for Archaeological Investigation of Aboriginal Objects in NSW* be implemented.

While the undertaking of this due diligence assessment acts as a defence against harming or disturbing Aboriginal objects without an AHIP, the undertaking of this assessment alone does not negate the need for an AHIP should Aboriginal objects be discovered or disturbed.

Investigations for an AHIP require preparation of an ACHA and must also be supported by Aboriginal consultation in accordance with the process outlined in the *Aboriginal cultural heritage consultation requirements for proponents*.

With regard to HS1 and the requirements of the Wentworth LEP 2011 and the *NSW Heritage Act 1977*, the preliminary assessment has indicated that this site would be unlikely to be assessed to be of local or state heritage significance against the NSW heritage significance criteria and, thus, considered an archaeological *relic* under the Wentworth LEP 2011 or NSW Heritage Act 1977. However, a historic archaeological assessment, including a full significance assessment would be required to be entirely certain of this fact.

In the absence of such an assessment, it is recommended that:

5. The proposed fence line be shifted 20 metres to the south to avoid this historic site
6. AWC and their contractors should be aware that in the event that historic artefacts or *relics* are discovered during the proposed works, all works in that area should cease and the AWC should contact the Heritage Division, Office of Environment and Heritage as delegates of the NSW Heritage Council or a qualified archaeologist to seek some determination of the discovery and how to proceed. This is to ensure that AMC meets s.146 of the NSW Heritage Act 1977 'Notification of Discovery of Relic'.

1.0 INTRODUCTION AND OBJECTIVES

The NSW Government and Australian Wildlife Conservancy (AWC) have signed an historic Extinct Mammal Agreement (EMA) under which AWC will deliver scientific and land management services in the Mallee Cliffs National Park. Mallee Cliffs National Park is located in southwest NSW to the east of Wentworth and Mildura. The project area is located within the southwestern portion of Mallee Cliffs National Park around 23km east of Buronga within the Wentworth Local Government Area (**Figure 1.1**).

The EMA (“A project to reintroduce locally extinct mammals”, Agreement number: OEH – 677 -2014) gives effect to a commitment under the NSW Government’s Saving our Species policy. Central to the EMA is a requirement for AWC, on behalf of the NSW Government, to establish a large feral predator-free (fenced) area into which mammal species listed as extinct in NSW will be reintroduced.

EnviroKey Pty Ltd (EnviroKey) has been engaged by AWC to prepare a Review of Environmental Factors (REF) for the proposed construction and operation of the conservation fencing and associated infrastructure. **Figure 1.2** provides an approximate location of the proposal. This is an approximate location due to the possibility of a small shift in the exact location of the CFAI such as to avoid significant large trees, areas of extreme erosion risk, or other sensitive environmental constraints. However, the proposal would remain within this general vicinity.

AWC have engaged On Site Cultural Heritage Management Pty Ltd (On Site CHM) to provide advice about the potential of the proposal to *harm* Aboriginal places and objects pursuant to the *National Parks and Wildlife Act 1974*. In response, On Site CHM have undertaken an Aboriginal heritage assessment consistent with the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects*.

1.1 OBJECTIVES OF THE ASSESSMENT

The objectives of this assessment are:

- Conduct an Aboriginal heritage investigation and provide specialist advice about the potential of the proposal to *harm* Aboriginal objects consistent with the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects*
- Provide a report consistent with the requirements under the *National Parks and Wildlife Act 1974* containing recommendations about the management of Aboriginal places and objects that may be affected by the proposal.

This advice will determine whether the proposal has the potential to *harm* Aboriginal objects.

1.2 BRIEF PROJECT DESCRIPTION

According to AWC the proposal would include the following components:

- The construction of a 37.2 kilometre feral predator-proof fence enclosing an area of 9,602 hectares in the Mallee Cliffs National Park. The conservation fence will require a 12 metre wide track to be cleared (–up to 6 metre wide on each side of the fence), resulting in the removal of up to 45 hectares of native vegetation.
- Management of this area including the removal of feral animals, the establishment of a network of internal tracks and the implementation of some changes to fire management in relation to the area.
- The reintroduction of at least ten threatened mammal species: Greater Bilby, Western Barred Bandicoot, Bridled Nailtail Wallaby, Brush-tailed Bettong, Burrowing Bettong, Greater Stick-nest Rat, Mitchell’s Hopping Mouse, Red-tailed Phascogale and Western Quoll between March 2019 and April 2021.
- The establishment of an associated operations base (housing, infrastructure, services, etc) in the Mallee Cliffs National Park, with a footprint of about 10.6 hectares outside the feral-free area.
- Establishment of 11.10 km of proposed fire-trail and 42.61 km of proposed minor tracks.

Figures 1.1-1.4 provide details of the location and specifications of the different elements of the proposed works.

Figure 1.1: Regional setting of the project area (EnviroKey 2017:4)

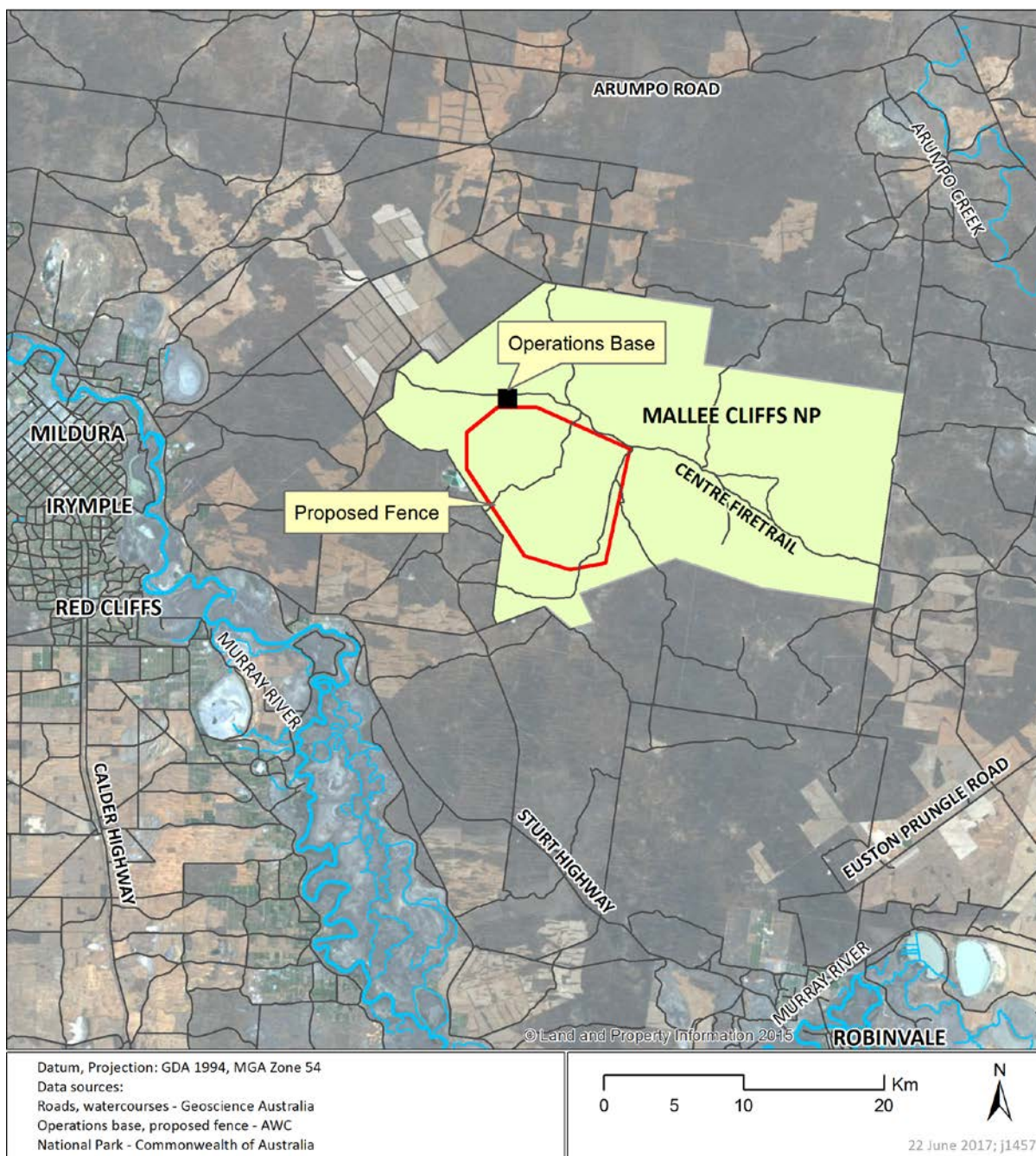


Figure 1.2: Location of the proposal (conservation fencing and operations base) (EnviroKey 2017:5)

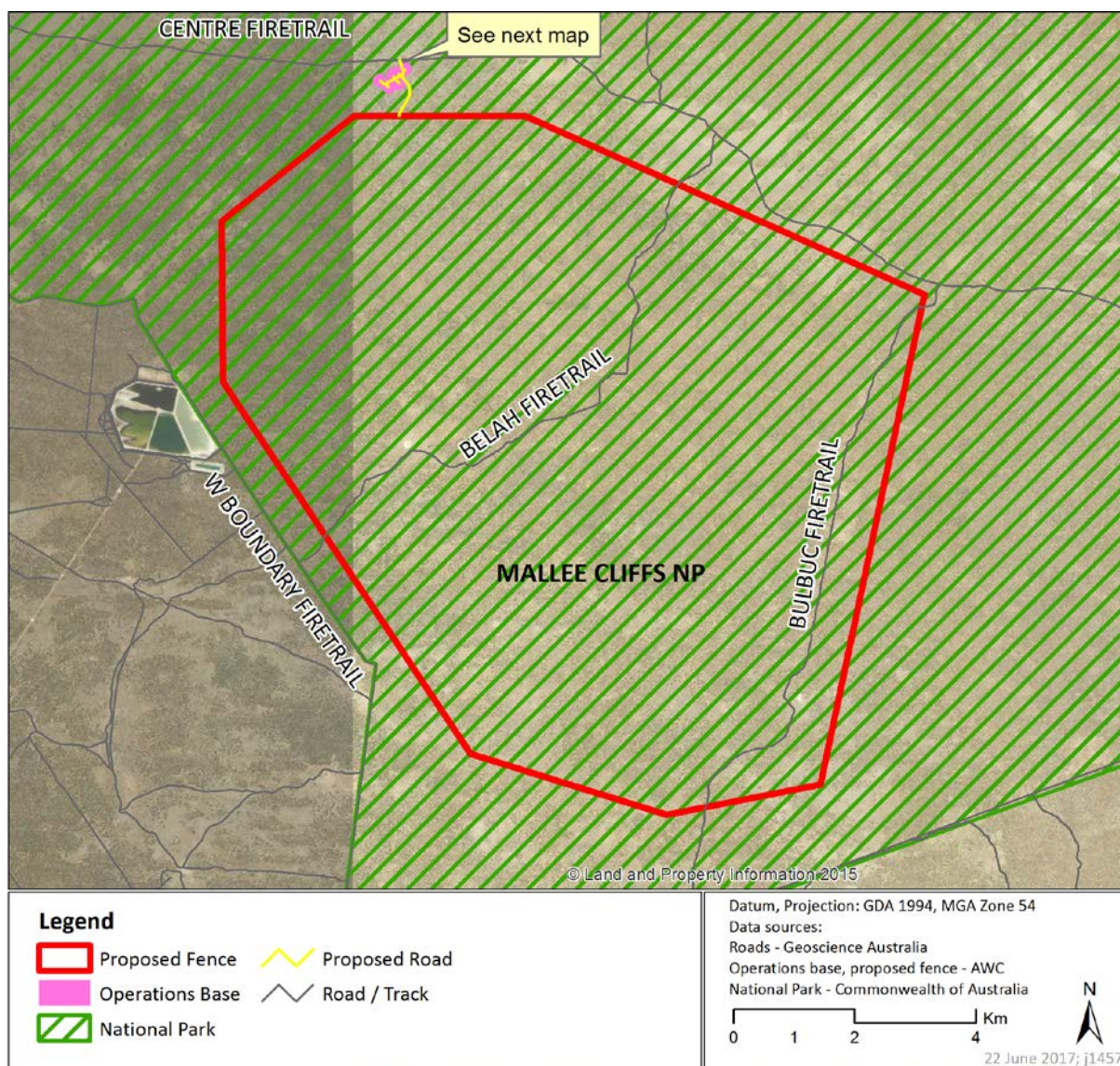


Figure 1.3: Location of the study area also showing access tracks (Supplied by AWC).

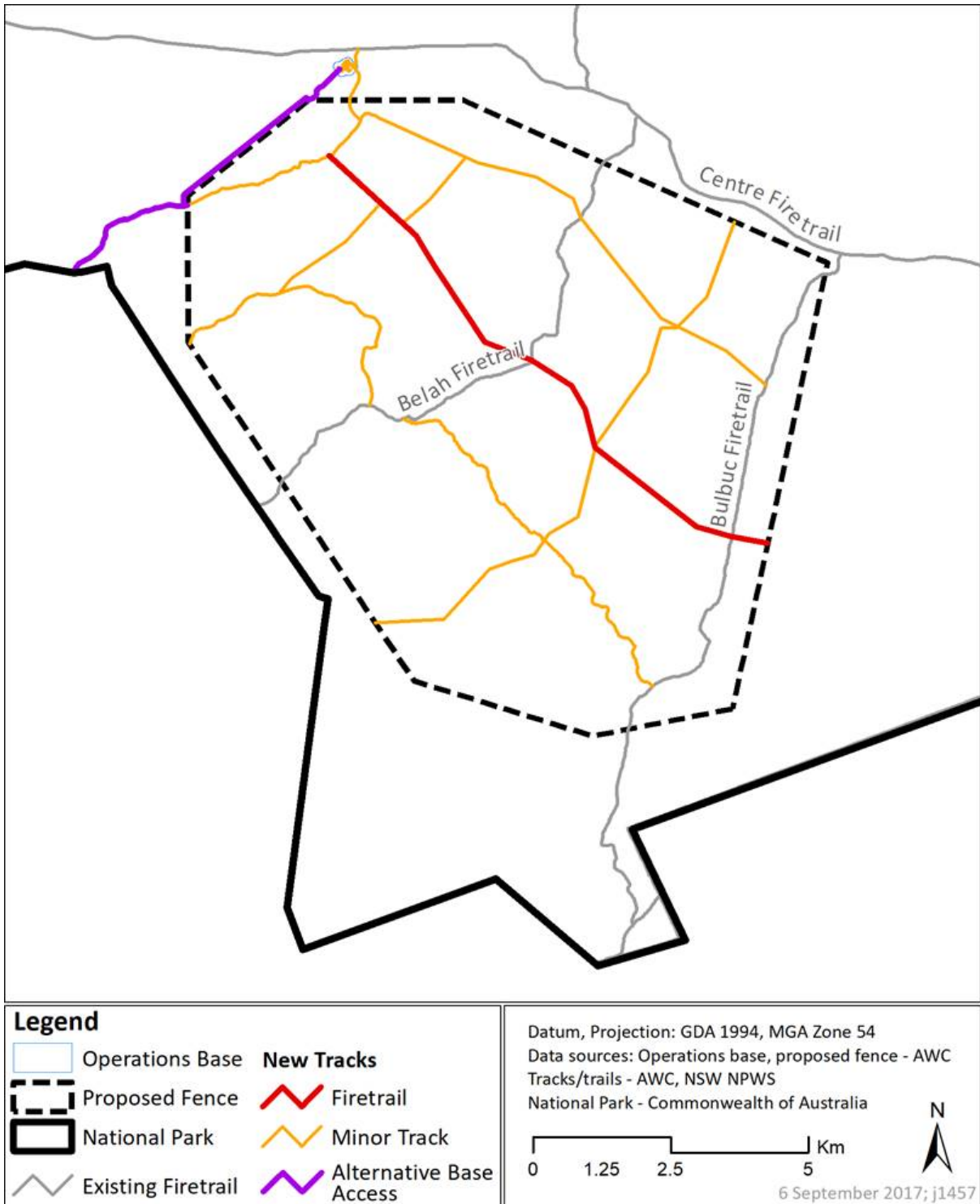
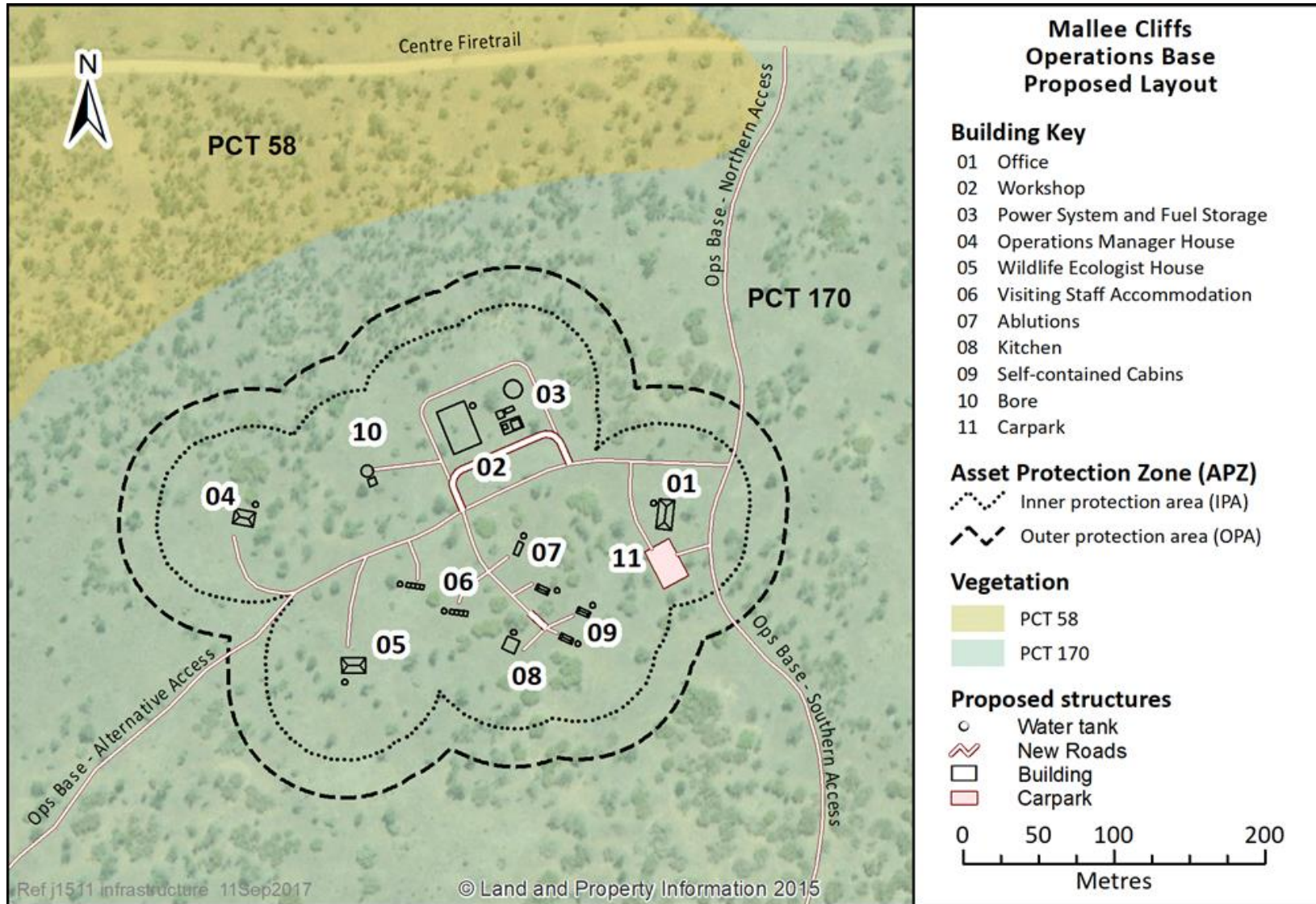


Figure 1.4: Detail of the proposed works in the operations base study area (Supplied by AWC).



2.0 PROTECTION OF ABORIGINAL HERITAGE

2.1 STATUTORY FRAMEWORK FOR THE PROTECTION OF ABORIGINAL HERITAGE

Primary protection of Aboriginal heritage in NSW is established at the State level under the *NSW National Parks and Wildlife Act 1974* (NPW Act) and to a lesser extent the *NSW Heritage Act 1977*. The Director General of the Office of Environment and Heritage NSW (OEH) is responsible for protecting and conserving Aboriginal objects and declared Aboriginal places in NSW.

Aboriginal objects are defined in NPW Act as any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.

Aboriginal places are defined in NPW Act as a place declared under s.84 of the NPW Act that, in the opinion of the Minister, is or was of special significance to Aboriginal culture. Such areas need not contain any Aboriginal objects but can only be gazetted with the approval of the Minister.

Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act) provides specific protection for Aboriginal objects and declared Aboriginal places by establishing offences of **harm**. *Harm* is defined to mean destroying, defacing, damaging or moving an object from the land. There are a number of defences and exemptions to the offence of harming an Aboriginal object or place.

Aboriginal heritage may also be protected under Commonwealth and Local Government legislation being the *Environment Protection and Biodiversity Conservation Act* and *Local Environmental Plans* respectively.

2.2 AVOIDING HARM TO ABORIGINAL OBJECTS

A number of policies or guidelines are relevant to assist proponents in avoiding *harming* Aboriginal objects in NSW. These policies are listed below in order of their consideration within a planning context or assessment of a given proposal or activity. From this perspective, the Due Diligence Code represents the minimum level of formal assessment prescribed in policy:

- *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* (DECCW, 2010)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010)
- *Aboriginal cultural heritage consultation requirements for proponents* (DECCW, 2010)
- *Guide to investigation, assessing and reporting on Aboriginal Cultural heritage in NSW*.

The *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* sets out reasonable and practicable steps which individuals and organisations need to take in order to:

- Identify whether or not Aboriginal objects are, or are likely to be, present in an area.
- Determine whether or not their activities are likely to harm Aboriginal objects (if present).
- Determine whether further assessment or an AHIP application is required.

Section 8 of the Due Diligence Code provides a generic due diligence process to be addressed by proponents and determine the above. The basic sequential steps of the due diligence process requires the proponent or their agent to consider the proposed activity or proposal and review whether:

1. The activity or proposal will disturb the ground surface.
2. The AHIMS database or other relevant databases record previously identified places.
3. The activity or proposal occurs in areas where certain landscape features may indicate the presence of Aboriginal objects (on land that is not disturbed).
4. Harm to Aboriginal objects or disturbance of the landscape feature can be avoided.
5. Desktop assessment and visual assessment is required.
6. Further investigation and impact assessment is required.

Several of these steps will commonly require more specialised assessment and interpretation, especially Step 3 which is further discussed below.

The Due Diligence Code (2010:12) discusses the common association between certain landscape features and the presence of Aboriginal objects as a result of Aboriginal people's use of those features. The Code defines the following landscape features (on land that is not disturbed land) and distance thresholds as indicating the likely presence of Aboriginal objects:

- within 200m of waters, or
- located within a sand dune system, or
- located on a ridge top, ridge line or headland, or
- located within 200m below or above a cliff face, or
- within 20m of or in a cave, rock shelter, or a cave mouth

Consequently, if the proposal or activity is within the defined proximity thresholds to one of these landscape features (on land that is not disturbed) then the code considers that there is a probability that Aboriginal objects will occur within the area or are *likely* to occur.

Due diligence may also be addressed through other forms of assessment providing they meet the basic requirements set out above. A Review of Environmental Factors or other assessment under the *Environmental Planning and Assessment Act 1979* may also meet the requirements of the Due Diligence Code of Practice.

While the undertaking of a due diligence process or equal assessment process acts as a defence against harming or disturbing Aboriginal objects without an Aboriginal Heritage Impact Permit (AHIP), the undertaking of these activities does not negate the need for an AHIP should Aboriginal objects be disturbed.

An application for an AHIP must be supported by a consultation process as set out in the ***Aboriginal cultural heritage consultation requirements for proponents 2010*** and an Aboriginal Cultural Heritage assessment that meets the *Guide to investigation, assessing and reporting on Aboriginal Cultural heritage in NSW*.

The ***Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*** also provides standards and methods for how this investigation has been conducted and reported.

2.3 ABORIGINAL CONSULTATION

Section 5 of the *Due Diligence Code* states that consultation with the Aboriginal community is not a formal requirement of the due diligence process. However, proponents may wish to consider undertaking consultation if it will assist in informing decision-making (Due Diligence COP 2010: 3).

AWC is undertaking Aboriginal consultation for this project. Following direction from AWC On Site CHM attempted to contact the Dareton Local Aboriginal Land Council (LALC) via email/letter (**Appendix 1**) and telephone to invite their participation in this assessment process. No response was received from Dareton LALC. It is understood that AWC has also made substantial unsuccessful attempts to engage with the Dareton LALC about this project.

A Native Title search of the project area was also undertaken. The results of this Native Title search are included in **Appendix 2**. The recent draft Plan of Management (on public exhibition until August 2017) included the following information (OEH NPWS, 2017:5) regarding Native Title:

The Barkandji Traditional Owners lodged a native title claim over a large area of western New South Wales that included Mallee Cliffs National Park and other NPWS-managed lands. A determination was issued in favour of the Barkandji Traditional Owners on 16 June 2015, but it excluded all NPWS-managed lands. NPWS is, however, committed to negotiating an Indigenous land use agreement (ILUA) with the Barkandji native title holders which will address how the Barkandji People will be involved in managing the parks within the native title area.

2.4 MANAGEMENT ARRANGEMENTS FOR MALLEE CLIFFS NATIONAL PARK

Mallee Cliffs National Park was reserved in 1977 following the purchase of Mallee Cliffs Station and comprises approximately 57,969 hectares. It is designed to protect extensive areas of flat to undulating red sandy plains and sand dunes and their associated mallee and other semi-arid ecosystems. A recent Statement of Management Intent does not exist for this National Park, but there is a Plan of Management (POM) from 1998 (NSW NPWS, 1998). NPWS are currently in the process of updating this POM (OEH NPWS, 2017).

The 1998 POM details that the management of national parks in NSW have the following general objectives (NSW NPWS, 1998:4):

- the protection and preservation of scenic and natural features;
- the conservation of wildlife;
- the maintenance of natural processes as far as is possible;
- the preservation of Aboriginal sites and historic features;
- the provision of appropriate recreation opportunities; and
- the encouragement of scientific and educational enquiry into environmental features and processes, prehistoric and historic features and park use patterns.

It also details the following specific objectives for the management of Mallee Cliffs National Park (NSW NPWS, 1998:4):

- the protection and where necessary restoration of the area as a representative sample of the sand plain and sand dune land system of south-western NSW and its associated plant and animal communities;
- the protection of rare, endangered and/or isolated plant and animal species and communities by preparing and implementing, where appropriate, specific management programs;
- the emphasis within the local community, particularly neighbours of the park, of the importance and purpose of management programs relating to the protection of natural features and the control of fire, weeds and feral animals; and
- the enhancement of the value of Mallee Cliffs National Park as a wildlife conservation area by promoting the importance of its conservation values through liaison with local councils and appropriate government organisations.

These objectives are aimed to be implemented through a management strategy that focuses on the 'protection of the area and on programs necessary for the restoration of disturbed lands to a more natural condition' (NSW NPWS, 1998:4).

The POM (NSW NPWS, 1998:20) outlines the following policies with relation to cultural heritage within the park:

- All cultural sites located on the park will be recorded and protected from disturbance.

- The provisions of the ICOMOS charter for the conservation of places of cultural significance (the Burra Charter) will be used as guidelines for the management of cultural sites in the park.
- NSW NPWS will liaise with relevant Local Aboriginal Land Councils and communities on all aspects of Aboriginal site management in the park.

The Mallee Cliffs Draft POM (OEH NPWS 2017) outlines the following NPWS vision for the park:

Mallee Cliffs conserves a regionally significance sample of mallee dune and sandplain vegetation and associated ecosystems of the semi-arid zone in the Murray Darling Depression Bioregion.

The park contributes to the recovery of threatened species including the endangered malleefowl.

The Draft POM (OEH NPWS, 2017:10-11) outlines the following two objectives in its Scheme of Operations for the purpose of ‘looking after our culture and heritage’:

- Aboriginal and shared histories are protected.
- Aboriginal people continue to enjoy connection to Country and are encouraged to participate in park management.

These objectives are to be fulfilled through the following Actions and Performance Measures:

19. Protect Aboriginal cultural heritage from disturbance.

- a. Due diligence is applied to ensure appropriate protection of Aboriginal cultural heritage including an appropriate level of cultural impact assessment and consultation prior to any works.

20. Support the negotiation of an Indigenous land use agreement (ILUA) with the Barkandji native title holders that includes the park. This agreement will address how and to what extent Aboriginal people will be involved in managing the park.

- a. Mallee Cliffs is incorporated into any ILUA which is established for NPWS-managed lands within the Barkandji native title claim area.

21. Assess shared cultural heritage values prior to carrying out works and/or installation of infrastructure in the park.

- a. Potential impacts on shared cultural heritage are assessed.
- b. Where necessary, protective measures are applied to protect shared cultural heritage items in accordance with their significance.

These Actions and Performance Measures clearly outline the need for Due Diligence processes.

2.4.1 Aboriginal Cultural Values

A recent Native Title determination (2015) and the Mallee Cliffs Draft POM (2017) recognises the Barkandji (Paakantji) People to be the traditional owners of the country with encompasses Mallee Cliffs National Park and the surrounding area (**Appendix 2**).

The Australian Heritage Database / Register of the National Estate (RNE) listing (**Appendix 3**) for Mallee Cliffs listed the the traditional owners of the Mallee Cliffs area (or Mallee country) as the Paakantji, Latji Latji, Muthi Muthi, and Yitha Yitha people.

Mallee Cliffs National Park is recognised to be a relatively undisturbed Aboriginal cultural landscape that provides a tangible link to the cultural knowledge and traditional views of the Barkandji People. As such, this landscape has value as a place where teaching, maintaining, and renewing of cultural knowledge can take place. This includes the use of culturally significant plants and animals for food, medicine, and ceremonial purposes, as well as the manufacture of artefacts. The Mallee fowl was an animal of particular significance as its nests were owned by local land holding groups with access being restricted to specific individuals and groups (RNE Listing – **Appendix 3**).

The local Aboriginal community consider all aspects of the Mallee country to be important or significant, particularly as a landscape where their traditional views and point of view can be expressed. Aboriginal links to this country are grounded in oral history and current land use of the region and they, in turn, help to embody the community's identity and ownership of their traditional lands (RNE Listing).

The Mallee country has economic and cultural significance to the local Aboriginal community due to the high diversity of flora and fauna resources it contained. For thousands of years this landscape was managed by Aboriginal people and was an important hunting ground. These land management practices included patch burning with low intensity fires that maintained the biodiversity of the region. Despite the nature of this semi-arid environment, with its lack of permanent surface water, the local Aboriginal people's profound knowledge of the landscape allowed them to develop a distinctive and successful lifestyle (RNE Listing).

Following the European invasion and settlement of the Mallee country Aboriginal people maintained their connection to country through participating in the local pastoral industry. Indeed, they (and their labour) played an important role in the expansion of this industry in the Scotia Mallee country. Aboriginal people worked on stations, such as Mallee Cliffs, to maintain their physical connection to country or family territories. Alternatively, if they worked on distant stations they would return periodically to their own country to re-establish their connections. Aboriginal elders in the late 1970s remembered how their families preferred living in the Mallee country as 'everything was clean and healthy and they could earn a living from rabbit trapping and station works and get lots of bushtucker'. In the past on Mallee Cliffs station, Aboriginal people, including perhaps Ralph Haradine and family, Arthur

Budda Kirby, and Kevin Pearce, earned a living through working on activities such as timber cutting (RNE Listing).

The local Aboriginal community have identified several management objectives for Mallee Cliffs National Parks (circa late 1990s). This includes seeing that plants and animals of Aboriginal social and cultural significance were managed to ensure their long term viability. This particularly involves protecting them from threats associated with high intensity fires, cattle, and other feral animals. To ensure that the park is managed with these interests in mind they have suggested that Aboriginal people be involved with the park's management in the future. Previously the Aboriginal community have commented that a study should be undertaken of the park towards identifying how best to preserve its flora and fauna resources. This study should involve Aboriginal Elders with their extensive cultural knowledge, as well as young people to provide them with the opportunity to learn from the Elders (RNE Listing).

2.4.2 Previous Aboriginal Consultation

Representatives of the Dareton LALC participated in a survey conducted by Lance (1989:1). This survey is reviewed at **Section 5.3**. These representatives comprised members of the Smith family: Rod Smith, Graham Smith, and David Smith. Their family is recognised to have a long history of association with the district and are descendants of the traditional Aboriginal groups who occupied the area before, and after, the European invasion of the region.

Ferguson (1991:2-3) consulted with Patsy Doolan and Karen Clark of the Dareton LALC on the survey conducted during this project. Rod Smith, the Council's chosen Aboriginal Consultant participated, in the survey. At this time Rod was a member of the Land Council and an Honorary Sites Officer.

The RNE listing for Mallee Cliffs National Park at **Appendix 3** also contains a list of Aboriginal people interviewed as part of the Aboriginal community values assessment.

3.0 SCOPE OF WORKS

This assessment has been conducted in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW*.

3.1 RATIONALE

The requirement for a due diligence assessment of this proposal arises from the following factors outlined above in **Section 2.2**:

- The proposed works will disturb the ground surface (on land that is not disturbed land).
- The activity or proposal occurs in areas where certain landscape features may indicate the presence of Aboriginal objects (the proposal occurs within Mallee Cliffs National Park).

The following scope of works was undertaken with the above factors in mind. The scope of this assessment has included a due diligence process consisting of:

Desktop Study

- Conduct searches of heritage registers and the Aboriginal Heritage Information Management Systems (AHIMS)
- Review relevant background environmental research
- Assess the integrity of the land with regard to current and previous land use and how that might affect the archaeological potential of the project area
- Provide an assessment of the archaeological potential of the project area

Field Investigation

- Undertake archaeological investigations across the proposed project area consistent with the ***Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*** to identify Aboriginal places and objects protected under the *NSW National Parks and Wildlife Act 1974*
- Where appropriate, identify areas of potential archaeological deposit where Aboriginal objects may occur in a subsurface context and may not be visible on the surface
- Detailed recording of identified Aboriginal objects and places

Reporting

- Preparation of a report in accordance with OEH guidelines describing the results of the investigation and processes above
- Preliminary assessment of significance for identified Aboriginal places and objects (as appropriate)
- Provide appropriate recommendations regarding the management of Aboriginal places and objects including requirements for further works and or AHIPs
- Prepare detailed mapping as necessary identifying the location of the Aboriginal sites or sensitive areas of high potential
- Preparation of AHIMS site cards for any new sites discovered

4.0 LANDSCAPE CONTEXT

According to the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW 2010: 8), the purpose of reviewing the landscape context is to assist in the determination or prediction of:

- the potential of the landscape, over time, to have accumulated and preserved objects;
- the ways Aboriginal people have used the landscape in the past, with reference to the presence of resource areas, surfaces for art, other focal points for activities and settlement; and
- the likely distribution of the material traces of Aboriginal land use based on the above.

Consideration of the landscape is essential to the definition and interpretation of Aboriginal land use across a landscape. The landscape will provide clues as to those areas of land that may have been more intensively used by Aboriginal people in the past, and also provide the context within which the material remains of past Aboriginal occupation may be preserved and detectable (DECCW 2010:8).

4.1 ENVIRONMENTAL DESCRIPTION OF PROJECT AREA

According to the landscape classification system described by Mitchell (2002) the project area falls within three landscapes: the Mallee Cliffs Sandplains, Mallee Cliffs Dunes, and Mallee Cliffs Linear Dunes of the Mallee Cliffs meso-ecosystem and Murray Darling Depression Bioregion (**Figure 4.1**).

Mitchell (2002a:14) describes a meso-ecosystem as groups of ecosystems representing larger natural entities based on topography and geology. A description of these landscapes after Mitchell (2002) is provided below.

4.1.1 Murray Darling Depression Bioregion – Mallee Cliffs Meso-Ecosystem

Mallee Cliffs Sandplains (Mcs)

Mallee Cliffs Sandplains landscape includes parts of twelve land systems: *Ashmont*, *Bulgamura*, *Frenchmans*, *Gulthul*, *Hatfield*, *Menilta*, *Mulurulu*, *Overnewton*, *Quambi*, *Roo Roo*, *Trelega* and *Wilkura*.

Extensive, slightly undulating sandplain of Quaternary aeolian sands with east-west trending dunes, often with blowouts, partly scalded broad swales and small depressions, relief 6 to 10m. Solonized brown soils, calcareous loamy sand, and texture-contrast soils on the plain, red and brown sands on dunes, non-cracking grey or brown clays in depressions.

Rosewood (*Alectryon oleifolius*), white cypress pine (*Callitris glaucophylla*), sugarwood (*Myoporum platycarpum*), belah (*Casuarina cristata*), dense clumps of black bluebush

(*Maireana pyramidata*), or pearl bluebush (*Maireana sedifolia*), with variable speargrass (*Austrostipa variabilis*), bottlewashers (*Enneapogon sp.*) and copperburr (*Sclerolaena sp.*) on plains. Scattered rosewood, belah, mallee patches (*Eucalyptus sp.*), with isolated porcupine grass (*Triodia irritans*), white cypress pine, narrow-leaf hopbush (*Dodonaea attenuata*), pumty bush (*Senna eremophila*) and grasses on dunes. Annual saltbush (*Atriplex sp.*), canegrass (*Eragrostis australasica*), lignum (*Muehlenbeckia cunninghamii*) and nitre goosefoot (*Chenopodium nitrariaceum*) in depressions usually fringed by black box (*Eucalyptus largiflorens*).

Mallee Cliffs Dunes (Mcu)

Mallee Cliffs Dunes landscape is made up of part of the Mandleman land system.

Quaternary dunefields of parabolic and unaligned dunes merging into slightly undulating sandplains, relief to 7m. Dunes and swales of deep red-brownish earthy sands with uniformly dense mallee (*Eucalyptus sp.*) and porcupine grass (*Triodia irritans*). Isolated flats of solonized brown soils with belah (*Casuarina cristata*) and rosewood (*Alectryon oleifolius*).

Mallee Cliffs Linear Dunes (Mld)

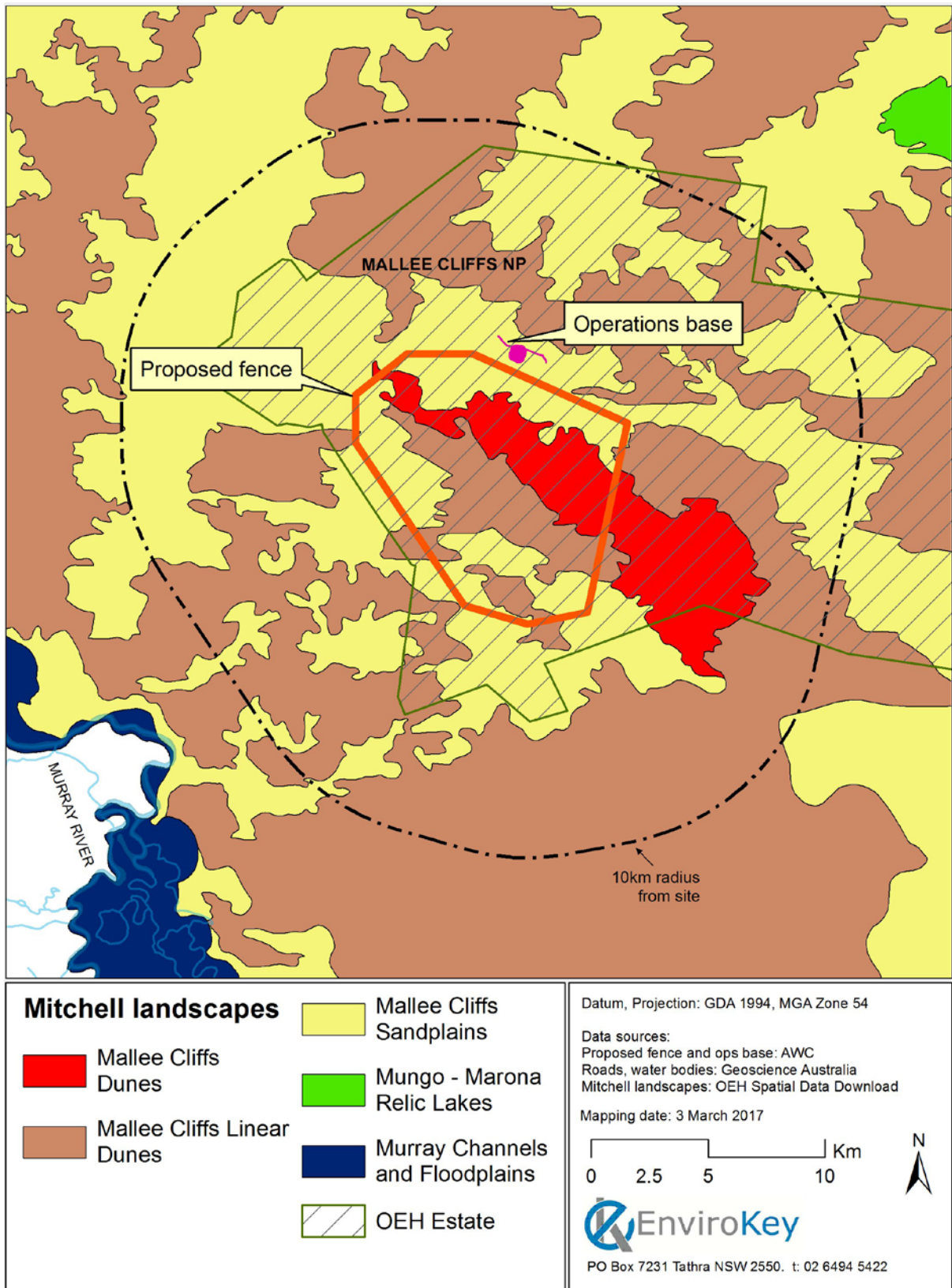
Mallee Cliffs Linear Dunes landscape includes parts of two land systems: KI Downs and Arumpo.

Extensive Quaternary dunefields and sandplains, relief to 7m. Deep brownish sands and calcareous earths with dense mallee (*Eucalyptus sp.*), belah (*Casuarina cristata*) and rosewood (*Alectryon oleifolius*) with porcupine grass (*Triodia irritans*). Narrow swales of calcareous loamy red earths with belah, rosewood, scattered shrubs, variable speargrass (*Austrostipa variabilis*), copperburr (*Sclerolaena sp.*) and forbs.

4.2 GENERAL DESCRIPTION OF THE PROJECT AREA

Both the conservation fencing and operations base study areas are located in semi-arid or arid Mallee country which consists of extensive areas of flat to undulating sandplains and sand dunes vegetated with mallee and belah-rosewood woodland. No major waterways are present within the vicinity of the proposal and drainage is relatively randomised across Mallee Cliffs National Park. In times of heavy rainfall swales provide some passage to overland flow. The study area is part of the catchment of the Murray River which is located around 15km southwest of the study area. The desktop review also suggests that the study area has revegetated since the declaration of Mallee Cliff National Park in 1977.

Figure 4.1: Mitchell Landscapes of the project area (EnviroKey 2017:64)



4.3 LAND-USE HISTORY

The Wentworth LGA was initially penetrated by European explorers in the 1830s and early 1840s travelling down what they named the Murray and Darling Rivers. This exploration prompted the settlement of the area by European from the Riverina to the east and from South Australia to the west in the late 1840s. By the early 1850s squatting licences were being issued for the area around the confluence of the Murray and Darling Rivers. This occupation of the area by squatters holding large pastoral runs resulted in what is now Mallee Cliffs National Park being spread across the border of two stations: Mallee Cliffs (the western two thirds) and Tapalin (the eastern third). Both of these stations had extensive frontage along the Murray River, with Mallee Cliffs occupying a strategic position opposite the future site of Mildura (NSW NPWS, 1998:20; RNE Listing).

Mallee Cliffs Station was established prior to 1866 by the pastoralists McFarlane and McDonald as a leasehold property of 20,480 acres. It was connected to the nearby villages of Euston and Gol Gol along the Murray River by an overland stock route between NSW and SA. This route was an important contact point between Aboriginal people and pastoralists during this period. The semi-arid nature of the region meant that much of these pastoral landholdings could only be stocked at low rates. The NSW Government subsequently moved to break up the large pastoral landholdings in the area with the 1884 Land Act. This resulted in both Mallee Cliffs and Tapalin being subdivided to some extent. However, the marginal nature of the region, with its low rainfalls and frequent droughts, resulted in both properties having been repossessed by the Commonwealth Bank of South Australia by 1889 after their owners became bankrupt. Further attempts were made in 1901 by the state government to break up the former large landholding in the region with the Western Land Acts and it is possible that both Mallee Cliffs and Tapalin were further subdivided at this time. The former station existed up until 1929, but at that time was no longer associated with the lands that became Mallee Cliffs National Park (RNE Listing).

There was likely some further pastoral use of the National Park area after 1929, and most likely after WWII, due to the presence of a homestead ruin and meathouse (detailed below) in the centre of the park. These sites are thought to be evidence of a later phase of occupation that may have lasted up until the resumption of the area for Mallee Cliffs National Park in 1977. This homestead and the majority of its outbuildings were demolished, likely by NPWS, following the declaration of Mallee Cliffs National Park (RNE Listing; OEH NPWS, 2017:5).

It is highly likely that the Mallee Cliffs Station employed Aboriginal people in a range of capacities during its existence. One of its first owners, Mr McFarland, claimed to have been fluent in the Kemendok Aboriginal language.¹ This suggests that he, or other Europeans associated with the station, had extensive contact with the local Aboriginal people.

¹ Extract from Curr, E. M. -- The Australian Race , v.2, 1886; 282-283
http://aiatsis.gov.au/sites/default/files/e_access/r_book/curr/pdfs/m0047369_a.pdf

5.0 HERITAGE REGISTERS AND ARCHAEOLOGICAL BACKGROUND

5.1 HERITAGE REGISTER LISTINGS

Heritage registers and inventories are lists of identified items of heritage significance. These registers are searched for any listed heritage items that occur within or in close proximity to the proposal.

The *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (Requirement 1b) requires searches of the following registers/databases as part of any due diligence process or Aboriginal assessment:

1. The Australian Heritage database – *Environment Protection and Biodiversity Conservation Act*.
2. NSW State Heritage Register and Inventory - *NSW Heritage Act 1977*.
3. Aboriginal Heritage Information Management System (AHIMS) – *National Parks and Wildlife Act 1974*.

They may contain information about both Aboriginal or historic (non-Aboriginal) places and objects. These registers may also provide information on comparative sites that can be used to assist in the evaluation of the relative significance of the site.

Registers and inventories relevant to this study are:

- The Wentworth Local Environmental Plan (LEP) 2011;
- The OEH Historic Heritage Information Management System (HHIMS);
- NSW State Heritage Register;
- NSW State Heritage Inventory;
- The Australian Heritage Database; and
- Aboriginal Heritage Information Management System (AHIMS).

A summary of inventory search results is provided in **Table 5.1**. The results of these searches are discussed further below.

Table 5.1 - Summary of Inventory Search Results and heritage listings

Heritage Register	Within or partially within project area	Within immediate proximity to project area
Wentworth LEP 2011	No	No
HHIMS Database	No	Yes
State Heritage Register	No	No
State Heritage Inventory	No	No
Australian Heritage Database	Yes	No
AHIMS Database	No	No

5.1.1 Local Environmental Plan (Wentworth 2011)

Local Environmental Plans (LEPs) provide a framework for development controls in their local area. Heritage schedules within an LEP provide for the identification and protection of heritage items. The proposal is within the Wentworth LGA and a search of the LEP for the Mallee Cliffs National Park area shows that there are no Heritage Items within proximity to the project area listed in Schedule 5 of the Wentworth LEP.

5.1.2 HHIMS Database

The HHIMS Database is a register of historic items present on lands managed by the Office of Environment and Heritage (OEH). The majority of these sites are within national parks and reserves. This database allows OEH to meet its obligations under Section 170 of the *NSW Heritage Act 1977*.

A search of the HHIMS database noted only one site within Mallee Cliff National Park. This is a Homestead and Meathouse, which are located approximately around 142°39'48.118"E 34°13'30.862"S (**Figure 5.1**) and near the intersection of Centre Fire Trail and Homestead Fire Trail. The homestead is an archaeological site of an early to mid-twentieth century station complex (homestead constructed c.1939) which operated the large pastoral run held across this part of the former Mallee Cliffs station. The Draft POM (2017:5) notes that this homestead and the majority of its outbuildings were demolished after the declaration of Mallee Cliffs National Park in March 1977. However, it is possible that the meathouse is extant (NSW NPWS, 1998:20). The site is located around 3km to the east of the study area just to the south of the southern end of the junction of Homestead Fire Trail and Centre Fire Trail.

Due to the prior land use of Mallee Cliffs National Park as a pastoral station it is also scattered with elements of infrastructure associated with this function including a network of tracks and ground tanks (previously used to water stock). Former tracks from this period include Centre, Belah, Dead Horse North, Bulbuc, Butchers, Homestead, and Pine Tank Tracks. Former tanks included Central Bulbuc, North Bulbuc, Chalky, Butchers, Lubra, Eureka, Myall, Cote, Homestead, Dead Horse, Belah, Todd's Tank, Milkay, Tail, Mulga, Twin, and Pine Tanks.

However, all of these tanks with the exception of Pine Tank were de-commissioned and closed down by NPWS in the recent past as part of pest and environmental management programs (NSW NPWS, 1998:23).

Figure 5.1: Location of homestead and meathouse site in Mallee Cliffs National Park (SIX Maps)

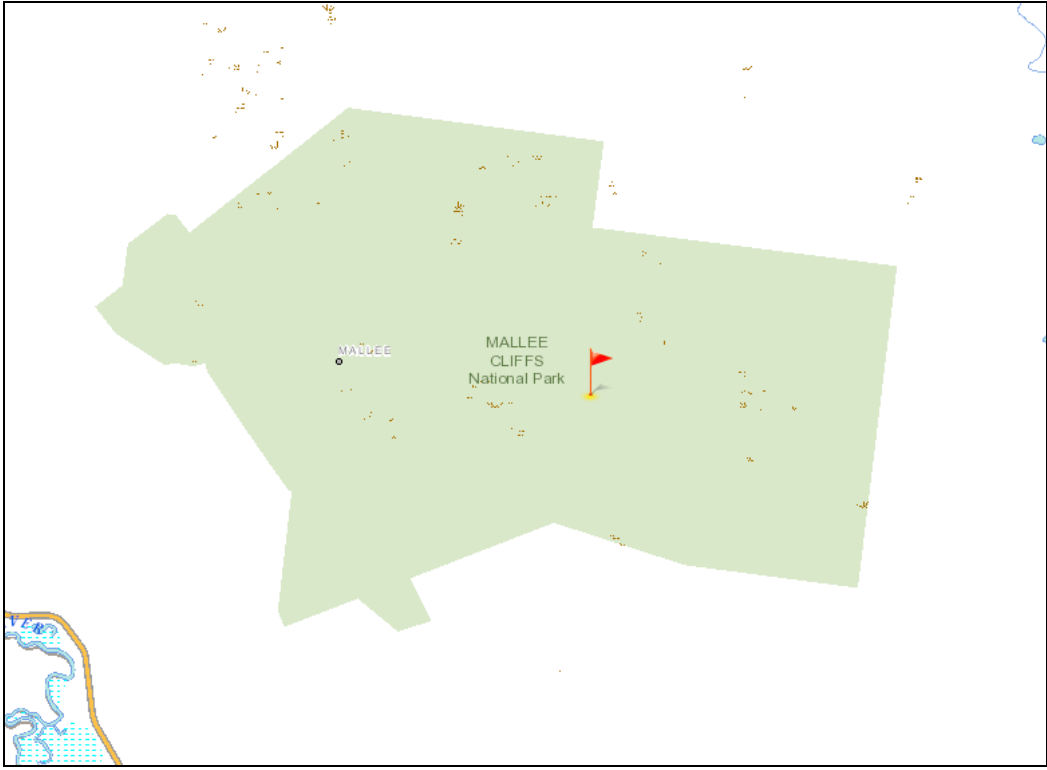
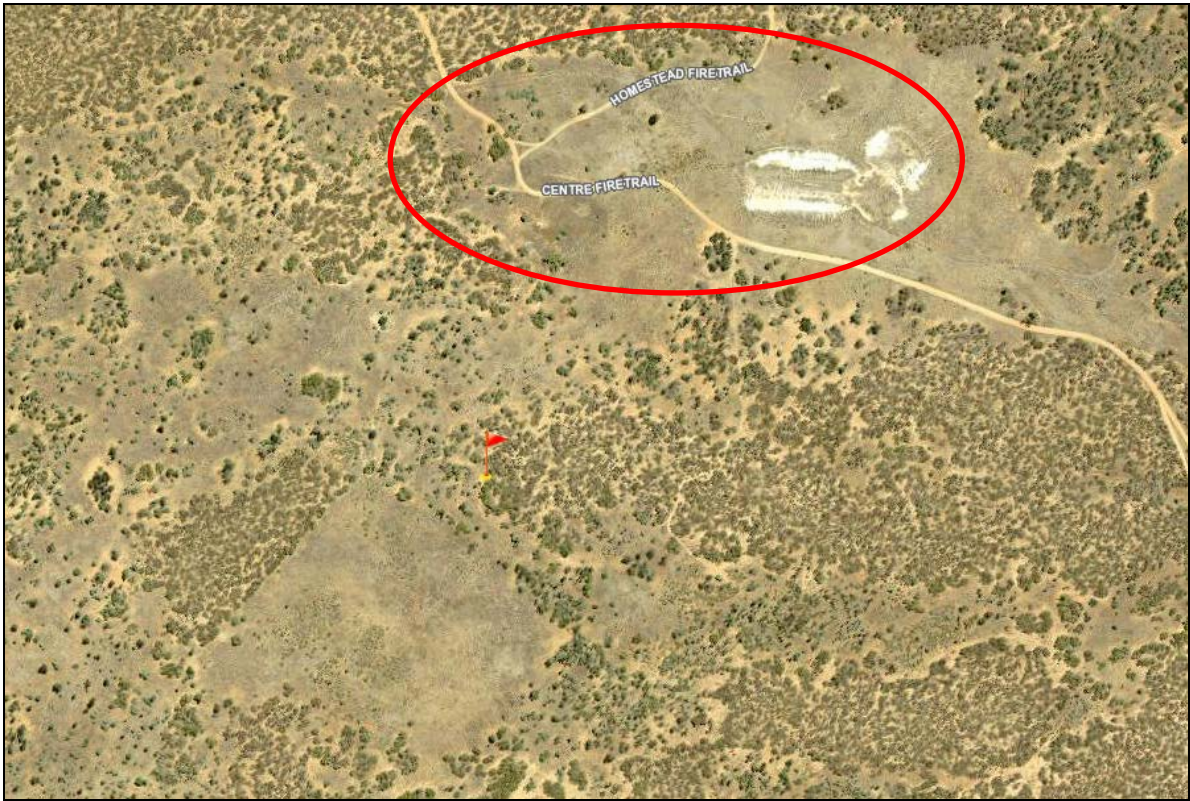


Figure 5.2: Detailed view of location of Homestead and Meathouse Site (SIX Maps)



5.1.3 State Heritage Register and State Heritage Inventory

The State Heritage Register (SHR) is managed by the NSW Heritage Council and comprises a list of heritage items of particular importance to the people of NSW. Items appearing on the SHR are considered significant to the State and are afforded statutory protection.

The State Heritage Inventory (SHI) is a listing of heritage items within NSW and is also managed by the NSW Heritage Council. It comprises a database of heritage items listed by Local Government and State Agencies across NSW as the result of heritage studies. Items listed on the SHI are considered locally significant and subject to protection through local government processes.

A search of the SHR and SHI for the Mallee Cliffs National Park area shows that there are no Heritage Items within proximity to the project area that will be affected by the proposal.

5.1.4 The Australian Heritage Database

The Australian Heritage Council is an independent agency within the Department of the Environment. The Council is the principal adviser to the Australian Government on heritage matters. The Council assesses nominations for the National Heritage List, the Commonwealth Heritage List and is also responsible for the Australian Heritage Database (AHD). The database includes:

- places on the World Heritage List
- places on the National Heritage List
- places on the Commonwealth Heritage list
- places on the Register of the National Estate
- places on the List of Overseas Places of Historic Significance to Australia
- places under consideration (nominated or assessed), or that may have been considered for any one of these lists.

A comprehensive search of the Australian Heritage Database for the Mallee Cliffs National Park area showed that there is one listed place that encompasses the project area that will be affected by the proposal (**Table 5.2**). Details of the AHD search are included in **Appendix 3**.

Table 5.2: Summary of heritage listings and details revealed by inventory searches

Name	Heritage Listing	Heritage Significance	Statutory Requirements
Murray Mallee – Mallee Cliffs National Park	RNE (#690)	Natural	None

5.1.5 Register of the National Estate (Non-Statutory Archive)

The Register of the National Estate is a non-statutory archive of information about more than 13,000 heritage places listed by the former Australian Heritage Commission between 1975 and 2007.

The Murray Mallee – Mallee Cliffs National Park is registered as a natural place on this register. This listing recognises the entire current Mallee Cliffs National Park (57,969 hectares) as a remnant landscape of the Murray Mallee region. It also recognises and identifies many aboriginal cultural heritage values for Mallee Cliffs National Park.

The Statement of Significance for this listing is as follows:

Murray Mallee Region

Mallee Cliffs National Park, together with Tarawi/Scotia, Big Desert/Wyperfeld, Murray Sunset Country, Bookmark, Ngarkat, Billiatt Conservation Park and Kulkurna, is an integral part of the Murray Mallee Region which has outstanding natural and cultural values. The region draws its name from the River Murray and from the distinctive mallee tree with its multiple stems and bulbous lignotuber which once dominated ecosystems in southern Australia from WA to NSW.

The reserves and adjoining bushland areas of the Murray Mallee region provide extensive insights into the geological and environmental processes which formed the region, and the changing relationship between people and the environment over time. These relationships are seen in the large, relatively intact areas of mallee bushland, which contain some of the least disturbed ecosystems in the southeast of the Australian continent. The survival of these areas illustrates a major shift in thinking, which started in the early 1900s, to recognise that parts of Australia's semiarid interior were important and worth conserving.

Much of the Murray Mallee Region provides tangible cultural links for Aboriginal people. Aboriginal links, which embody identity and ownership, are grounded in oral history and current Aboriginal use of Mallee country, which has always had economic and cultural significance to Aboriginal people due the high diversity of plant and animal species.

The region is recognised in an international context because it contains two UNESCO Biosphere Reserves and two Ramsar wetlands.

The continuing agricultural and pastoral uses of the surrounding areas starkly illustrate the impact of European exploration in the mid1800s and the subsequent

push to extract a living from the Mallee shrublands in the late nineteenth and early twentieth centuries

Mallee Cliffs Area

As a relatively undisturbed Aboriginal cultural landscape, the Mallee Cliffs area provides a tangible link to Aboriginal cultural knowledge, in particular the traditional view of the Paakantji and Yitha Yitha people, and has value as a place for teaching and renewing this knowledge.

Local Paakantji, Latji Latji, Muthi Muthi and Yitha Yitha people have stated that just about everything about the Mallee country is important to their community. To understand the Aboriginal heritage significance of the Mallee country people need to understand the Aboriginal point of view, the traditional view of the Paakantji, Latji Latji, Muthi Muthi and Yitha Yitha people.

Mallee Cliffs is important in the maintenance of Aboriginal cultural knowledge through activities such as Aboriginal use of culturally significant plants and animals for food, medicine and ceremonial purposes and for the manufacture of artefacts.

Of particular significance is the Mallee fowl that still breeds in the Park, using the mallee scrub with spinifex understorey as its preferred habitat. Nests were owned by local land holding groups and access was restricted to specific individuals and groups within the Aboriginal community.

Mallee Cliffs Station, established by 1866, was associated with the overland stock route between NSW and SA and was important as a point of contact between Aboriginal people and pastoralists. The marginal nature of much of the grazing however allowed only low stocking rates and consequently, limited modification of the mallee vegetation.

Mallee Cliffs National Park contains extensive areas of two important plant communities typical of the southwest NSW region. These are the Mallee scrub and the Belah Rosewood woodland. The Park also contains a number of isolated, relict plant communities which demonstrate shifts in the pattern of vegetation arising from long term environmental change.

The Mallee Cliffs area provides an important contemporary fauna refuge from human changes to the landscape of southwest NSW. The Park has significantly high species diversity including 108 species of birds, 17 mammal species, 39 reptile species, and 59 species of ants, as well as 171 native plant species from 48 families. Two species of birds and one species of mammal listed as endangered in NSW are found in the Park. These are the Mallee fowl (LEIPOA OCELLATA) which is

also considered to be vulnerable nationally, the Plains Wanderer (*PEDIONOMUS TORQUATUS*) and the Western Pygmy Possum (*CERCARTETUS CONCINNUS*). Another eight species of bird and two bats found here are considered vulnerable in NSW. They are the Shy Heathwren (*HYLACOLA CAUTA*), Purplegaped Honeyeater (*LICHENOSTOMUS CRATITIUS*); Gilbert's Whistler (*PACHYCEPHALA INORNATA*); the Chestnut Quail Thrush (*CINCLOSOMA CASTANOTUM*); Pink Cockatoo (*CACATUA LEADBEATERI*), Redtailed Black Cockatoo (*CALYPTORHYNCHUS BANKSII*); Blackbreasted Buzzard (*HAMIROSTRA MELANOSTERNON*), the Pied Honeyeater (*CERTHIONYX VARIEGATUS*), the Greater Longeared Bat (*NYCTOPHILUS TIMORIENSIS*) and the Little Pied Bat (*CHALINOLOBUS PICATUS*). Of particular interest is the confirmation of the Mallee Worm Lizard (*APRASIA INAURITA*) in the park, which is listed as vulnerable in NSW. Very few records exist for this species in the region.

Little archaeological or anthropological work has been undertaken to identify the Aboriginal cultural and archaeological values of the Park.

5.2 ABORIGINAL HERITAGE INFORMATION MANAGEMENT SYSTEM (AHIMS)

A search of the Aboriginal Heritage Information Management System or AHIMS register was undertaken for a 40 EW x 40 NS kilometre area (1600 km²) encompassing the Mallee Cliffs NP study area. **Table 5.3** below shows the grid coordinates for the AHIMS register search.

Table 5.3: Minimum and maximum grid references employed for AHIMS register search

	Minimum	Maximum
Easting	55 622000	55 662000
Northing	6190000	6230000

The AHIMS Database search shows 10 Aboriginal sites have been previously recorded within this search area. Of these 10 sites, 8 are recorded as midden sites (2 with hearths) with the remaining sites comprising a scar tree and a burial site. The distribution of previously recorded AHIMS sites is shown in **Figure 5.3**. Nearly all of the previously recorded sites (90%, n = 9) are within proximity to the Murray River. This bias is likely to result from both a preference for Aboriginal occupation within proximity to freshwater sources and developments and associated archaeological surveys. There are no previously recorded sites within the project area.

The Draft POM 2017:5 states that only one Aboriginal site, a hearth has been recorded within Mallee Cliffs National Park. This site was not revealed during the original AHIMS search (**Appendix 4**) and accordingly a second search centring on the park was undertaken to ascertain the location and status of this site. The second AHIMS search revealed the hearth

site to be AHIMS Site 47-1-0049 and located in the section of the park to the east and outside the AHIMS search boundary (See **Figure 5.3**).

The subject land is not within, either partly or wholly an area that has been declared an Aboriginal place. Results of the two AHIMS site register searches are provided in **Appendix 4**.

Figure 5.3: Distribution of previously recorded AHIMS sites within AHIMS search area.



5.3 REGIONAL ARCHAEOLOGY STUDIES

The 1998 POM for Mallee Cliffs National Park claimed that at that time no Aboriginal sites had been documented within the park. The 2017 Draft POM similarly notes that only one Aboriginal hearth site has been recorded in the park (OEH NPWS, 2017:5). Both these documents argue that as there was no permanent water or raw stone material sources in the mallee sandridge country it is likely that this area was visited less frequently by Aboriginal people in the past. This is especially in contrast to the resource rich Murray River corridor located to the south (OEH NPWS, 2017:5).

On a regional scale, it is argued that Aboriginal sites in the Mallee scrubland, which were located a considerable distance from the only permanent water source in the region – the Murray River – are typically located near non-permanent water sources such as soaks or clay pans. These sites are usually located on sand dunes and contain only terrestrial fauna and stone artefacts. In contrast, the majority of Aboriginal occupation is thought to have been confined along the Murray River corridor (NSW NPWS, 1998:20). This type of site pattern is thought to indicate the ‘seasonal’ land use of the Mallee by Aboriginal groups where they would only travel into the area following rainfall which would have filled outlying claypans. This would have allowed them to utilise food sources within this region, as well as perhaps other stone material sources (Lance, 1989:3).

The results of the AHIMS search show two previous studies have been conducted to the southwest of the study area outside the boundary of Mallee Cliffs National Park.

5.3.1 Lance, 1989

In 1989 Lance conducted an Aboriginal survey for a groundwater interception scheme aimed at preventing saline groundwater from seeping into the Murray River at a point near Paringi and Lambert Island along the Sturt Highway. The proposed location of the series of bores designed to tap and drain the saline groundwater was located approximately 8km to the southwest of Mallee Cliffs National Park. This phase of the project was focussed on surveying the location of the series of bores, but the proposal also involved the construction of an underground pipeline that would pipe the saline water to a holding pond inland. Several alternative routes for this pipeline and proposed sites for the holding pond were also investigated during this project to some extent (Lance, 1989:1).

Due to the proximity of the main study area to the Murray River it was dominated by a series of three alluvial type landforms: alluvial flats, covered with river red gum and box trees; colluvial fans covered with box and interspersed saltbush, and an escarpment up to 30m high. The area to the north of the escarpment was dominated by open Mallee eucalypt woodland (Lance, 1989:1-2).

The archaeological survey of the proposed development involved a foot survey along the section adjacent the Murray River. Along the underground pipeline routes the survey was conducted through vehicle inspection as these routes appeared to be located along current roads. Consequently, ground exposure and visibility was good during these surveys. The several holding pond locations seem to have been inspected on foot, but dense grass and scrub cover severely limited ground visibility (Lance, 1989:4).

The survey resulted in the recording of eight Aboriginal archaeological sites and isolated stone artefacts. These were all located along the escarpment and on the slopes between it and the alluvial flats (to the south of the Sturt Highway). The majority were also located in areas of disturbance. The six Aboriginal archaeological sites consisted of one shell midden, two shell middens with stone artefact scatter, two shell middens and hearths, and a large site complex (between 1-2km long) comprising scattered shell middens, artefact scatters, and hearths. The two isolated stone artefacts consisted of a silcrete core and grinding stone. All the shell midden material comprised freshwater mussels while the raw material for all flaked stone artefacts was silcrete. Outcrops of this material were likely present in the local cliffs within the study area. Grinding stones were also a common find and were used traditionally to grind grass seeds and sporocarps to create seed cakes. A pounding stone was also recorded which was likely used to remove starch from plant roots or crush tree seeds. The hearths recorded during the survey all contained baked clay balls or hearthstones. The findings of this survey were considered to be consistent with the typical pattern of Aboriginal site distribution along the Murray Valley (Lance, 1989:6-11).

Although it appears that none of these sites were located along the proposed routes of the underground pipeline or at the proposed holding tank locations during this survey, Lance (1989) assessed the proposal to have some potential to disturb similar midden materials and subsequently recommended a program of subsurface testing and monitoring.

5.3.2 Ferguson, 1991

In 1991 Ferguson conducted an archaeological survey for the next phase of the saline interception scheme. At that stage the precise location of the proposed bores and pipeline had been determined allowing more focused investigations to be undertaken. Unfortunately, it only focussed on the areas of the site complex identified by Lance (1989) through which the proposed pipeline was to traverse. In this manner, it only investigated areas to the south of the Sturt Highway in proximity to the Murray River. No further investigation of the pipeline routes through the Mallee scrub north of the highway, nor the location of the holding tank, was undertaken during this survey.

6.0 SURVEY AND RESULTS

6.1 SURVEY

Gerard Niemoeller and Tanya Erofeev of On Site CHM conducted archaeological pedestrian surveys of the proposed fence line and infrastructure site between 27 July and 1 August 2017.

The project area was inspected via a series of pedestrian transects conducted along the entire proposed fence line. This involved survey participants walking approximately 8 metres apart in parallel lines. This allowed complete coverage of the proposed 15 metre wide corridor for the fence line to be achieved. Survey of the operations base consisted of a meandering transect within the proposed project area as provided by AWC

The survey focussed on areas of exposure that could reveal archaeological materials and this methodology sometimes resulted in a meandering transect. Observations and results are discussed below.

6.2 RESULTS

A total of 41.9 kilometres of survey were conducted for the proposed fence line and operations base. The survey traversed 100% of the linear length of the proposed fence line. A summary of survey attributes recorded for this survey is shown in **Table 6.1**.

Table 6.1 - Summary of survey attributes.

Project	Total Transects length (m)	Survey Coverage (m ²) (based on transect width of 15 metres)
Fence line	40,500	607,500
Operations Base	1,400	21,000

This extensive survey did not locate any Aboriginal objects or sites within the project area. No specific areas of Potential Archaeological Deposit (PAD) were identified or discernible. Indeed the absence and scarcity of stone across the project area was notable in itself.

Visibility across the survey area was variable and ranged between 10 – 100%. Due to the sparse nature of arid lands vegetation, average visibility was generally high and between 40%-60%.

A single historic site was located along the northern most boundary of the fence line. The location of this site is shown in **Figures 6.1** and **6.2** and described further in **Section 6.3**. A number of historic elements, such as telegraph insulators on wooden poles, were also noted along Centre Fire trail. These elements are however outside the proposed fence line area and will not be impacted by the proposed works.

Figure 6.1: Location of historic site HS1 in relation to project area (orange outline).

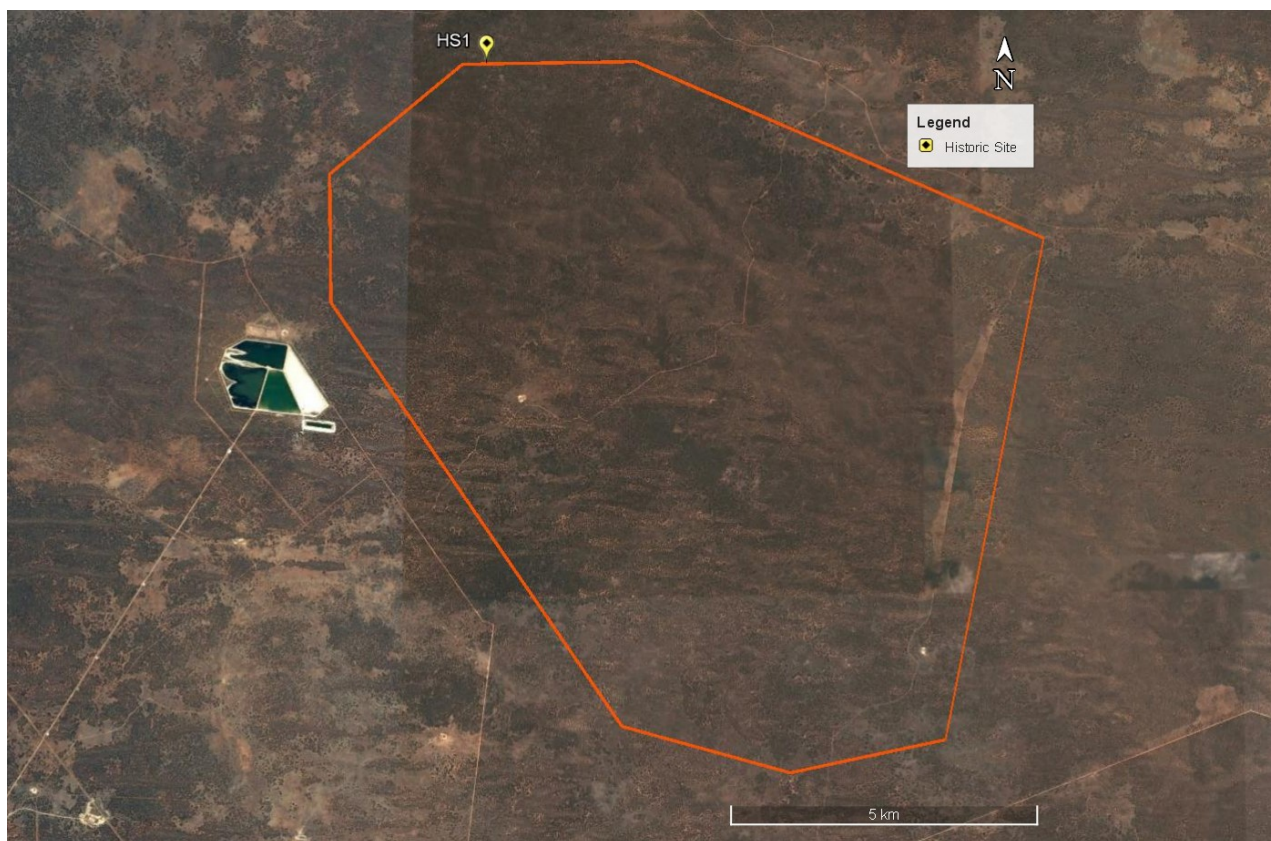
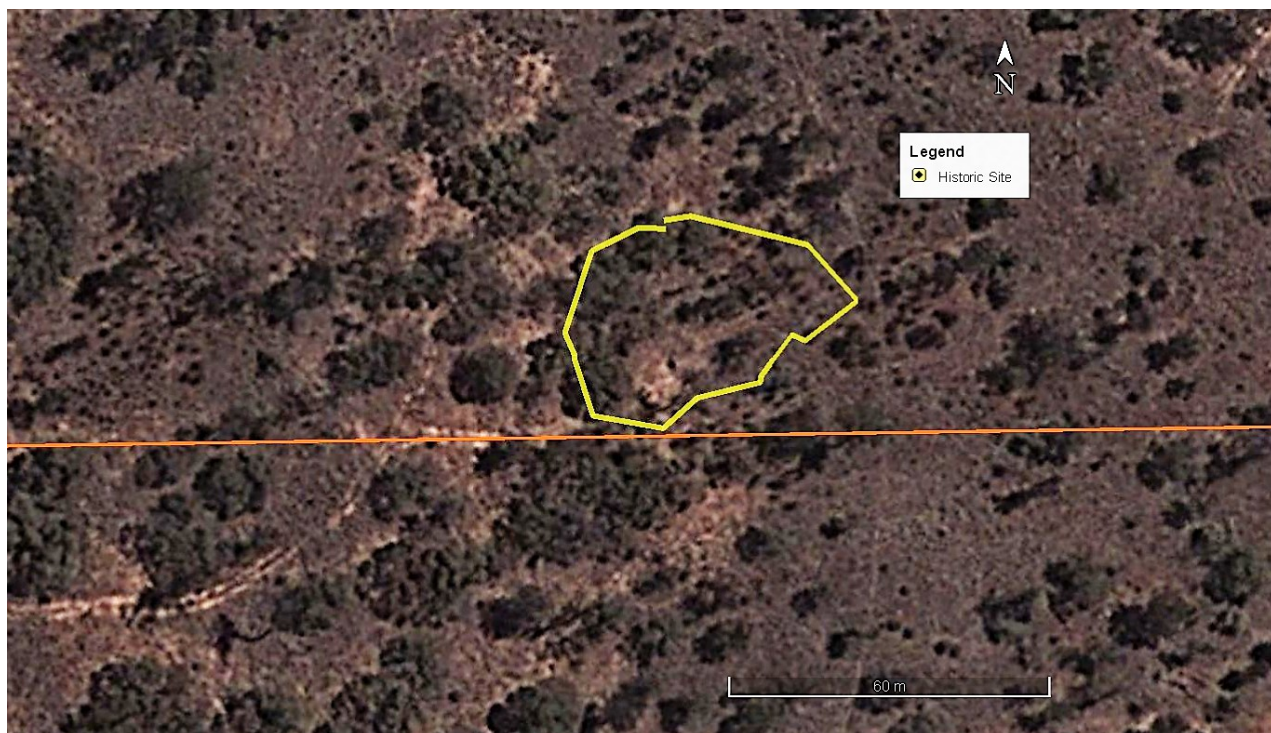


Figure 6.2: Close up of locality view of historic site HS1 in relation to project area (orange outline).



6.3 SITE DESCRIPTIONS

6.3.1 HS 1

Grid Reference: 54 639110E, 6216423N (GDA 94)

Site Type: Historic artefact scatter

Scatter of historic artefacts including tin cans, longneck brown glass beer bottles, small medicine and condiment bottles and most notably a 1963 Australian penny. This site is most likely the remains of a stockman camp.

Besides the penny, the most diagnostic item would be that of the beer bottles. Numerous specimens were embossed with MB CV (Manufactures Bottle Company of Victoria) on the shoulder (see **Plate 6.1**) and the inscription 'THIS BOTTLE ALWAYS REMAINS THE PROPERTY OF MANUFACTURER OF VICTORIA'. A large C was also noted on some bases suggesting that they were manufactured at Carlton, Victoria. This manufacture appears to have been operation during the early to mid-twentieth century.

Plate 6.1: Selection of historic artefacts at site.



Plate 6.2: Close up of 1963 penny.



Preliminary Assessment of Significance

This site is likely associated with the early to mid-twentieth century pastoral activities on Mallee Cliffs Station and is probably a transient stockman's camp. It is likely that many similar short-term camps were used across the pastoral station during its period of occupation.

It is also possible that this site was associated with a bore as many were noted to have been located across the former station. However, all but one was demolished by NPWS in the 1990s. Therefore, this site could be the demolished remains of a stockman's camp associated with a bore, which seems likely considering the need for water at any occupation site in this semi-arid environment. The fact that an old trail appears to lead to the site on aerial photography (**Figure 6.2**) may confirm this interpretation.

As no evidence of structural remains was noted during the survey of this site it seems unlikely that it would be assessed to be of local or state heritage significance against the NSW heritage significance criteria and, thus, considered an archaeological *relic* under the Wentworth LEP 2011 or NSW Heritage Act 1977. However, an archaeological assessment including a full significance assessment would be required to be entirely certain of this fact.

7.0 DISCUSSION

The archaeological review in **Section 5.0** indicated that the majority of Aboriginal occupation and archaeological evidence was confined along the Murray River corridor. Aboriginal sites in the Mallee scrubland located a considerable distance from the only permanent water source in the region – the Murray River – are typically located near non-permanent water sources such as soaks or clay pans. This type of site pattern was suggested to indicate the ‘seasonal’ land use of the Mallee by Aboriginal groups where they would only travel into the area following rainfall which would have filled outlying claypans.

The Draft POM for Mallee Cliffs National Park (OEH NPWS, 2017:5) notes that only one Aboriginal hearth site has been recorded within the park. The Draft POM suggests that with no permanent water and no source of rock, it is possible that the mallee sandridge country was visited less frequently by Aboriginal people in the past, when compared with the resource-rich Murray River corridor further to the south (OEH NPWS, 2017:5).

Despite an extensive survey within the Mallee Cliffs National Park as part of this project, no traces of Aboriginal occupation evidence were located. While the absence of Aboriginal occupation evidence may, or may not, correlate with the absence of non-permanent water sources, the results of this study certainly do not argue against the current archaeological propositions.

7.1 DUE DILIGENCE DISCUSSION

The requirement for this due diligence assessment was outlined in **Section 3.1** and is triggered by:

- The proposed works will disturb the ground surface (on land that is not disturbed land)
- The activity or proposal occurs in areas where certain landscape features may indicate the presence of Aboriginal objects

These factors in relation to the proposed project are considered below.

Step 2b of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects* (2010:12) requires the consideration of whether the project area contains landscape features that indicate the *likely* existence of Aboriginal objects and is on land that is not *disturbed*.

Likely and *disturbed* are the key concepts to understand in interpreting the results of this assessment and against the policy. These concepts and the project area are discussed below.

Disturbed land

The Due Diligence Code (2010:18) defines *disturbed land* as land that has been the subject of a human activity that has changed the land’s surface, being changes that remain clear and

observable. Examples of disturbed land 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 (Due Diligence Code 2010:18).

The project area is recognised for its conservation values and relative to much of the surrounding country, has a good level of integrity. The subject land is not considered *disturbed land* within the meaning of the Code.

Likely

Likely is not defined within the Due Diligence Code but is defined by the Merriam-Webster Dictionary “as having a high probability of occurring or being true: very probable”.

The likelihood or probability generally equates to what is also discussed as the degree of archaeological sensitivity or potential. An index of likelihood has been devised and is presented below.

Archaeological Sensitivity	Likelihood or probability
High	Very likely
Moderate to High	Likely
Moderate	Maybe likely
Low to Moderate	Unlikely
Low	Very unlikely

For the purposes of interpreting the Due Diligence Code then areas of ‘moderate to high’ and ‘high’ archaeological sensitivity/potential are those areas considered *likely* to contain Aboriginal objects.

The archaeological review in **Section 5.0** indicates that the majority of the Aboriginal archaeological evidence is located along the Murray River corridor, with Aboriginal sites in the Mallee scrubland typically being located near non-permanent water sources such as soaks or clay pans.

On the basis that this survey did not identify any Aboriginal archaeological evidence or encounter any non-permanent water sources, the entire project area is assessed as having a low potential to contain Aboriginal objects (*very unlikely*).

AWC has since added internal access tracks to the project scope (See **Figure 10.3**). A desktop review of the Mallee Cliffs National parks shows no non-permanent water sources or drainage lines where the archaeological sensitivity or potential may be higher. Therefore, unless any of the proposed internal access tracks traverse near such a water source, these areas would also be considered to have a low potential to contain Aboriginal objects (*very unlikely*).

8.0 CONCLUSIONS AND MANAGEMENT RECOMMENDATIONS

8.1 CONCLUSIONS

AWC have engaged On Site CHM to undertake and prepare an Aboriginal heritage assessment consistent with the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects* and provide advice about the potential of the proposal to *harm* Aboriginal places and objects pursuant to the *National Parks and Wildlife Act 1974*.

This assessment has concluded that:

- The project area within the Mallee Cliffs National Park has a low potential to contain Aboriginal places or objects (*very unlikely*).
- The potential for Aboriginal places or objects will be higher near non-permanent water sources such as soaks or clay pans.
- No Aboriginal sites or objects will be *harmed* by proposed works.

8.2 MANAGEMENT RECOMMENDATIONS

The following management recommendations are based on the above conclusions and are in accordance with Step 4 of the *Due Diligence Code* (2010:13). Step 4 states that where either desktop assessment or visual inspection indicates that there are (or are likely to be) Aboriginal objects in the area of the proposed activity, more detailed investigation and impact assessment will be required.

Where the desktop assessment or visual inspection does not indicate that there are (or are likely to be) Aboriginal objects, the proposed activity can proceed with caution without an AHIP application.

On the basis of this assessment for Aboriginal objects and their protection under the *NSW National Parks and Wildlife Act* it is recommended that:

1. This proposal does not require any further assessment relevant to Aboriginal sites or objects protected under the *NSW National Parks and Wildlife Act*. The project area has been subject to intensive archaeological survey and assessed as having a low potential, (or *very unlikely*) to contain Aboriginal sites or objects. No AHIP or supporting ACHA is required to undertake the proposed works.
2. Planning for the internal access tracks should identify and avoid any discrete non-permanent water sources such as soaks or clay pans not identifiable through desktop assessment by at least 200 metres. If this is not possible the particular internal access tracks should be subject to further archaeological survey and assessment.

3. AWC and their contractors should be aware that in the event that Aboriginal objects are discovered during the proposed works, all works in that area should cease and the AWC should contact the Office of Environment and Heritage, an Aboriginal community representative or a qualified archaeologist to seek some determination of the discovery and how to proceed.
4. In the unlikely event that skeletal remains are discovered during earthworks, all works should cease and protocols consistent with Requirement 25 in the *Code of Practise for Archaeological Investigation of Aboriginal Objects in NSW* be implemented.

While the undertaking of this due diligence assessment acts as a defence against harming or disturbing Aboriginal objects without an AHIP, the undertaking of this assessment alone does not negate the need for an AHIP should Aboriginal objects be discovered or disturbed.

Investigations for an AHIP require preparation of an ACHA and must also be supported by Aboriginal consultation in accordance with the process outlined in the *Aboriginal cultural heritage consultation requirements for proponents*.

With regard to HS1 and the requirements of the Wentworth LEP 2011 and the *NSW Heritage Act 1977*, the preliminary assessment has indicated that this site would be unlikely to be assessed to be of local or state heritage significance against the NSW heritage significance criteria and, thus, considered an archaeological *relic* under the Wentworth LEP 2011 or NSW Heritage Act 1977. However, a historic archaeological assessment, including a full significance assessment would be required to be entirely certain of this fact.

In the absence of such an assessment, it is recommended that:

5. The proposed fence line be shifted 20 metres to the south to avoid this historic site
6. AWC and their contractors should be aware that in the event that historic artefacts or *relics* are discovered during the proposed works, all works in that area should cease and the AWC should contact the Heritage Division, Office of Environment and Heritage as delegates of the NSW Heritage Council or a qualified archaeologist to seek some determination of the discovery and how to proceed. This is to ensure that AMC meets s.146 of the NSW Heritage Act 1977 'Notification of Discovery of Relic'.

9.0 REFERENCES

Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales. NSW Office of Environment and Heritage policy document.

Due Diligence Code of Practice for the Protection of Aboriginal Objects. NSW 2010. NSW Office of Environment and Heritage policy document

EnviroKey 2017. Review of Environmental Factors: Proposed construction and operation of conservation fencing and associated infrastructure in Mallee Cliffs National Park. A report prepared by EnviroKey for Australian Wildlife Conservancy on behalf of NSW Office of Environment & Heritage

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NSW NPWS. 1998. *Mallee Cliffs National Park Plan of Management*. Available online @ <http://www.environment.nsw.gov.au/parkmanagement/ParkManagementPlans.htm>

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APPENDIX 1

Dareton Local Aboriginal Land Council
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4/38 Tapio Street, NSW 2717
daretonlandcouncil@bigpond.com

PO Box 574 NAROOMA NSW 2546
gerard@onsitechm.com.au
Ph: 0414441896
www.onsitechm.com.au
ABN: 48 089 066 744

Our Ref: A061

7 April 2017

Aboriginal Heritage Due Diligence Assessment – Mallee Cliffs National Parks NSW.

Dear Dareton Local Aboriginal Land Council,

The NSW Office of Environment and Heritage have engaged Australian Wildlife Conservancy (AWC) to conduct a project that reintroduces extinct and threatened species into Mallee Cliffs National Park. This will be achieved through constructing and establishing a large fenced area within the Mallee Cliffs National Park and the development of an operations base to house staff. AWC will also provide land management and science activities for at across the site.

AWC propose to establish a fenced enclosure within the Mallee Cliffs National Park that will eventually exclude feral animals, provide habitat for animals and the development of a base that would provide accommodation and working space for up to 5 staff including houses, sheds and power generation. The establishment of this fenced area will require a cleared fence line of approximately 12 – 15 meters (subject to some local variances) for approximately 36 kilometres. The project area is located approximately 23 kilometres east of Buronga and within the Wentworth Local Government Area (LGA).

In order to ensure that this proposal does not harm Aboriginal sites or objects, AWC has engaged On Site Cultural Heritage Management Pty Ltd (On Site CHM) to undertake an Aboriginal Heritage Due Diligence Assessment for the proposal to meet the requirement of the *NSW Parks and Wildlife Act 1974*. This assessment is being conducted as part of the Review of Environmental Factors (REF) and in accordance with the *Environmental Planning and Assessment Act* also being conducted for the project.

I have included a link to the AWC website describing further the project <http://www.australianwildlife.org/sanctuaries/mallee-cliffs.aspx> and maps showing the location of the proposed project.

The project area falls within the boundaries of the Dareton LALC. As part of the Due Diligence assessment AWC wish to consult with the Aboriginal Traditional Owners and Custodians of the lands within the Mallee Cliffs National Park about any culturally significant areas or known Aboriginal sites within the area.

AWC and On Site CHM would also welcome participation in the survey from Aboriginal Traditional Owners and Custodians with connection to this Country. The survey is scheduled to occur in April and will involve walking the entire proposed perimeter (approximately 8 kilometres per day) and will take approximately 4 to 5 days.

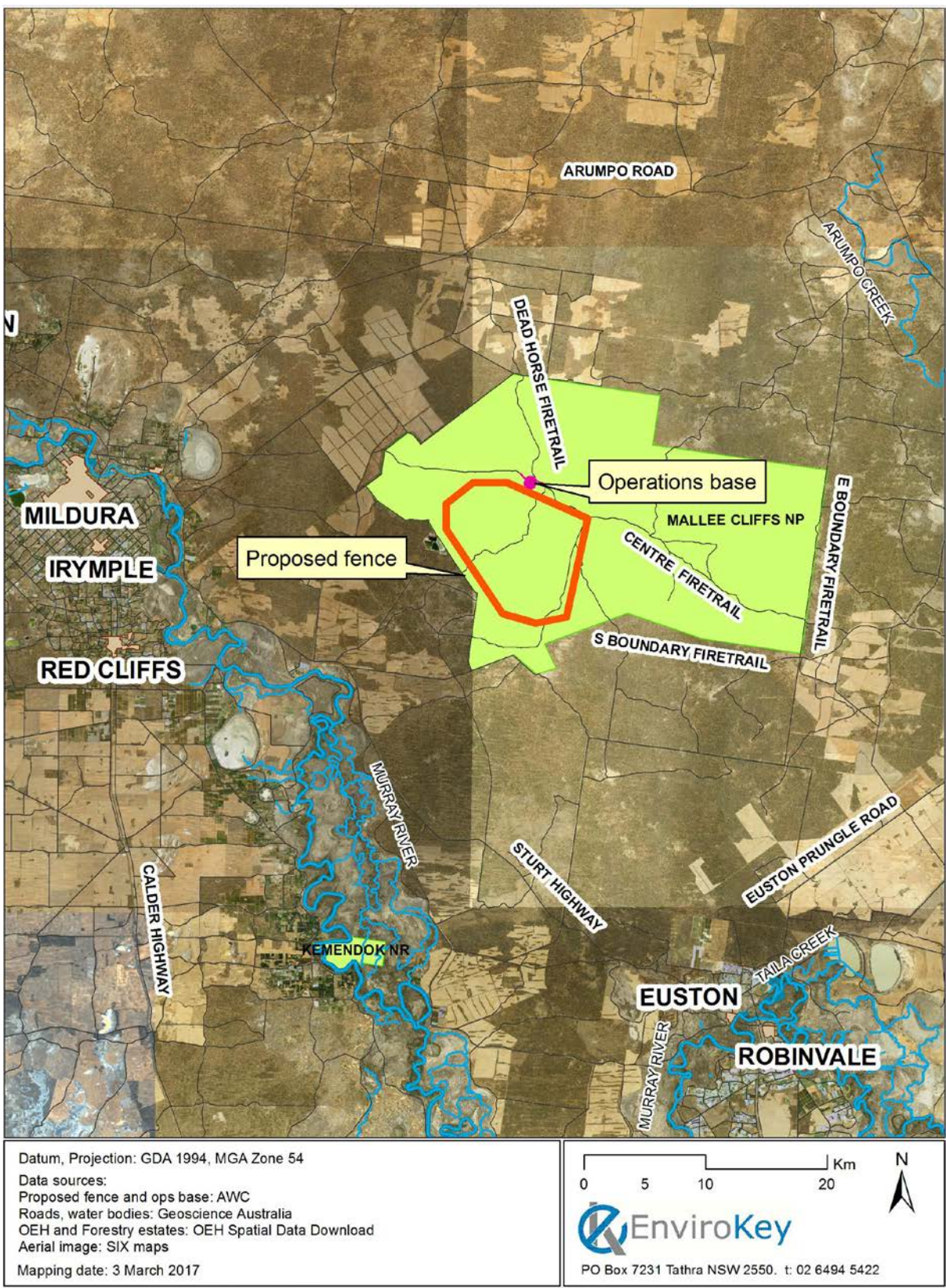
If you would like to discuss this project or the survey or if you would like further information, please contact Gerard Niemoeller of On Site Cultural Heritage Management on 0414441896.

Regards

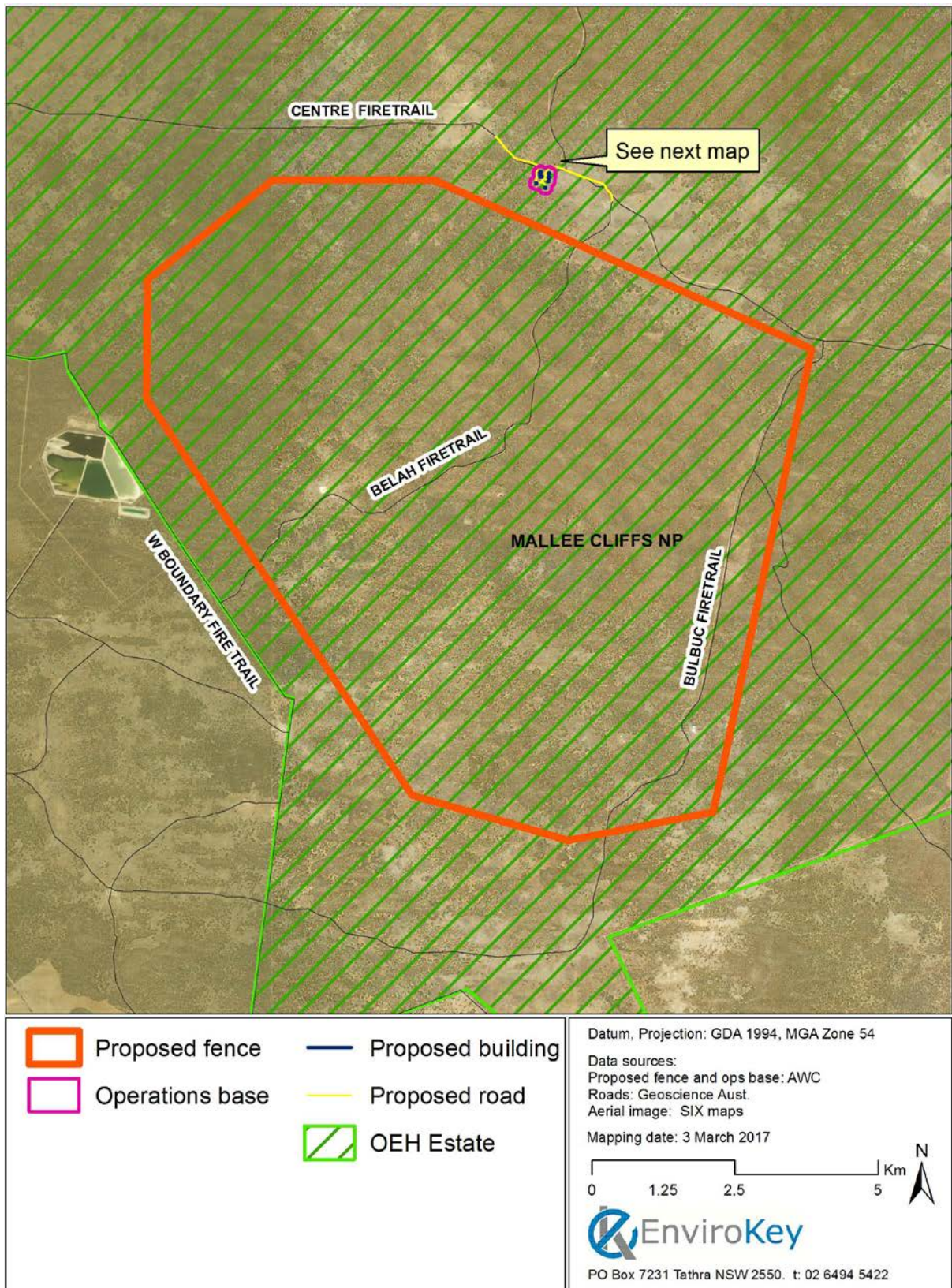
A handwritten signature in blue ink, appearing to read 'Gerard Niemoeller', written in a cursive style.

Gerard Niemoeller
Principal Heritage Consultant

Map 1: Regional setting of the Mallee Cliffs study area (from the Draft REF: Enviro Key 2017).



Map 2: Location of the proposal (conservation fencing) from the Draft REF: Enviro Key 2017).



APPENDIX 2



Overlap Analysis Report

Disclaimer

This information product has been created to assist in understanding the spatial characteristics and relationships of this native title matter and is intended as a guide only. Spatial data used has been sourced from the relevant custodians in each jurisdiction, and/or the Tribunal, and is referenced to the GDA94 datum.

While the Native Title Registrar (**Registrar**) has exercised due care in ensuring the accuracy of the information provided, it is provided for general information only and on the understanding that neither the Native Title Registrar nor the Commonwealth of Australia (Commonwealth) is providing professional advice. Appropriate professional advice relevant to your circumstances should be sought rather than relying on the information provided. In addition, you must exercise your own judgment and carefully evaluate the information provided for accuracy, currency, completeness and relevance for the purpose for which it is to be used.

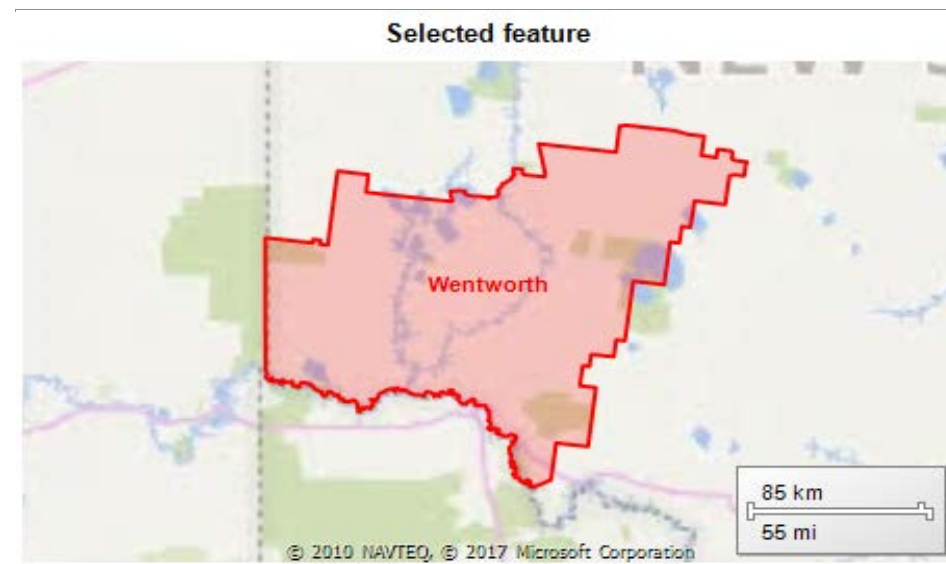
As the interpretation of any particular native title determination area provided is based upon the best information available to the Registrar at the time of creation, any effective analysis must include reference to **both** the relevant determination of native title made by the Federal Court of Australia and the entry made in relation to that determination on the National Native Title Register maintained by the Registrar.

Please note:

- Calculated areas may not be the same as the legal area of a parcel.
- Where shown, NNTT Tenure Class for a non freehold parcel refers to a tenure grouping derived for the purposes of the Tribunal, and does not necessarily represent the jurisdictional tenure type.
- Overlap results are returned only for the currently active jurisdiction.

Selected feature

Name	Wentworth
Full name	Wentworth Shire Council
As at	1/08/2016
Calculated area SqKm	26,246.1819



Overlap details

Schedule of Native Title Determination Applications

Overlap Tribunal ID	Name	FC No	Date Lodged	RT Status	Area sq km(calculated)	Overlap Area sq km (calculated)
NC1997/032	Barkandji Traditional Owners #8	NSD6084/1998	8/10/1997	Currently identified for registration decision	687.6018	6.2761
NC2014/002	Muthi Muthi People	NSD1248/2014	28/11/2014	Not accepted for registration	30,098.8102	40.3357

Register of Native Title Claims

Overlap Tribunal ID	Name	FC No	Date Lodged	RT Status	Combined	Area sq km(calculated)	Overlap Area sq km (calculated)
NC1997/032	Barkandji Traditional Owners #8	NSD6084/1998	8/10/1997	Currently identified for Reg. Decision	N	687.6018	6.2761

Native Title Determinations

Overlap Tribunal ID	Name	FC No	Determination Status	Related NTDA	Area sq km(calculated)	Overlap Area sq km (calculated)
NCD2015/001	Barkandji Traditional Owners #8 (Part A)	NSD6084/1998	In effect - Finalised	NC1997/032	712.8118	128.5959
NPD2004/001	Barkandji (Paakantyi) People #11	NSD6167/1998	In effect - Finalised	NP1997/004	146.7495	146.7495

Native Title Determination Outcomes

Overlap Tribunal ID	Name	Federal Court number	Determined outcome	Determination Type	Determination area Albers	Selected feature area sq km(calculated)	Overlap Area sq km (calculated)	% selected feature covered by outcome
NCD2015/001	Barkandji Traditional Owners #8 (Part A)	NSD6084/1998	Native title extinguished* (outside the determination area)	In effect - Finalised	712.8118	26246.1819	24,934.2232	95.00 %
NCD2015/001	Barkandji Traditional Owners #8 (Part A)	NSD6084/1998	Native title exists (non-exclusive)	In effect - Finalised	712.8118	26246.1819	128.4017	0.49 %
NCD2015/001	Barkandji Traditional Owners #8 (Part A)	NSD6084/1998	Native title exists (exclusive)	In effect - Finalised	712.8118	26246.1819	0.1942	0.00 %
NPD2004/001	Barkandji (Paakantyi) People #11	NSD6167/1998	Native title does not exist	In effect - Finalised	146.7495	26246.1819	146.7495	0.56 %

* Note: Outcomes identified as "Native title extinguished" are generally outside the determination area. Refer to the determination document for more information.

Indigenous Land Use Agreements

No overlap found

RATSIB areas

Name	Organisation	RATSIB Status	Area sq km(calculated)	Overlap Area sq km (calculated)
New South Wales	NTSCORP Limited	NTSP	1,723,577.6107	26,241.2781

APPENDIX 3

Place Details

[Send Feedback](#)

Murray Mallee - Mallee Cliffs National Park, Gol Gol, NSW, Australia

Photographs	None
List	Register of the National Estate (Non-statutory archive)
Class	Natural
Legal Status	Registered (25/08/1981)
Place ID	690
Place File No	1/05/360/0003

Statement of Significance

Murray Mallee Region

Mallee Cliffs National Park, together with Tarawi/Scotia, Big Desert/Wyperfeld, Murray Sunset Country, Bookmark, Ngarkat, Billiatt Conservation Park and Kulkurna, is an integral part of the Murray Mallee Region which has outstanding natural and cultural values. The region draws its name from the River Murray and from the distinctive mallee tree with its multiple stems and bulbous lignotuber which once dominated ecosystems in southern Australia from WA to NSW.

The reserves and adjoining bushland areas of the Murray Mallee region provide extensive insights into the geological and environmental processes which formed the region, and the changing relationship between people and the environment over time. These relationships are seen in the large, relatively intact areas of mallee bushland, which contain some of the least disturbed ecosystems in the south-east of the Australian continent. The survival of these areas illustrates a major shift in thinking, which started in the early 1900s, to recognise that parts of Australia's semi-arid interior were important and worth conserving.

Much of the Murray Mallee Region provides tangible cultural links for Aboriginal people. Aboriginal links, which embody identity and ownership, are grounded in oral history and current Aboriginal use of Mallee country, which has always had economic and cultural significance to Aboriginal people due the high diversity of plant and animal species. The region is recognised in an international context because it contains two UNESCO Biosphere Reserves and two Ramsar wetlands.

The continuing agricultural and pastoral uses of the surrounding areas starkly illustrate the impact of European exploration in the mid-1800s and the subsequent push to extract a living from the Mallee shrublands in the late nineteenth and early twentieth centuries.

Mallee Cliffs Area

As a relatively undisturbed Aboriginal cultural landscape, the Mallee Cliffs area provides a tangible link to Aboriginal cultural knowledge, in particular the traditional view of the Paakantji and Yitha Yitha people, and has value as a place for teaching and renewing this knowledge.

Local Paakantji, Latji Latji, Muthi Muthi and Yitha Yitha people have stated that just about everything about the Mallee country is important to their community. To understand the Aboriginal heritage significance of the Mallee country people need to understand the Aboriginal point of view, the traditional view of the Paakantji, Latji Latji, Muthi Muthi and Yitha Yitha people.

Mallee Cliffs is important in the maintenance of Aboriginal cultural knowledge through activities such as Aboriginal use of culturally significant plants and animals for food, medicine and ceremonial purposes and for the manufacture of artefacts.

Of particular significance is the Mallee fowl that still breeds in the Park, using the mallee scrub with spinifex understorey as its preferred habitat. Nests were owned by local land holding groups and access was restricted to specific individuals and groups within the Aboriginal community.

Mallee Cliffs Station, established by 1866, was associated with the overland stock route between NSW and SA and was important as a point of contact between Aboriginal people and pastoralists. The marginal nature of much of the grazing however allowed only low stocking rates and consequently, limited modification of the mallee vegetation.

[Historic themes: 3.32 Looking for overland stock routes; 3.5 Developing primary production]

Mallee Cliffs National Park contains extensive areas of two important plant communities typical of the south-west NSW region. These are the Mallee scrub and the Belah-Rosewood woodland. The Park also contains a number of isolated, relict plant communities which demonstrate shifts in the pattern of vegetation arising from long term environmental change.

The Mallee Cliffs area provides an important contemporary fauna refuge from human changes to the landscape of south-west NSW. The Park has significantly high species diversity including 108 species of birds, 17 mammal species, 39 reptile species, and 59 species of ants, as well as 171 native plant species from 48 families. Two species of birds and one species of mammal listed as endangered in NSW are found in the Park. These are the Mallee fowl (*LEIPOA OCELLATA*) which is also considered to be vulnerable nationally, the Plains Wanderer (*PEDIONOMUS TORQUATUS*) and the Western Pygmy Possum (*CERCARTETUS CONCINNUS*). Another eight species of bird and two bats found here are considered vulnerable in NSW. They are the Shy Heathwren (*HYLACOLA CAUTA*), Purple-gaped Honeyeater (*LICHENOSTOMUS CRATITIUS*); Gilbert's Whistler (*PACHYCEPHALA INORNATA*); the Chestnut Quail Thrush (*CINCLOSOMA CASTANOTUM*); Pink Cockatoo (*CACATUA LEADBEATERI*), Red-tailed Black Cockatoo (*CALYPTORHYNCHUS BANKSII*); Black-breasted Buzzard (*HAMIROSTRA MELANOSTERNON*), the Pied Honeyeater (*CERTHIONYX VARIEGATUS*), the Greater Long-eared Bat (*NYCTOPHILUS TIMORIENSIS*) and the Little Pied Bat (*CHALINOLOBUS PICATUS*). Of particular interest is the confirmation of the Mallee Worm Lizard (*APRASIA INAURITA*) in the park, which is listed as vulnerable in NSW. Very few records exist for this species in the region.

Little archaeological or anthropological work has been undertaken to identify the Aboriginal cultural and archaeological values of the Park.

Official Values Not Available

Description

Context:

The Australia wide Mallee Belt, which extends from southern NSW through SA and Victoria into the Esperance Lands of Western Australia, is characterised by dune systems formed in the Late Holocene period and was stabilised by mallee vegetation about 6,000 years ago. Over half the remaining mallee areas in Victoria, South Australia and Western Australia have been cleared for agriculture.

The Murray Mallee area straddles the common borders of South Australia, Victoria and New South Wales. It comprises large expanses of natural mallee vegetation in the Big Desert/Wyperfeld, Murray Sunset Country, Billiatt, Ngarkat, Bookmark, Kulcurna, Mallee Cliffs and Tarawi/Scotia areas. The boundaries of the Murray Mallee area have been determined by pastoral grazing and clearing for agriculture.

The Murray Mallee has been a hunting ground for local Aboriginal people for thousands of years. Aboriginal management through the cultural practices of patch burning with low intensity fires contributed to the maintenance of the biodiversity of the Mallee country. Despite the absence of permanent surface water, Aboriginal people's profound knowledge of the Mallee country enabled them to develop a distinctive lifestyle in this semi-arid environment. Aboriginal links to the Mallee country, which embody identity and ownership, are maintained through oral history and Aboriginal use of the Mallee country.

The Mallee Cliffs National Park is comprised mostly of remnant land from the former Mallee Cliffs Station with part of the former Tapalin Pastoral Holding (now Western Lands Lease 3175) to the east.

Background

Prior to European pastoral use of the Mallee Cliffs National are Aboriginal people lived on, and used, the land.

Ethno historical records document the key role Aboriginal labour played in the expansion of the pastoral industry in the Scotia Mallee country. Aboriginal people working on stations maintained their physical connection to country by either choosing to work on stations in their family territories or leaving stations periodically to go back to country. Aboriginal elders today remember how their families liked living out in the Mallee as everything was clean and healthy and they could earn a living from rabbit trapping and station work and get lots of bushtucker. In the past Aboriginal people earned a livelihood at Mallee Cliffs Station from activities such as timber cutting (Ralph Haradine & family, Arthur Budda Kirby, Kevin Pearce).

Mallee Cliffs Station was established by McFarlane and McDonald prior to 1866 in the Darling District of NSW and originally comprised 20,480 acres. Land in the region was effectively controlled by leasehold properties that held river frontages on the Murray River and Mallee Cliffs Station occupied a strategic position on the river opposite the future site of Mildura. The station was connected to the villages of Euston and Gol Gol by a travelling stock reserve linking New South Wales and South Australia.

Under the 1884 Land Act, the New South Wales State Government attempted to break up large pastoral holdings and as a result both Tapalin property and Mallee Cliffs Station were subdivided. By 1889 both Mallee Cliffs Station and

Tapalín were owned by the Commercial Bank of South Australia, suggesting that grazing was marginal at best. The financial crisis of the 1890s resulted in many stations being repossessed by mortgage lenders with only 110 of the 300 stations in the Western lands Division being privately owned. According to a state government inquiry this was attributed to the low rainfall and frequent periods of drought. In 1901 the State government passed the Western Land Acts to further break up large pastoral leasehold properties in the region. This had the effect of reducing rents at the same time reducing sheep carrying capacity and the impact of grazing on the mallee vegetation.

Mallee Cliffs Station existed up until 1929, but is no longer associated with the reserve. The foundations of buildings recorded near Homestead tank, in addition to a meathouse, appear to be evidence of a later phase of occupation (after 1929), and probably post war.

The Mallee Cliffs National Park was dedicated in 1977 for its regionally significant mallee vegetation and as an important wildlife refuge in western NSW. Since gazetted as a National Park, water tanks have been progressively decommissioned by the NPWS to control feral animals.

Physical Description

The Mallee Cliffs area lies in the south-west corner of the Murray Basin and consists of Quaternary deposits of low aeolian sand dunes and sand plains. The soils of the Park are typically sandy solonized brown loams and calcareous earths overlying sandy clays. The climate is cool semi-arid, with temperatures ranging from a mean daily maximum in January of 33.2C to the daily minimum in July of 4.5C. Frosts are common in the winter months. The Park is typically flat to slightly undulating country covered with mallee (*EUCALYPTUS* spp.) and belah (*CASUARINA PAUPER*) woodland and some open areas of forbs and grasses.

Mallee Cliffs retains evidence of the pattern of land holding which developed following the survey of pastoral runs during the 1860s, overlaid by changes in property boundaries brought about by new legislation in 1884 and 1901. The external boundaries of the reserve area largely reflect the pattern of paddocks recorded in 1929. The major tracks continue to illustrate the history of pastoral use including Centre Track, Belah Track, Dead Horse Track, Bulbuc Road, Butchers Track, Homestead Track and Pine Tank Track. The area originally included 17 recorded ground tanks. Only Pine Tank has been retained in use as an aid to management of the Park.

A total of 213 vegetation species from 50 families, including 42 exotics, have been identified in the Park. The Park contains flora and fauna of cultural and social significance to Aboriginal people. Four main vegetation communities cover 99% of the Park. These are:

1. Yorrell (*E. GRACILIS*)- white mallee (*E. DUMOSA*)-red mallee (*E. SOCIALIS*) open scrub: found on sandy loams and solonised brown soils of the calcareous sandplains. This is the most extensive plant community in the park, and is characterised by a diverse understorey which includes silver cassia (*SENNA ARTEMISIOIDES*), twin-leaf (*ZYGOPHYLLUM* spp.), common emu-bush (*EREMOPHILA GLABRA*) and comb grevillea (*GREVILLEA HUEGELII*).
2. Yorrell-white mallee-red mallee open scrub with rough spinifex (*TRIODIA SCARIOSA*) understorey: occurs on low dune ridges where shallow sands underlie sandy clays. This is the preferred habitat of the nationally vulnerable Mallee fowl. Aboriginal cultural practices helped to ensure the sustainable use of Mallee fowl and Mallee fowl eggs through culturally sanctioned restrictions maintained by clan ownership of nests and eggs.
3. Belah low woodland/ open woodland: this community occurs on calcareous plains of loamy solonised brown soils between the dunes and typically contains rosewood (*ALECTRYON OLEIFOLIUS* ssp. *CANESCENS*) and scattered white cypress-pine (*CALLITRIS GLAUCOPHYLLA*).
4. Herbland and open herbland: this vegetation type covers approximately 10% of the park and is thought to be a degraded community that has resulted from grazing especially around major watering points.

The Mallee Cliffs National Park supports 164 species of vertebrate fauna, including the very common Western Grey Kangaroo (*MACROPUS FULIGINOSUS*) and the Red Kangaroo (*M. RUFUS*).

Arthropods found in the Park include 59 species of ants as well as many butterflies and moths, sucking insects, bees, wasps, sawflies, spiders and scorpions.

History Not Available

Condition and Integrity

The Mallee Cliffs National Park has suffered in the past from over-grazing and bushfire. Today, though regenerating, the Park is still threatened by the presence of feral animals, infestation of weeds and fire. There is currently a National Parks and Wildlife Service Draft Plan of Management (1997) in operation.

Local Aboriginal people want plants and animals of Aboriginal social and cultural significance in the Park to be managed to ensure their long-term viability. They are particularly concerned about threats from high intensity fires, cattle and feral animals and have suggested that Aboriginal people should be involved in the management of the Park.

Aboriginal people are concerned about the disappearance or lack of regeneration of species such as mulga and native pine in the area, and the diseases affecting the viability of other species such as needlewood. Aboriginal people expressed the view that a study is needed to determine the factors involved in the loss of species, the lack of regeneration of species and diseases in certain species. Aboriginal people have suggested that elders should be employed as they have information needed for the study, and young people should be employed so this information can be handed down.

Work is required to identify the cultural resources of the Park so that they can be managed effectively.

Location

About 57,969ha, 20km east of Gol Gol, comprising Mallee Cliffs National Park, Noo44.

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Local Aboriginal community members interviewed for the Indigenous Heritage, Aboriginal community values assessment:

Paakantyi Elders:

Roddy Smith (Mitchell family) - Dareton
Noel Johnson (Johnson -Whyman families) - Wentworth
Shelia Kirby (Lawson family) - Wentworth
Renie Mitchell (Johnson family) - Dareton
Ray Lawson - Dareton

Euston and Robinvale community members:

Darcy Pettit - Robinvale
Ralph Haradine and family -Euston
Arthur (Budda) Kirby - Euston
Kevin Pearce - Robinvale

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APPENDIX 4

The content of this appendix has been removed to ensure the location of Aboriginal Heritage sites remains confidential.