

Aboriginal Cultural Heritage Due Diligence Assessment

for

Proposed Solar farm

19 Murray Street, Hay, NSW 2711

Prepared for

Green Gold Energy

Version 1

19/11/21

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Study Area Address

19 Murray Street, Hay, NSW 2711

Local Government Area

Hay Shire Council

Revision / Version #

19/11/21

Primary Authors

Damian Wall

Red-Gum Sign-off



Damian Wall

Executive Summary

Red-Gum Environmental Consulting Pty Ltd has been commissioned by Green Gold Energy to undertake an Aboriginal Cultural Heritage Due Diligence Assessment (ACHDDA) for a proposed Solar farm at 19 Murray Street, Hay, NSW 2711.

Previous archaeological studies within the region have found that land overlooking fresh water sources have the potential to contain Aboriginal objects or Aboriginal places, which could include, the Murrumbidgee River, which is in close proximity to the development site.

A survey of the study area was undertaken on the Wednesday 10th November 2021 by Damian Wall of Red-Gum Environmental Consulting Pty Ltd. During the site survey, areas of previous disturbance were noted and recorded. Areas of ground surface exposure were targeted in order to identify any Aboriginal objects within the study area. No previously unrecorded sites or objects were located during the survey.

The assessment considered the perceived impacts associated with the proposal and did not identify any areas of archaeological potential that are likely to be harmed within the study area. The Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010) (due diligence code) provides a flowchart with the steps of the due diligence process outlined. This flowchart is provided in **Appendix A** in order to demonstrate that each step of the process has been addressed.

The study area typically exhibited moderate visibility and exposure without revealing any apparent Aboriginal objects. No (zero) Aboriginal cultural heritage objects were identified within the study area. The survey also did not identify any undisturbed areas of potential (PADs) within the study area.

There is no legal obligation for further assessment to be undertaken, however the purpose of the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (DECCW 2010) (the due diligence code) is to provide a defence against prosecution if the process is followed. The due diligence code sets out penalties for impacting on Aboriginal objects, defining two types of offences as follows:

- An offence of harming or desecrating an object which a person knows is an Aboriginal object (a 'knowing offence'); and
- An offence of harming an object whether or not a person knows it is an Aboriginal object (a 'strict liability offence').

The maximum penalty for the knowing offence is \$550,000 or \$275,000 (depending on whether there are aggravating circumstances) and 1- or 2-years' jail for an individual. For a corporation the maximum penalty for the knowing offence is \$1.1 million. The maximum penalty for the strict liability offence is \$110,000 or \$55,000 (depending whether there are aggravating circumstances) for an individual or \$220,000 for a corporation.

As this assessment has not identified any areas of archaeological sensitivity, it will provide a defence against prosecution if Aboriginal sites are impacted by the development assuming its recommendations are followed.

The following contingencies are to be adhered to during the project implementation stage:

Contingency 1: Discovery of unanticipated Aboriginal objects within areas of low potential.

All Aboriginal objects and places are protected under the National Parks and Wildlife Act 1974 (NPW Act). It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by DPIE. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the DPIE and Aboriginal stakeholders.

Contingency 2: Discovery of Aboriginal ancestral remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:

1. Immediately cease all work at that location and not further move or disturb the remains;
2. Notify the NSW Police and DPIE's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location.
3. Not recommence work at that location unless authorised in writing by DPIE.

Regards



Mr Damian Wall
BAppSc, MEnvMgt, MAACAI
Managing Director

19/11/21

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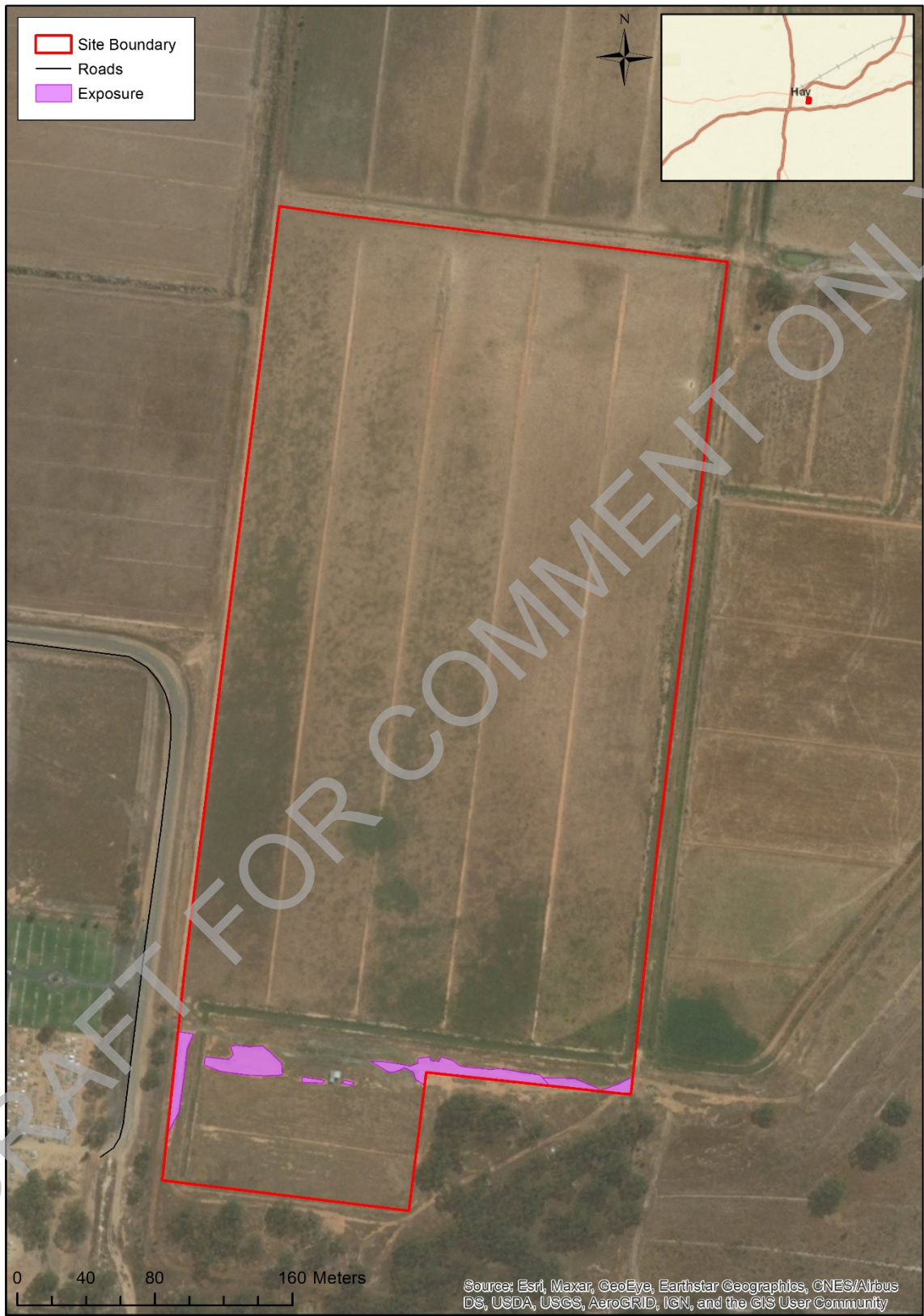
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Table 1: Previous Archaeological Assessment

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1 INTRODUCTION

Green Gold Energy is proposing the construction of a new Solar farm, at 19 Murray Street, Hay 2711. The solar farm will consist of multiple arrays of solar panels running north to south across 14ha.

This due diligence assessment has been prepared in support of the proposed works. The advice and reporting provided here follows the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, 2010a). In following these requirements, it has been issued to The Greater Hume Council and should be retained for 5 years as it may provide for a defence against prosecution in the event of unanticipated harm.

The study area is within the Hay Local Aboriginal Land Council (Hay LALC) area and this work has been prepared by Damian Wall (Red-gum Environmental Consulting Pty Ltd) in partnership with the Hay LALC. Damian holds the relevant qualifications for undertaking formal archaeological assessment in New South Wales (as set out in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b) and is a full member of the Australian Association of Consulting Archaeologists Inc (ACCAI).

2 BACKGROUND

Green Gold Energy propose the construction of a new solar farm 2km east of the township of Hay NSW. The development is designed to produce sustainable solar generated energy to go back into the grid, enabling it to be sold on the National Electricity Market.

The town of Hay is an important inland township, that services the communities' everyday needs, situated 28 kilometres north of Deniliquin, along the Murrumbidgee River. The major land uses of the surrounding areas outside the Hay township include livestock grazing, cropping, and a range of irrigation crops. The towns rich heritage and the Murrumbidgee River are central parts of the tourism for the area with several museums such as the Hay Australian Shearers' Hall of Fame, numerous bike trails, water skiing, canoeing, swimming, camping, fishing, bush walking and 4WD being some of the uses in the region. The site is currently utilised for irrigated agricultural and cattle grazing.

3 PLANNING APPROVALS

The proposed development will be assessed against Part 4 of the Environmental Planning and Assessment Act 1979 NSW (EP&A Act). Other relevant legislation and planning instruments that will inform the assessment include:

- Environmental Planning and Assessment (EP & A) Act 1979 (NSW)
- National Parks and Wildlife Act (NPW Act) 1974 (NSW)
- National Parks and Wildlife Amendment Act 2010 (NSW)
- Hay Local Environment Plan 2012



Figure 1: Site Locality, 19 Murray Street, Hay, NSW 2711. Scale 1:12,500

4 SCOPE OF THE ASSESSMENT

The following is a summary of the major objectives of the assessment:

1. Conduct background research in order to recognise any identifiable trends in site distribution and location, including a search of the Aboriginal Heritage Information Management System (AHIMS).
2. Undertake archaeological survey as per requirement 5 of the code, with particular focus on landforms with high potential for heritage places within the study area, as identified through background research.
3. Record and assess sites identified during the survey in compliance with the guidelines endorsed by Heritage NSW (formally NSW Department of Planning, Industry and Environment).
4. Determine levels of archaeological and cultural significance of the study area.
5. Make recommendations to mitigate and manage any cultural heritage values identified within the study area.

5 DESCRIPTION OF PROPOSED WORK

Green Gold Energy is proposing the construction of a new Solar farm, at 19 Murray Street, Hay 2711. The solar farm will consist of multiple arrays of panels running north to south across 14ha. The development will encapsulate approximately 14 hectares of land, with site access from Cemetery Road and is adjacent to the Murrumbidgee River corridor.

These works will involve a degree of 'clear & grub' of the current surface (including the removal of any remaining native grass), earthworks (minor excavations) and construction. The works will not result in the removal of any native trees, as the development site is dominated by non-local native species and exotic species in a land-formed irrigation bay. All existing irrigation infrastructure on the site will also likely be removed. These works are proposed in order to facilitate structural integrity protocols administered by the Proponent on behalf of the general public, their employees and anyone visiting the site.

Earthworks will be carried out in accordance with The Blue Book – Managing Urban Stormwater: Soils and Construction (Landcom, 2004) and AS2436:1981– Guide to noise control on construction, maintenance and demolition sites. Construction waste management will be in accordance with the Environmental Guidelines: Assessment, Classification and Management of Liquid and Non Liquid Wastes (EPA, 1999).

The extent of works will be considered in an Erosion & Sediment Control Plan (ESCP) as part of the construction process and machinery to be used during construction may include a grader, roller, water cart, tipper trucks, excavator, loader and various other light support vehicles.

6 THE DUE DILIGENCE SYSTEM

The DPIE *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* provides a step-wise process to help determine whether an activity is likely to cause 'harm' to 'Aboriginal objects' (both as defined in the *National Parks and Wildlife Act 1974*). If it is determined that the work may 'proceed with caution' and harm later occurs, the documentation of due diligence may provide a defence against prosecution. The following report sections address the questions set out in the generic due diligence system as shown in **Figure 2**. Following this schematic version of the due diligence system, clearance for the work to go ahead without an Aboriginal Heritage Impact Permit (AHIP) occurs variously at:

- Step 1 – will the activity disturb ground surface.
- Step 2 – where there are no relevant indicators of Aboriginal cultural heritage potential;
- Step 3 – where potential harm can be avoided;
- Step 4 – where desktop assessment and archaeological survey determine that Aboriginal objects are unlikely to be present.

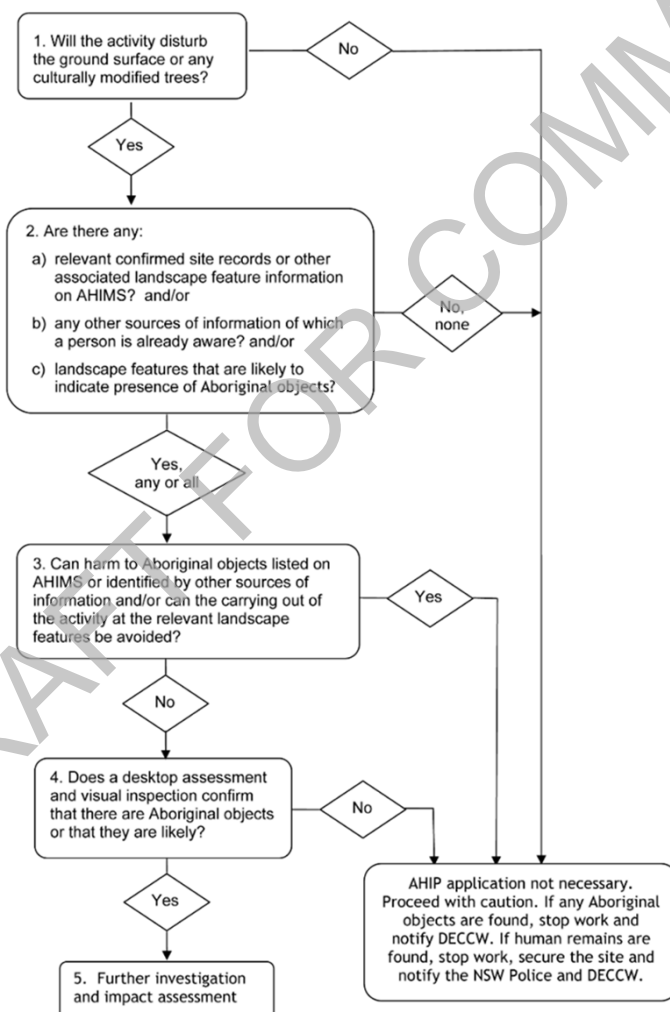


Figure 2: Generic Due Diligence process in NSW.

7 DESK-TOP ASSESSMENT

A desktop assessment has been undertaken to review existing archaeological studies for the study area and surrounding region. This information has been synthesised to develop some Aboriginal site predictive statements for the study area and identify known Aboriginal sites and/or places recorded in the study area. This desktop assessment has been prepared in accordance with requirements 1 to 4 of the code.

7.1 SOIL & GEOLOGICAL LANDSCAPES

7.1.1 SOILS

Soil landscapes have distinct morphological and topological characteristics that result in specific archaeological potential and are essentially terrain units that provide a useful way to summarise archaeological potential and exposure.

The NSW Riverina bioregion (RIV) covers a total area of 9,576,964 ha, with 7,090,008 ha or 74.03% of it lying in NSW (NSW Department of Planning, Industry and Environment). The Riverina covers the alluvial fans of the Lachlan, Murrumbidgee and Murray Rivers west of the Great Dividing Range and extends down the Murray. The upper catchment landscape is a series of overlapping, low gradient alluvial fans. The lower tract of the river is a floodplain with overflow lakes. Discharge from past and present streams control patterns of sediment deposition, soils, landscapes and vegetation. (NSW Department of Planning, Industry and Environment).

This bioregion is dominated by river channels, floodplains, backplains, swamps, lakes and lunettes that are all of Quaternary age. Modern river channels consist mostly of sandy soils and more saline heavy grey and brown clays towards the outer perimeter of the floodplains on the higher rarely flooded terraces (Eardley 1999). Sandy soils also form levees, old channels, dunes and lunettes.

As soil and water salinity increase downstream on the Murrumbidgee, saline clays become evident on lake floors. The red-brown and grey clays in the bioregion support grassland communities that are nationally significant. Calcareous, sandy soils, that tend to be feature of adjacent bioregions are also present in the Riverina and support mallee communities (Semple 1990, Porteners 1993, cited in Eardley 1999).

7.1.2 GEOLOGY

Geologically, the Murray Darling Basin is considered to be a 'shallow crustal depression' and has a layer of marine and terrestrial sediments, which have been deposited over the last 50-60 million years. There is evidence to suggest that the coast reached as far inland as Balranald, approximately 130 km to the west of the study area (NPWS 2003a). The NSW 1500k simplified surface geology (available via the seed online portal) indicated that the activity area was one type of surface geology.

- Quaternary alluvial deposits - Current and recent mud, silt, sand and gravel deposited by river (alluvial) systems. The widespread distribution includes the western plains near Warren and Walgett and the extensive Darling River floodplain

7.2 FLORA & FAUNA

In a semi-arid environment, the Murrumbidgee River and heavily wooded Black Box creek lines provided shelter, abundant food and a focal point for social interaction. Indigenous communities procured Murray Cod, fruit, mussels, wood, Murray Crayfish, yabbies, reeds and medicines from the river system. Evidence for the processing of food stuff and the working of wood can be found throughout the landscape in the form of lithic artefact scatters, mounds, hearths and midden material. Burial grounds are present within this environment and several studies have located these sacred places within the Hay district. In addition the local communities have used the bark from the surrounding trees to make canoes, coolamons and shields which can be seen throughout the landscape (Attenbrow, 2002).

Animals including kangaroo, emu, and wallaby would also have provided abundant sources of food, with brush-tailed possums being highly prized for their fur, which were worn as cloaks over one shoulder. Kangaroo teeth were incorporated into decorative items, such as head bands (Attenbrow, 2002). As well as being important food sources, animal products were also used for tool making and fashioning a myriad of utilitarian and ceremonial items. For example, tail sinews are known to have been used to make fastening cord, while 'bone points', which would have functioned as awls or piercers, are often an abundant part of the archaeological record (Attenbrow, 2002).

7.3 EUROPEAN LAND USE

Large tracts of land were taken up by squatters following the establishment of the first stock routes after the crossing of the Blue Mountains in 1813 by Blaxland, Wentworth and Lawson (Cameron & Spooner, 2010, p. 341). Following this, John Oxley explored the Riverina followed by Thomas Mitchell in 1836 and Charles Sturt in the years between 1828 and 1831 (Sahukar, Gallery, Smart, & Mitchell, 2003). The squatters following the explorers introduced cattle and sheep to the country and were followed by further settlers after the introduction of the *Free Selection Act* in 1861 (McInnes, 1990). 'Illiliwa' station, established in the 1840s, contained the land on which northern Hay would later be built and where the development site is located.

Hay is located in the western Riverina region of New South Wales. The township began as a crossing-place on the Murrumbidgee River, for stock being driven south to markets in Victoria during the gold-rushes of the 1850s. The site was eventually surveyed in 1859 and Hay quickly developed as an important hub for the surrounding pastoral holdings, with their fat-stock and wool production. (Hay Historical Society Inc).

During its earliest days Hay's economy was linked to the navigation by steam-boats of the Murrumbidgee, and it became an important port. The town and district was also extensively serviced by horse- and bullock-driven waggon. In 1882 the railway was extended to Hay, linking the town directly with regions to the east, including Sydney. (Hay Historical Society Inc).

At this time areas near the river appeared to attract large gatherings of Aboriginal people. Lang (1865, cited in Kabaila 2013) recorded a spear-fight between young men at one such gathering. Subsequently he employed Aboriginal people to cut bark and timber for settlers' huts. In the 1860s, with the introduction of wire fencing, the properties began to be fenced. At the same time, rabbits, introduced some years earlier in Victoria, became a significant pest and competitor for pasture. By

c.1900, following over-grazing major drought years, carrying capacity of properties in the region were diminished.

The major land-use that has affected the exposure and potential survival of Aboriginal cultural heritage material has been pastoralism. Nineteenth century over-grazing and rabbit infestations depleted ground cover, forming extensive scalds, eroding deposits and exposing archaeological remains. The location of the proposed development is surrounded by pastoral and agricultural fields, roads and residential buildings; and therefore, has been subject to considerable impacts for many decades.

7.4 SITE RECORDS

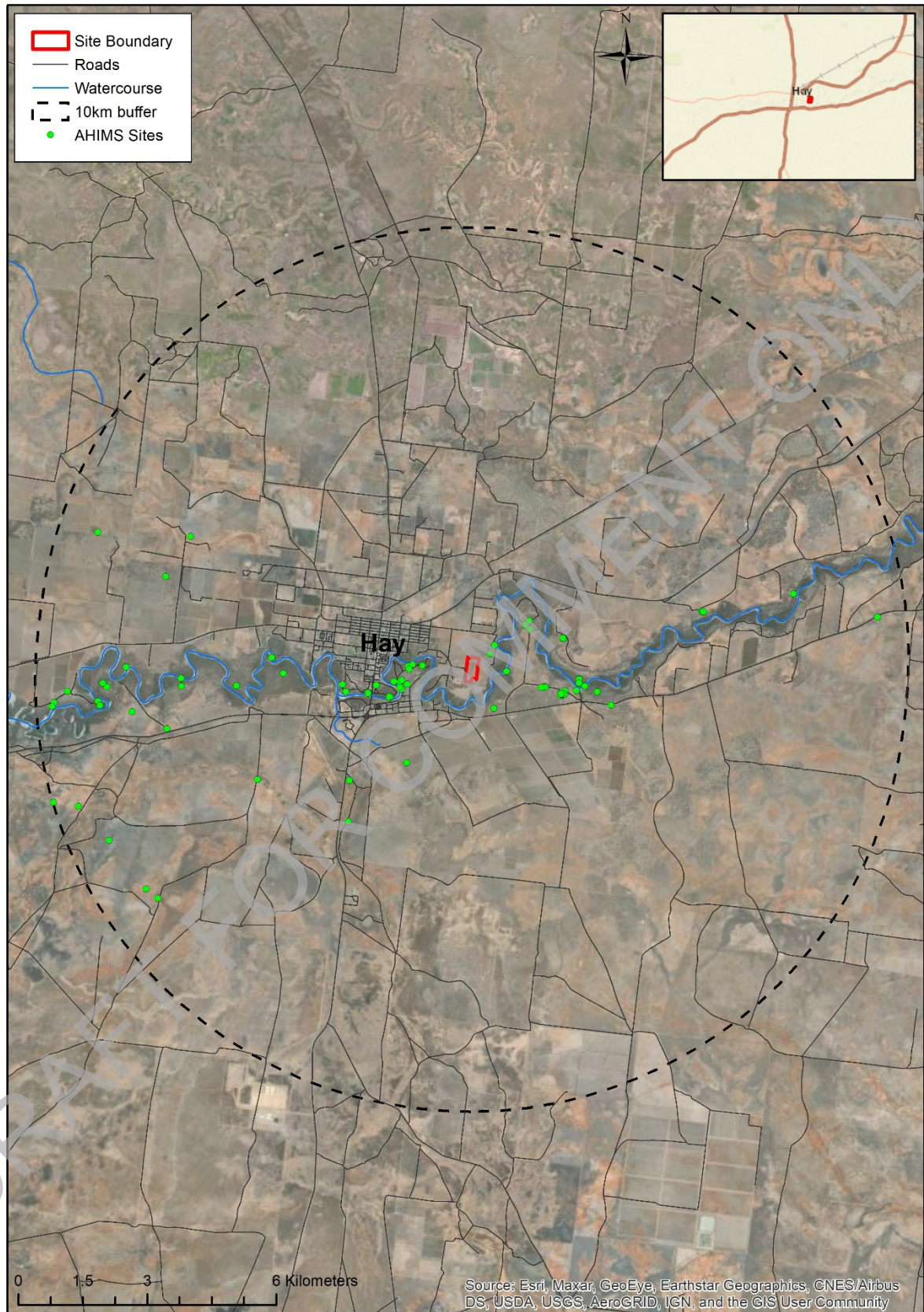
AHIMS searches were conducted on 16th November 2021, returning zero (0) records within the site development boundary and eighty-seven (87) records within a 10 km buffer of the site (**Map 1**). The mapping coordinates recorded for these sites were checked for consistency with their descriptions and location on maps from Aboriginal heritage reports where available. These descriptions and maps were revised where notable discrepancies occurred.

It should be noted that the AHIMS database reflects Aboriginal sites that have been officially recorded and included on the list. Large areas of NSW have not been subject to systematic, archaeological survey; hence listings may reflect previous survey patterns and should not be considered a complete list of Aboriginal sites within a given area.

Based on previous archaeological investigation in the region and knowledge of the Wiradjuri cultural practices and traditional activities, the proposal area has a possibility for containing archaeological sites, especially given that Aboriginal people have lived in the region for tens of thousands of years. This would most likely be in the form of artefact scatters isolated artefacts and scarred trees in remnant old growth vegetation areas bordering water sources and/or as isolated paddock trees.

Previous surveys in the local region demonstrate that there is a strong, complex and varied pattern of human use and movement throughout the landscape. This is apparent from the range of artefacts and site types distributed and concentrated in specific landforms across the region. There appears to be a strong association between the presence of potential resources for Aboriginal use and the presence of archaeological sites. Areas directly associated with water and elevated ground appear to have the greatest potential for identification for Aboriginal cultural material.

Background research undertaken for this report however, has indicated that there has been a lack of coordinated research into Aboriginal archaeology in the areas between the larger city centres, and that a larger variety of site types occur across the wider region may exist. As such, these results do not necessarily represent the full range of archaeological sites which may be identified within the study area.



Map 1: AHIMS recorded sites within 10 km of the site. Scale 1:120,000. Source: AHIMS 2021

7.5 LANDSCAPE FEATURES

The Due Diligence Code (DECCW, 2010a) specifies a number of landscape features which are most associated with the likely presence of Aboriginal objects and which therefore require further assessment if present. These are areas that are: within 200m of waters; located within a sand dune system; located on a ridge top, ridge line or headland; located within 200m below or above a cliff face; within 20m of or in a cave, rock shelter, or a cave mouth.

Of these, proximity to mapped waterways is the only relevant factor. However, all areas were subject to archaeological survey regardless.

7.6 ABORIGINAL PEOPLE IN THE REGION

The land associated with the Murrumbidgee River has been occupied for more than 40,000 years (Sahukar, Gallery, Smart, & Mitchell, 2003) with some of the earliest evidence of people in Australia being found at Lake Mungo and the Willandra Lakes area (Bowler, et al., 2003).

The most common association of traditional ownership in the lower Murrumbidgee catchment is with the Nari Nari language group. Local Aboriginal community members continue to identify traditional ownership and the custodial responsibility for country with this group.

LOCAL ABORIGINAL HISTORY

The Aboriginal history of the region is, like most of rural NSW, one of heavy impact with European settlement from the early 19th Century and a struggle to maintain continuity of culture and connection to country through into the 20th Century. From the 1960s through into the 21st Century, the Aboriginal community has maintained and built a culture of pride, population increase, and the assertion of many rights once denied them.

The initial impact of European settlement / invasion was marked by grim decimation by diseases like smallpox and influenza which reduced the population dramatically. During the period between 1830 and the 1861 introduction of the Robertson Land Acts, there was a rapid occupation of land by sheep and cattle graziers, particularly along the river corridors (Kabaila, 2011, p. 30). Stations were rapidly and progressively established west along the Murrumbidgee River, onto the Hay plains and beyond from 1832. Aboriginal people were still able to move freely along the river corridors and the back country connecting stations, as well as camping, and sometimes working, on stations; however the freedom to pursue a traditional lifestyle was severely curtailed.

A survey undertaken in 1845 estimated approximately 2,000 Aboriginal people occupied the Murrumbidgee Pastoral District (Sahukar, Gallery, Smart, & Mitchell, 2003). At the end of the 19th century some Aboriginal people were paid by European settlers to undertake corroborees, and once gathered, were forced from the land and moved to areas further south. Together with the removal of children by the Aborigines Protection Board, the fierce regulation and discouragement of Aboriginal culture by many led to an eerily quiet century of Aboriginal history from the mid-1800s to mid-1900s. A mix of approaches were followed by Aboriginal people during this time, including assimilation, inconspicuous fringe-swelling and migration to more amenable areas. 'Under the radar' so to speak, a lot of Aboriginal history for the period is an oral history maintained by the community and individual families.

Aboriginal communities in the area now include a mix of traditional owners and people from elsewhere, particularly from other parts of the Murray-Darling basin. Many families that have been in the area a long time have developed strong historical ties, including with its Aboriginal heritage and cultural history. The major representation of this community is through the Hay Local Aboriginal Land Council, an organisation that also has statutory obligations relating to the protection of Aboriginal cultural heritage through the *Aboriginal Land Rights Act 1983* (S52 (4)): “(a) to take action to protect the culture and heritage of Aboriginal persons in the Council’s area, subject to any other law” and “(b) “to promote awareness in the community of the culture and heritage of Aboriginal persons in the Council’s area”. The Nari Nari Tribal Council is also an active force in the area and works with the Local Land Council.

7.7 PREVIOUS ARCHAEOLOGICAL STUDIES

A number of archaeological studies have been undertaken within the region, largely centred on developments in and near Hay and the Murrumbidgee River. The studies consist of investigations for proposed infrastructure projects and private research. Aboriginal heritage found within the region include scar trees, mounds, burials, artefact scatters, isolated lithic artefacts, middens and hearth remains. **Table 1** is a summary of previous studies.

This background information provided the basis for the design of the pedestrian survey which was discussed with, and ratified by, the Hay LALC representatives on site. The previous studies also provided insight into the type of sites that may be identified before entering the field.

Table 1: Previous Archaeological Assessment

Literature	Type	Date	Author	Summary
Aboriginal Cultural Heritage Assessment and Archaeological Report - Mungadal Water Efficiency Scheme – DTIRIS 15/82	ACHAR	2015	Brown, O., Dortch, J. & Wall, D.	The Department of Trade and Investment, Regional Infrastructure and Services, NSW, proposed to install water pipelines to replace existing irrigation channels on the Mungadal pastoral lease (Lot 1 DP1198807). Following consultation with Aboriginal parties, a field inspection of the subject area was undertaken in the form of complete archaeological survey of the proposed pipeline route. This survey enabled construction of an Aboriginal artefact distribution model around 12 identified Aboriginal sites:
Rivcott Cotton Gin Assessment of Aboriginal Cultural heritage	Cultural Heritage Plan	2014	Dunn & Wall	An assessment of a site on the southern side of the Sturt Highway on the corner of Gum Creek road, 2kms south of the development site. The study identified 2 Aboriginal Places (stone artefact scatters).
Auscott Cotton Gin Archaeological Heritage assessment	Cultural Heritage Plan	2013	Kabaila	Kabaila has undertaken a heritage assessment for the proposed Cotton Gin site at Hay. The study found no aboriginal cultural heritage at the proposed site (Kabaila 2013).
Aboriginal Heritage Desktop Study for Proposed Cotton Gin,	Desktop study	2013	Therin	The study found that scar trees were unlikely due to clearing, mounds were likely to be found and camp sites around ephemeral water courses likely

Literature	Type	Date	Author	Summary
5km south of Hay				to be found. Therin postulated that scalded plains were more extensively surveyed and therefore overrepresented. (Therin 2013)
Survey for development of a Property Vegetation Plan, 2005, HA0502 - Leonard Ovenden "Desert Corner"	Site Survey	2005	Hoare & Willis	Mr Donald Thompkins of GLALC undertook an Aboriginal Site Inspection on "Desert Corner" (previous name of the activity area assessed in this AACH). Mr Thompkins concluded that the low depression area in the southern part of the block contains a number of open oven sites and heat retainers and a stone flake.
Toogimbie Burial Survey Hay, NSW	PHD research	1996	Littleton	Littleton's study involved researching the burial patterns of pre contact aboriginal people within the hay area.
Archaeological Survey of Proposed water treatment works at Hay	Cultural Heritage Plan	1986	Martin	This study found 3 aboriginal sites including a midden, scar tree and low density artefact scatter (Martin 1986)
Archaeological Survey of the route of a proposed electricity transmission line from Hay to Darlington point.	Cultural Heritage Plan	1982	Gollan	Gollan undertook an assessment of a proposed electricity line between Hay and Darlington point. 8 open camp sites (low density artefact scatters), 5 scar trees and 3 isolated finds were discovered. (Gollan 1982)
Archaeological survey of Murrumbidgee weir site.	Impact Assessment	1979	Kelly	This study was undertaken for a proposed weir north of Hay. Cultural heritage was located during the survey and consisted of 4 scar trees, 1 burial and 8 middens (Kelly 1979).

7.8 PREVIOUS ARCHAEOLOGICAL STUDIES SUMMARY

Based on the studies discussed above it is possible to suggest that while Aboriginal sites may be expected through all landscapes there does appear to be a pattern of sites that relate to the presence of potential resources for Aboriginal use.

Sites tend to be concentrated on elevated level ground associated with a water source and are noted to consistently occur on raised terrace landforms within 50m of peripheral or seasonal creeks (Border Archaeology 2007). Additionally, the presence of scarred trees on black box and river red gums is relatively common and can occur in all landscapes.

Based on site modelling and the prevalence of sites in the surrounding area the site types most likely to be encountered within the activity area are artefact scatters, midden sites, hearth sites, isolated artefacts and scarred trees in remnant old growth vegetation areas bordering and within the proposal area and/or as isolated paddock trees.

7.9 SITE TYPES IN THE GEOGRAPHIC REGION

The NSW Riverina has an Aboriginal archaeological record derived from Aboriginal occupation and land use that was concentrated on drainage lines but includes dispersed evidence throughout the landscape (Brown & Wall 2018). Regionally occurring sites such as human burials and faunal deposits are essentially confined to areas above the active floodplain on larger rivers and/or their source bordering sandy deposits.

Cultural material is dominated by flaked stone tools (lithics) and lithic sites in NSW are listed by the features of either 'Artefact' or 'PAD' (potential archaeological deposit) in the AHIMS register. While not as significant as human burials, stone artefacts have variable distribution that can largely be correlated with different landform types.

Many authors have stressed the importance of proximity to water as well as relatively common-sense amenity factors such as level, well-drained areas with useful views of resource use areas or a watercourse (Brown O., 2008).

Stone artefacts may be found as occasional pieces (background scatter) or in concentrations typically described as 'Open Camp Sites' (even if not interpreted as having been a site where people camped). At these sites, the presence of large numbers of stone tools and the debitage from making and maintaining them provide evidence about the nature of the human use of the location.

Scarred trees are also found relatively commonly along the Murrumbidgee River and its major tributaries. Mature trees may bear evidence of the removal of bark for the making of implements such as coolamons (bowls), shields and sometimes pieces large enough to have potentially provided for a canoe (Brown 2008). Elsewhere, midden deposits and hearth sites can occasionally be found that contain valuable evidence about the types of resources used by Aboriginal people based on the identification of the bones and shells found within them.

Elsewhere, midden deposits and hearth sites can occasionally be found that contain valuable evidence about the types of resources used by Aboriginal people based on the identification of the bones and shells found within them. Hearth sites, other than vaguely fired patches of clay subsoil, are unlikely to still occur due to the history of relatively intensive land use; and significant disturbance across the site.

There are no Aboriginal Places (locations nominated and listed as having special significance to the Aboriginal community) in the subject area.

7.10 PREDICTIVE STATEMENTS

A series of statements been formulated to broadly predict the type and character of Aboriginal cultural heritage sites likely to exist throughout the study area and where they are more likely to be located. This model is based on:

- Local and regional site distribution in relation to landform features identified within the study area;

- Recent investigations within the region, have demonstrated that artefacts are likely to occur on level/flat areas, raised from flood plains and waterlogged land, particularly on level ridges, hills and terraces;
- Consideration of site type, raw material types and site densities likely to be present within the study area;
- Findings of the ethnohistorical research on the potential for material traces to present within the study area;
- Potential Aboriginal use of natural resources present or once present within the study area; and
- Consideration of the temporal and spatial relationships of sites within the study area and surrounding region.

Previous survey results within the region allow some predictions to be made about local site distribution:

- Prior streams (or palaeo-channels) in the survey area would have been have used by Aboriginal people and are likely to be fringed by archaeological sites consisting of concentrations of flaked stone artefacts and hearths, depending on the extent of topsoil disturbance from former land uses (e.g. ploughing for pasture improvement);
- Within the former stream areas, adjacent raised red soil areas are predicted to be the most likely to contain sites; identification of these was considered most likely in areas of scalded soil exposure.
- Sites in red soil areas are often eroding out of scalds, so that some stone artefacts are likely to be a lag from deposits that have been blown away. Hearths, on the other hand, can only survive in their original stratigraphic positions, and so indicate less disturbed deposits.
- The contents of former occupation sites may include hearths, stone artefacts, mussel shell, or animal bone.
- Across black soil areas and in depressions in black soil, it is predicted that Aboriginal cultural heritage material would be very sparse or consist of isolated finds.
- Scarred trees are concentrated along waterways, which are the areas with the highest focus of Aboriginal land use and where a number of suitable tree species are found. Older black box trees (>100 years) may exhibit scarring or other modifications for shields, carrying dishes, or canoes;
- Former or extant mounded areas (in areas of red soil) may represent sandy elevations attractive for burying the dead, and so may be more likely to feature human remains.
- There is a tendency for concentrations of stone artefacts to be found within 200-250m of permanent and ephemeral water sources, particularly on raised areas such as sand hills by the river and elevations (commonly aeolian sand or red soil) adjacent to ephemerally flooded areas or billabongs. These sites may also contain burnt clay balls that were used as heat retainers for cooking;
- Lithic sites are however rarely recorded along the lower alluvial floodplains of the major river margins – in part because of the favoured use of raised areas by Aboriginal people, but also because these are dynamic depositional environments where potential sites are rarely preserved or exposed;

- Shell midden deposits dominated by freshwater mussel (*Velesunio* sp.) occur along river margins, typically also associated with flaked stone artefacts; these are rarely evident as surface deposits and are usually found as exposed sections in eroded river banks;
- Burial sites are most typically associated with prominent raised sand hills ('source bordering dunes') near the river;
- Clay heat retainers, artefacts and faunal material are also found in association with raised earth mound sites where ephemeral water may have led to seasonal availability of cumbungi (*Typha* sp.); these earth mound sites are a distinctive archaeological feature of the Hay Plains and other parts of the Riverina, although many have been destroyed over the last century.

8 ARCHAEOLOGICAL SURVEY

8.1 SURVEY AIMS

The principle aims of the survey were to:

1. Undertake a systematic survey of the study area targeting areas with the potential for Aboriginal heritage
2. Identify and record Aboriginal archaeological sites visible on the ground surface; and
3. Identify and record areas of Aboriginal archaeological and cultural sensitivity.

8.2 SURVEY METHODS

The survey was conducted on foot. Recording during the survey followed the archaeological survey requirements of the code and industry best practice methodology. Information that recorded during the survey included:

- Aboriginal objects or sites present in the study area during the survey;
- Survey coverage;
- Any resources that may have potentially been exploited by Aboriginal people;
- Landform elements, distinguishable areas of land approximately 40m across or with a 20m radius;
- Photographs of the site indicating landform;
- Ground surface visibility (GSV) and areas of exposure;
- Observable past or present disturbances to the landscape from human or animal activities; and
- Aboriginal artefacts, culturally modified trees or any other Aboriginal sites.

Where possible, the identification of natural soil deposits within the study area was undertaken and photographs of survey units, landform, vegetation coverage, GSV etc, were incorporated into the survey. The location of Aboriginal cultural heritage and points marking the boundary of the landform elements were recorded using a hand-held Global Positioning System and the Map Grid of Australia (94) coordinate system.

In addition, a predictive assessment of the likelihood of the occurrence of undetected and/or subsurface Aboriginal cultural heritage material was conducted. This is an intuitive assessment using generalised contextual information rather than a geostatistical assessment using digitised (raster) map data of landforms and known locations of other sites.

Brown O., 2008 notes that although intuitive assessments are rarely afforded much written favour by archaeologists, they are in fact used by almost all. The term 'modelling' may be frequently inserted to infer statistical rigour that is usually not present nor for that matter. A *modelled predictive assessment* typically combines rule-based definitions of known site distribution factors with available mapped data that lacks the full range of detail that would affect human choices and behaviour - or the map data may quite simply be wrong (Brown, 2008).

8.3 GROUND SURFACE VISIBILITY

Archaeological visibility refers to the amount of ground surface that is clearly visible for inspection. The greater the ground surface visibility, the more effective the surface survey. Examples of high surface visibility are vehicular and pedestrian tracks, dune blow outs (100% per m²); and examples of poor visibility are areas of heavy vegetation cover (0-10% per m²) (Murphy & Thomson 2016).

Unfortunately, it is often the case that highly visible Aboriginal cultural heritage places are also often highly disturbed. High ground surface visibility (GSV) is therefore often related to the amount of disturbance that has occurred. This disturbance may be manmade (such as drainage lines, vehicle tracks), by stock (overgrazing, tracks), or due to natural processes (erosion by wind or water). The level of GSV is typically assessed as follows:

Table 1: Ground Surface Visibility (GSV) ratings vs ranges

%	0%	0 – 10%	10 – 30%	30 – 50%	50 – 70%	70 – 90%	90 – 100%
Rating	No visible ground surface	Very poor	Poor	Fair	Good	Very good	Excellent



Photo 1: Example of excellent (90-100%) GSV on site. Photo: D. Wall, 2021.



Photo 2: Example of Poor (10-30%) GSV in the project area due to exotic grass coverage. Photo: D. Wall, 2021.



Map 2: Ground Surface Visibility (GSV) of Activity area. Scale 1:3,000.

8.4 RESULTS

SURVEY COVERAGE & EFFECTIVENESS

The purpose of compiling survey coverage data is to measure the limitations of site detectability at the time of the survey. For example, a survey transect across a heavily grassed paddock has little likelihood of finding lithic material on the surface regardless of the survey effort spent.

The quantification of survey coverage data also usually relies on an assessment of the soil surface visibility in relation to other variables, principally the different landforms included in the survey and the amount of survey effort spent on each.

For the current investigation the ground surface visibility ranged from Fair (30-50%) in areas of thick introduced grasses to Very Good (70-90%) in highly disturbed areas e.g. on the irrigation banks.



Photo 3: Example of Very Good (70-90%) GSV on the irrigation banks. Photo: D. Wall, 2021.

8.5 EXPOSURE

Exposure refers to the geomorphic conditions of the local landform being surveyed and attempts to describe the relationship between those conditions and the likelihood the prevailing conditions provide for the exposure of (buried) archaeological materials. Whilst also usually expressed as a percentage estimate, exposure is different to visibility in that it is in part a summation of geomorphic processes, rather than a simple observation of the ground surface (Burke & Smith 2004, p.79, DECCW 2010b). On site, there were some areas of exposure at the southern end of site and around the existing chiller building but overall, the study area had minimal areas of exposure across the majority of the site (**Map 3**).



Photo 4: Southern end of site showing areas of exposure. Photo: D. Wall, 2021.



Map 3: Areas of exposure in the Activity area. Scale 1:3,000.

8.6 DISTURBANCE

Disturbance in the study area is associated with the existing and past land use. The study area is highly disturbed as a result of past agricultural use, irrigation channel construction, construction of buildings and infrastructure on site. The site is cleared of trees, now dominated by exotic grasses.



Photo 5: Example of disturbance as a result of the formed irrigation channel and bank construction. Photo: D. Wall, 2021.

8.7 LANDFORM FEATURES

The study area is a flat floodplain, draining to the Murrumbidgee River system. The study area is currently utilised for agricultural irrigation activities, with multiple irrigation channels across the site.

The slope of the site is flat with a westerly aspect and the study area is regarded as part of a single 'floodplain' landform zone, intersected by formed irrigation channels with ephemeral drainage lines that typically only flow in periods of high rainfall in the winter months.

The site does not possess scar age trees, does not contain any rock shelters, caves or other landscape features that are likely Potential Archaeological Deposits. Culturally scarred trees are typically > 80cm DBH, as those trees in the wider Geographic region are typically the oldest.

Soils were generally granitic and all natural surfaces were inspected in this zone and no cultural features, places or PADs were identified.



Photo 6: Typical landform across the site, intersected by irrigation channel. Photo: D. Wall, 2021.

8.8 SURVEY OUTCOMES

- The entire study area typically exhibited fair to very good visibility and exposure without revealing any apparent Aboriginal objects.
- No Aboriginal cultural heritage objects were identified within the study site.
- The survey did not identify any undisturbed areas of potential (PADs) within the study site. All parts of the study area have been subject to some form of disturbance.
- It was confirmed that the construction techniques to be employed (**Section 5**) will see relatively small disturbance to the subsurface, excavation of previously disturbed surfaces and no removal of any excavated material off the site.
- It is acknowledged that in the context of the ubiquitous 'background scatter' of artefacts that exists in almost any Australian landscape, undetected Aboriginal objects may be present in the fill and topsoil material that is to be returned to its original location post works. However, in the absence of any detectable surface representation upon which to base the targeting of subsurface testing (in an obviously disturbed landscape), there is no reasonable trigger by which to seek an Aboriginal Heritage Impact Permit (AHIP) for the work.
- The section south of the east to west irrigation channel is the only section on site that is likely to have any cultural heritage remaining in situ (**Map 3**), however it is still highly unlikely due to the widespread site disturbance.

9 RECOMMENDATIONS & CONTINGENCIES

This report documents an assessment of the potential for the project to have an impact on Aboriginal objects or places. The assessment finds that there are no previously recorded Aboriginal objects within the study site and it is not predicted that significant potential exists for undiscovered Aboriginal sites to be impacted. This largely relates to large extent of previous ground disturbance in the study area.

10 RECOMMENDATIONS

1. On the basis of desktop assessment (AHIMS records, previous work in the region and general regional site distribution patterns) and the survey, it is considered that harm to Aboriginal objects as a result of the proposed work is unlikely.
2. It is therefore considered that **application for an Aboriginal Heritage Impact Permit** is not required.
3. It is recommended that the development seeks to avoid the areas mapped in **Map 3**, as this section of the site has the highest potential to contain any potential archaeological deposits remaining in situ across the landscape, even though it too has been laser graded and land formed.

4. No further assessment is considered warranted if low impact building practices are employed at all stages that:
 - Minimise soil disturbance;
 - Maximise the use of significantly disturbed areas in the first instance;
 - Ensure no topsoil is removed from site; and
 - Ensure no removal or damage to existing native vegetation beyond the site boundary.
5. Cultural awareness induction is considered appropriate at this site before any works commences. An invitation to be sent to the **Hay LALC**, requesting their involvement in the induction process, is also considered appropriate. The induction is to be undertaken by employees who are supervising works during the activity in relation to earthmoving or ground disturbance works. All ground disturbance works must be supervised by a person who has undertaken the cultural awareness training. It is the responsibility of the client to:
 - Ensure that the training be undertaken prior to the commencement of works to familiarise employees and contractors with local Aboriginal traditions and culture;
 - Familiarise employees and contractors with Aboriginal places and objects (particularly stone artefacts and features such as hearths and shell midden lenses) so that they may recognise Aboriginal cultural heritage that may be exposed during works. Information sheets to assist in the identification of Aboriginal cultural heritage should be provided during this training.
 - Promote a knowledge and understanding of and respect for Aboriginal tradition and culture;
 - Assist with compliance with relevant Commonwealth and State cultural heritage legislation; and
 - Foster good relationships between the client and all relevant Aboriginal stakeholders.
6. The information presented above meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as 'shelf documentation' for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

11 CONTINGENCIES

Contingency 1: Discovery of unanticipated Aboriginal objects within areas of low potential.

All Aboriginal objects and places are protected under the National Parks and Wildlife Act 1974 (NPW Act). It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the NSW Department of Planning, Industry and Environment (DPIE). Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the DPIE and Aboriginal stakeholders.

Contingency 2: Discovery of Aboriginal ancestral remains

Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:

1. Immediately cease all work at that location and not further move or disturb the remains;
2. Notify the NSW Police and DPIE's Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location.
3. Not recommence work at that location unless authorised in writing by DPIE.

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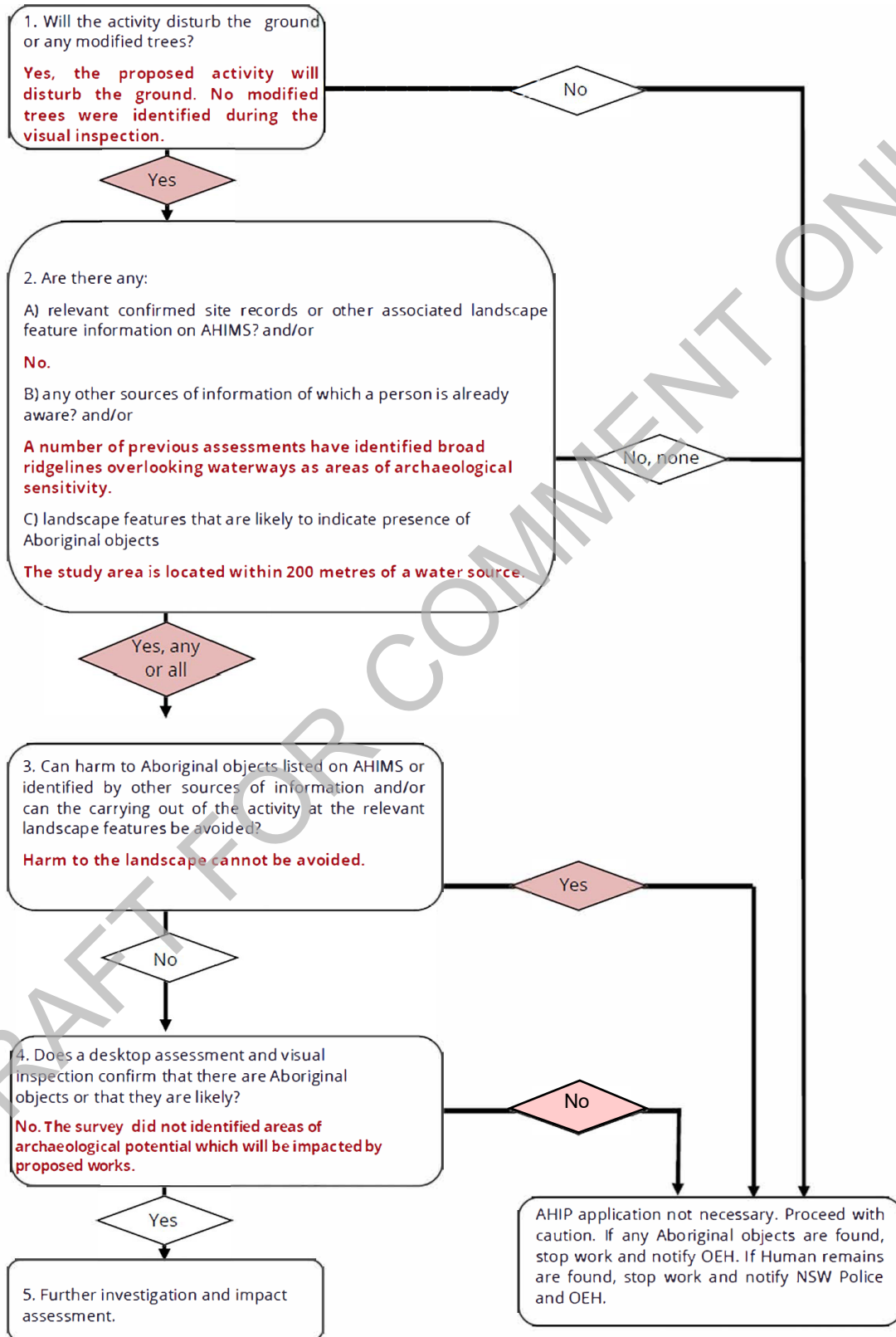
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13 APPENDIX

APPENDIX A: FLOW CHART OF THE DUE DILIGENCE PROCESS FOR THE PROJECT



APPENDIX B: AHIMS SEARCH RESULTS

[The following pages are not to be made public]

DRAFT FOR COMMENT ONLY

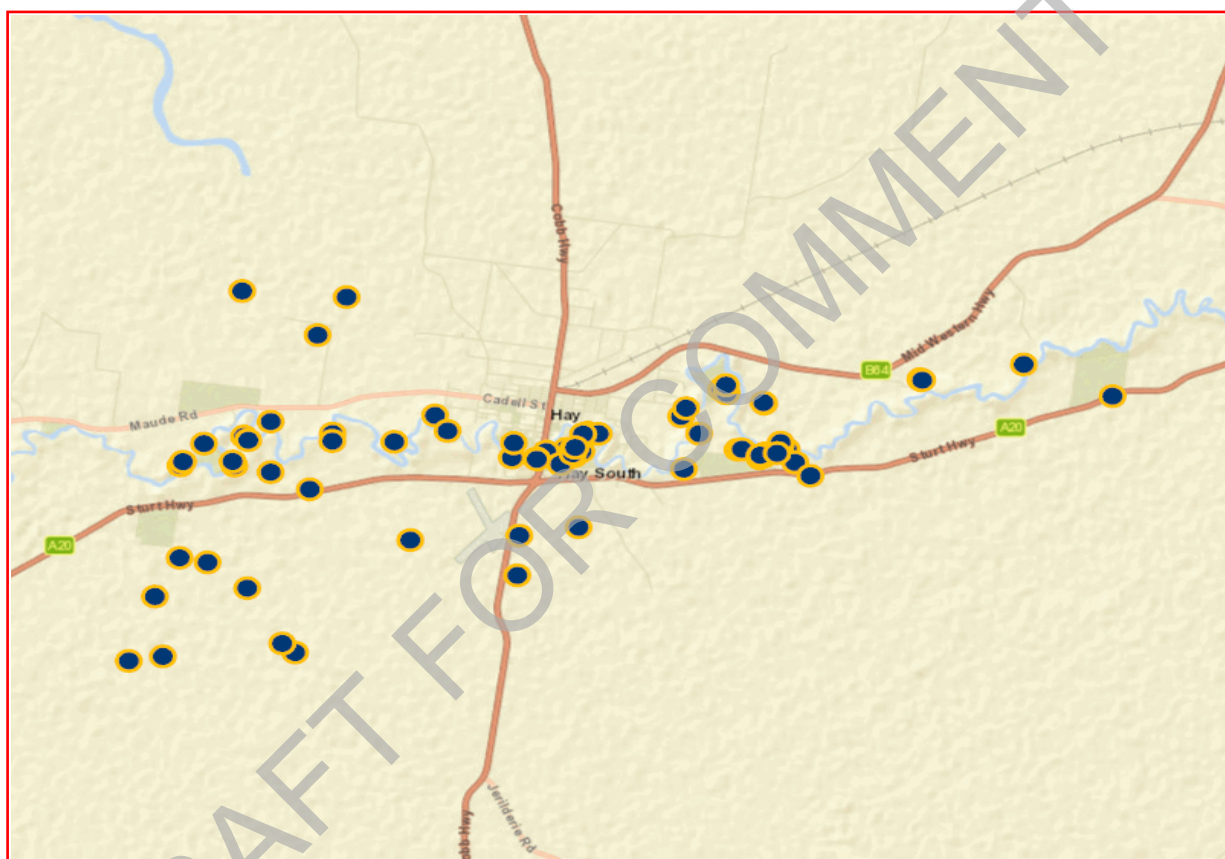
Attention: Damian Wall

Email: damian.wall@red-gum.com.au

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -34.56, 144.74 - Lat, Long To : -34.46, 144.98, conducted by Damian Wall on 16 November 2021.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

	90 Aboriginal sites are recorded in or near the above location.
	0 Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the [NSW Government Gazette \(https://www.legislation.nsw.gov.au/gazette\)](https://www.legislation.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Heritage NSW upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not to be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Heritage NSW and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date. Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
48-5-0033	GSE 3	AGD	55	301420	6176500	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	<u>Contact</u>									
48-5-0034	GSE 1& 2	AGD	55	301400	6175540	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	<u>Contact</u>									
48-5-0001	Mungadal;	AGD	55	295774	6178680	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	1160
	<u>Contact</u>									
48-5-0002	Mungadal;Tongul;	AGD	55	296227	6179141	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	1160
	<u>Contact</u>									
48-5-0003	Hay	AGD	55	301260	6178734	Open site	Valid	Artefact : -, Burial : -	Burial/s,Open Camp Site	1160,1216
	<u>Contact</u>									
48-5-0010	Mungadal;Murrumbidge River;	AGD	55	295682	6178770	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -	Midden	1160
	<u>Contact</u>									
48-5-0011	South Bank Murrumbidgee;Mungadal;	AGD	55	297511	6178697	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -, Modified Tree (Carved or Scarred) :	Midden,Scarred Tree	1160
	<u>Contact</u>									
48-5-0015	North Bank Murrumbidgee;	AGD	55	294861	6178579	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -	Midden	1160
	<u>Contact</u>									
48-5-0016	North Bank Murrumbidgee;	AGD	55	297510	6178880	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -	Midden	1160
	<u>Contact</u>									
48-5-0017	North Bank Murrumbidgee;	AGD	55	298791	6178709	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -	Midden	1160
	<u>Contact</u>									
48-5-0018	North Bank Murrumbidgee;	AGD	55	299886	6178995	Open site	Valid	Earth Mound : -, Shell : -, Artefact : -	Midden	1160
	<u>Contact</u>									

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Murray Street

Client Service ID : 639204

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
48-5-0020	Illiliwa;	AGD	55	311754	6180849	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	338
	Contact									
	Recorders			ASRSYS				Permits		
48-5-0023	River Farm 2	AGD	55	304800	6179650	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	1044
	Contact									
	Recorders			Doctor.Sarah Martin				Permits		
48-5-0024	River Farm 1	AGD	55	304700	6179450	Open site	Valid	Artefact : -, Earth Mound : -, Shell : -	Midden,Open Camp Site	1044
	Contact									
	Recorders			Doctor.Sarah Martin				Permits		
48-5-0026	Winilba	AGD	55	306700	6178600	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact									
	Recorders			B Gray				Permits		
48-5-0027	Winilba	AGD	55	306900	6178700	Open site	Valid	Modified Tree (Carved or Scarred) :	Scarred Tree	
	Contact									
	Recorders			B Gray				Permits		
48-1-0013	Hay Site;	AGD	55	305080	6179040	Open site	Valid	Burial : -	Burial/s	
	Contact									
	Recorders			Randelle Blair				Permits		
48-2-0001	Binghams Lane;	AGD	55	297150	6181250	Open site	Valid	Burial : -	Burial/s	
	Contact									
	Recorders			J Brickhill				Permits		
48-2-0003	Test Pitting Area 22 (duplicate refer to 52-2-2233)	AGD	55	297730	6182180	Open site	Deleted	Artefact : -		
	Contact									
	Recorders			Stuart Huys				Permits		
48-5-0036	Test Pitting Area 20 (duplicate refer to 52-50409)	AGD	55	295830	6175110	Open site	Deleted	Artefact : -		
	Contact									
	Recorders			Stuart Huys				Permits		
48-5-0296	10 Mile TSR 3	GDA	55	302753	6176912	Open site	Valid	Artefact : -		
	Contact									
	Recorders			Mr.Peter Ingram				Permits		
48-2-0018	WDRA_AX_16	AGD	55	295568	6182281	Open site	Valid	Artefact : 12		
	Contact			S Scanlon						
	Recorders			Australian Museum Consulting (AM Consulting)				Permits		
48-2-0047	6 Mile Res 1	AGD	55	309623	6180451	Open site	Valid	Hearth : -		
	Contact									
	Recorders			Mr.Mark Brettschneider				Permits		
48-5-0038	6 mile Res 2	AGD	55	309639	6180429	Open site	Valid	Hearth : -		
	Contact									
	Recorders			Mr.Mark Brettschneider				Permits		
48-5-0039	6 mile Res 3	AGD	55	309651	6180421	Open site	Valid	Hearth : -		
	Contact									
	Recorders			Mr.Mark Brettschneider				Permits		
48-5-0040	6 mile Res 4	AGD	55	309663	6180426	Open site	Valid	Hearth : -		
	Contact									
	Recorders			Mr.Mark Brettschneider				Permits		

Report generated by AHIMS Web Service on 16/11/2021 for Damian Wall for the following area at Lat, Long From : -34.56, 144.74 - Lat, Long To : -34.46, 144.98. Number of Aboriginal sites and Aboriginal objects found is 90

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

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
48-5-0041	Brandon's bend 1	AGD	55	305539	6180098	Open site	Valid	Hearth : -		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0042	Brandon's bend 2	AGD	55	305518	6180132	Open site	Valid	Hearth : -		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0043	Brandon's bend 3	AGD	55	305614	6180223	Open site	Valid	Hearth : -		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0044	Brandon's bend Scarred tree 1	AGD	55	305628	6180023	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0045	Brandon's bend Scarred Tree 2	AGD	55	305971	6178682	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0046	Brandon's bend scarred tree 3	AGD	55	305983	6178672	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0047	Brandon's bend scarred tree 4	AGD	55	305885	6178667	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0048	Brandon's bend scarred tree 5	AGD	55	304784	6178177	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u> Searle	<u>Recorders</u>	Mr.Mark Brettschneider <u>Permits</u>							
48-5-0100	Winilbe Stn Bora Ring	AGD	55	306410	6179793	Open site	Valid	Ceremonial Ring (Stone or Earth) : -		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Colin Pardoe <u>Permits</u>							
48-5-0101	Winilbe Stn Scarred Tree 4	AGD	55	306394	6179817	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Colin Pardoe <u>Permits</u>							
48-5-0102	Winilbe Stn Scarred Tree 1	AGD	55	306770	6178860	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Colin Pardoe <u>Permits</u>							
48-5-0103	Winilbe Stn Scarred Tree 2	AGD	55	306770	6178860	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>	<u>Recorders</u>	Doctor.Colin Pardoe <u>Permits</u>							

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Murray Street

Client Service ID : 639204

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
48-5-0104	Winilbe Stn Scarred Tree 3	AGD	55	306762	6178773	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0110	Barman Reserve 1	AGD	55	306444	6178591	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0111	Barman Reserve 2	AGD	55	306348	6178532	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0112	Barman Reserve 3	AGD	55	306355	6178490	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0113	Barman Reserve 4	AGD	55	306345	6178470	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0114	Barman Reserve 5	AGD	55	306372	6178495	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0115	Barman Reserve 6	AGD	55	306367	6178503	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0116	Barman Reserve 7	AGD	55	306374	6178517	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0117	Barman Reserve 8	AGD	55	306386	6178514	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0118	Barman Reserve 9	AGD	55	306397	6178499	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0119	Barman Reserve 10	AGD	55	306404	6178514	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0120	Barman Reserve 11	AGD	55	306426	6178511	Open site	Valid	Earth Mound : -		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0121	Barman Reserve 12	AGD	55	306390	6178530	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0122	Barman Reserve 13	AGD	55	306356	6178547	Open site	Valid	Modified Tree (Carved or Scarred) :		
	<u>Contact</u>									
	<u>Recorders</u>									
48-5-0123	Barman Reserve 14	AGD	55	306344	6178516	Open site	Valid	Modified Tree (Carved or Scarred) :		

Report generated by AHIMS Web Service on 16/11/2021 for Damian Wall for the following area at Lat, Long From : -34.56, 144.74 - Lat, Long To : -34.46, 144.98. Number of Aboriginal sites and Aboriginal objects found is 90

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SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0069	Soap Works Bend & The Island	AGD	55	299617	6179364	Open site	Valid	Aboriginal Resource and Gathering : -, Habitation Structure : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0070	Sandy Point 1	GDA	55	301846	6178556	Open site	Valid	Modified Tree (Carved or Scarred) : -, Aboriginal Resource and Gathering : -, Artefact : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0124	Hay State Forest 100	GDA	55	302631	6178627	Open site	Valid	Conflict : -, Habitation Structure : -, Shell : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0125	Hay state forest 102	GDA	55	302462	6178802	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-4-0187	Newmarket Mound 2	GDA	55	296366	6178105	Open site	Valid	Artefact : -, Earth Mound : 1		103361
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0128	Hay State Forest 101	GDA	55	302595	6178685	Open site	Valid	Shell : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0129	Hay State Forest 103	GDA	55	302796	6179164	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0130	Hay State Forest 104	GDA	55	302891	6179202	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0131	Hay State Forest 105	GDA	55	303122	6179177	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0132	Hay State Forest 106	GDA	55	302811	6179097	Open site	Valid	Earth Mound : -		
	<u>Contact</u>	<u>Recorders</u>						<u>Permits</u>		
48-5-0133	Hay State Forest 110	GDA	55	302605	6178806	Open site	Valid	Modified Tree (Carved or Scarred) : -		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
	Contact	Recorders	Mr.Rene Woods					Permits		
48-5-0134	Hay State Forest 111	GDA	55	302642	6178836	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders	Mr.Rene Woods					Permits		
48-5-0135	MUNG1501	GDA	55	297182	6177709	Open site	Valid	Hearth : -		
	Contact	Recorders	Joe Dortch					Permits	3879	
48-5-0136	MUNG1502	GDA	55	299285	6176528	Open site	Valid	Hearth : -		
	Contact	Recorders	Joe Dortch					Permits	3879	
48-5-0137	MUNG1503	GDA	55	296966	6173763	Open site	Valid	Artefact : -, Hearth : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0138	MUNG1504	GDA	55	295111	6175898	Open site	Valid	Artefact : -, Hearth : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0139	MUNG1505	GDA	55	294531	6175996	Open site	Valid	Hearth : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0140	MUNG1506	GDA	55	294042	6175051	Open site	Valid	Artefact : -, Hearth : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0141	MUNG1507	GDA	55	293538	6173486	Open site	Valid	Artefact : -, Hearth : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0142	MUNG1508	GDA	55	294238	6173610	Open site	Valid	Artefact : -, Hearth : -, Shell : -		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0146	MUNG1512	GDA	55	296694	6173978	Open site	Valid	Non-Human Bone and Organic Material :-		
	Contact	Recorders	Joe Dortch					Permits		
48-5-0191	Hay Bridge Canoe tree 1	GDA	55	301864	6178536	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders	Mr.Mark Saddler					Permits		
48-5-0192	Hay Bridge Ring tree 1	GDA	55	301847	6178556	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders	Mr.Mark Saddler					Permits		
48-5-0205	Bushy Bend-Sandy Point 5	GDA	55	302046	6178724	Open site	Valid	Modified Tree (Carved or Scarred) :		
	Contact	Recorders	Mr.Peter Ingram					Permits		

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
48-5-0206	Bushy Bend-Sandy Point 6	GDA	55	302772	6178742	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0207	Sandy Point 2.	GDA	55	307192	6178571	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0208	Sandy Point 3.	GDA	55	301857	6178532	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0209	Sandy Point 4	GDA	55	301339	6178565	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0210	Bushy Bend/Sandy Point 4.	GDA	55	302344	6178425	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0211	Bushy Bend/Sandy Point 3.	GDA	55	302378	6178449	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0212	Bushy Bend-Sandy Point 2	GDA	55	302351	6178453	Open site	Valid	Modified Tree (Carved or Scarred) : -		
	Contact	Recorders	Mr.Peter Ingram					Permits		
48-5-0430	HY-IF-001	GDA	55	307515	6178254	Open site	Valid	Artefact : 1		
	Contact	Recorders	Kayandel Archaeological Services					Permits		
48-5-0431	HY-ST-001	GDA	55	313714	6180305	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Kayandel Archaeological Services					Permits		
48-5-0432	Wooloondool scar tree 1	GDA	55	295574	6178346	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	Contact	Recorders	Ms.Jessica Murphy					Permits		
48-5-0433	Wooloondool artefact 1	GDA	55	294550	6178317	Open site	Valid	Artefact : 1		
	Contact	Recorders	Ms.Jessica Murphy					Permits		
48-5-0434	Wooloondool shell 1	GDA	55	294501	6178224	Open site	Valid	Shell : 1		

AHIMS Web Services (AWS)

Extensive search - Site list report

Your Ref/PO Number : Murray Street
Client Service ID : 639204

<u>SiteID</u>	<u>SiteName</u>	<u>Datum</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>	<u>Context</u>	<u>Site Status **</u>	<u>SiteFeatures</u>	<u>SiteTypes</u>	<u>Reports</u>
	<u>Contact</u>	<u>Recorders</u>	Ms.Jessica Murphy					<u>Permits</u>		
48-5-0435	Wooloondool Ring Tree	GDA	55	295614	6178245	Open site	Valid	Modified Tree (Carved or Scarred) : 1		
	<u>Contact</u>	<u>Recorders</u>	Ms.Jessica Murphy					<u>Permits</u>		

**** Site Status**

Valid - The site has been recorded and accepted onto the system as valid

Destroyed - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

Partially Destroyed - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

Not a site - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

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