



**HIGHWAY SERVICE CENTRE
BOWNING, NSW**

Aboriginal Heritage Due Diligence Assessment

Prepared for Waters Consultancy Pty Ltd
for Bowning Pty Ltd

Yass Valley Local Government Area

March 2017

Ref. 1631

KELLEHER NIGHTINGALE CONSULTING PTY LTD
Archaeological and Heritage Management
ACN 120 187 671

Level 10, 25 Bligh St
SYDNEY NSW 2000
Phone 02 9232 5373
Fax 02 9223 0680

Document Information

Project Name	Highway Service Centre, Bowning: Aboriginal Heritage Due Diligence Assessment
Project Number	1631
Client Name	Waters Consultancy Pty Ltd
Recipient	Kate Waters
Issue Date	28/03/17
Prepared by	Dr Matthew Kelleher, Madeline Harding, Cristany Milicich, Ben Anderson
Approved by	Dr Matthew Kelleher

Contents

CONTENTS	III
1 INTRODUCTION	1
1.1 PROJECT BACKGROUND	1
1.2 ASSESSMENT PROCESS.....	1
1.3 SUMMARY OF FINDINGS.....	1
2 ASSESSMENT.....	4
2.1 IDENTIFY IF THE PROPOSED ACTIVITY WILL DISTURB THE GROUND SURFACE	4
2.2 DATABASE SEARCH (AHIMS) AND KNOWN INFORMATION SOURCES.....	4
2.3 LANDSCAPE ASSESSMENT	6
2.4 IMPACT AVOIDANCE	8
2.5 DESKTOP REVIEW SUMMARY	8
2.6 VISUAL INSPECTION	9
3 STATUTORY REQUIREMENTS	11
4 DISCUSSION	12
5 CONCLUSIONS AND RECOMMENDATIONS.....	12
REFERENCES	13
APPENDIX A AHIMS SEARCH RESULTS	19

Figures

Figure 1. Study area location	2
Figure 3. Proposed site plan	3
Figure 4. Geology and soil landscapes of the study area.....	7

1 Introduction

1.1 Project background

Bowning Pty Ltd proposes to construct a highway service centre at a property located at 'Springvale' 27782 Hume Highway, Bowning NSW. The location of the proposed works is shown in Figure 1 and is hereafter referred to as the 'study area'. A proposed site plan is provided in Figure 2.

Kelleher Nightingale Consulting Pty Ltd (KNC) was engaged by Waters Consultancy Pty Ltd on behalf of Bowning Pty Ltd to undertake a due diligence Aboriginal heritage assessment of the location of the proposed works. This assessment has been conducted in accordance with the Office of Environment and Heritage (OEH) Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (OEH 2010).

1.2 Assessment process

A due diligence Aboriginal archaeological assessment of the study area was undertaken in accordance with the Office of Environment and Heritage (OEH) *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. The due diligence assessment process is a step by step method designed to give proponents a baseline level of information outlining opportunities and constraints related to Aboriginal heritage. The relevant steps are:

- Determining if the activity will disturb the ground surface or any culturally modified trees (Step 1)
- Database search: Aboriginal heritage information management system (AHIMS) and known information sources (Step 2a)
- Landscape assessment (Step 2b)
- Impact avoidance assessment (Step 3)
- Desktop assessment and visual inspection (Step 4).

The Code of Practice specifies that if the initial assessment process identifies that Aboriginal objects will or are likely to be harmed, then further investigation and impact assessment is required (Step 5).

1.3 Summary of findings

Results of the due diligence assessment found no Aboriginal archaeological objects or areas of archaeological potential within the study area. The study area displayed a (disturbed) agricultural soil structure with minimal to low archaeological potential. According to the OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, the proposed highway service centre can proceed with caution as it will not impact any Aboriginal objects or Aboriginal places.



Figure 1. Study area location



Figure 2. Proposed site plan

2 Assessment

2.1 Identify if the proposed activity will disturb the ground surface

The proposal involves the construction of a highway service centre and ancillary roadworks. These activities would impact the ground surface and have the potential to impact on Aboriginal heritage. As a result, the due diligence process progressed to the next step.

2.2 Database search (AHIMS) and known information sources

2.2.1 AHIMS web services

AHIMS is a database operated by OEH, regulated under section 90Q of the *National Parks and Wildlife Act 1974*. AHIMS contains information and records related to registered Aboriginal archaeological sites (Aboriginal objects, as defined under the Act) and declared Aboriginal places (as defined under the Act) in NSW.

A search of AHIMS was conducted on 22 February 2017 (AHIMS Client Service ID 265432) to identify any registered (known) Aboriginal sites or declared Aboriginal places within or adjacent to the study area. The AHIMS Web Services database search was conducted within the following coordinates (GDA, Zone 55):

Eastings: 662700 - 665690
Northings: 6149930 - 6152320
Buffer: 0 (search coordinates include a buffer around the study area)

The AHIMS search results showed:

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

The AHIMS database search did not identify any Aboriginal sites or Aboriginal places within the study area.

2.2.2 Other heritage registers and databases

Other sources of information including heritage registers and lists were also searched for known Aboriginal heritage in the vicinity of the study area. These included:

- Yass Valley Local Environmental Plan 2011
- Sydney Water Heritage Register
- State Heritage Register
- State Heritage Inventory
- Commonwealth Heritage List
- National Heritage List
- Register of the National Estate (note the Register was closed in 2007 and is no longer a statutory list. It is maintained on a non-statutory basis as a publicly available archive and educational resource).
- Australian Heritage Places Inventory.

No items of Aboriginal heritage were listed or registered on these databases within the study area.

2.2.3 Known Aboriginal heritage around the study area

Results of the AHIMS search and associated databases indicate that no previously recorded Aboriginal archaeological sites are present within or in the immediate vicinity of the study area. Review of previous archaeological investigations undertaken in the Yass Valley region, provides background information on whether Aboriginal archaeology is likely to occur within the study area, and if so, what site types might be expected. A summary of these investigations is presented below.

New South Wales Archaeology Pty Ltd undertook archaeological investigations for the Rye Park Wind Farm proposal in 2013. The assessment area is located approximately 20km to the north east of the study area. The 40km of proposed wind farm and associated works was surveyed. Ten isolated finds and three quartz outcrops were recorded (New South Wales Archaeology Pty Ltd 2013). These artefacts consisted of silcrete, tuff and chert flakes identified along farm tracks, ridges and eroded drainage lines. The assessment area was considered to be of generally low cultural and archaeological potential and significance. Based on the finds of the archaeological survey and a consideration of the predictive model applicable to the environmental context and the results of the survey, no further archaeological investigations were deemed necessary and the proposal could go ahead as planned.

Archaeological survey was undertaken for the Yass Valley Wind Farm project in 2008, 10-40 kilometres to the west and southwest of the study area. The survey was divided between three different landforms including Carrolls Ridge, Coppabella Hills and Marilba Hills. Across the entirety survey, 116 Aboriginal object locales were identified and recorded along ridge crests and upper slopes. These sites were comprised of flakes and cores consisting of mainly chert and tuff artefacts. A salvage program was recommended in a sample of the survey units within impacted areas prior to construction in survey units which were deemed to have moderate archaeological potential. The majority of the assessment area however, was assessed to be of low archaeological significance and did not require further subsurface excavations. Additional surveys were conducted in 2012 for the wind farm project to include new project areas, these surveys identified a total of nine object locales, consisting of flakes and cores, with the predominant material type being grey silcrete and grey chert. No further archaeological investigations were recommended.

Archaeological investigations were undertaken by Koettig to the southeast of the study area for a proposed water pipeline route between Bowning and Yass. The physical landscape assessed was predominantly flat, with a series of spurs separated by shallow drainage channels extending approximately 700m adjacent to Derringullen Creek. Two small artefact scatters (consisting of three artefacts each) and two scarred trees were identified as part of this assessment near Derringullen Creek (Koettig 1986a). Subsurface testing was undertaken for the project, resulting in consistent low density artefact distribution.

In 1995, Oakley undertook survey of Mt Bowning to the southeast of the study area, a prominent landscape feature in the region, as a part of a larger survey of a number of Optus towers in the region. No sites were located during the survey. The site was highly disturbed due to erosion and was considered to be of low potential.

Summary

Previous archaeological investigations undertaken throughout the region have identified low density artefact scatters and isolated finds. Vegetation clearance and agricultural/pastoral landuse can disturb the ground surface and destabilise soils, contributing to the diminution of archaeological potential. The majority of Aboriginal archaeological sites in these studies were recorded along creeks and eroded drainage lines or on farm tracks and ridges. Natural focal points in the landscape such as river crossings and prominent ridgelines were likely used as travel routes. Due to low artefact density and moderate levels of disturbance, the majority of these sites have been assessed as exhibiting low archaeological significance and a variation of low to moderate potential for subsurface archaeological deposit. While it is acknowledged that Aboriginal objects and sites may occur anywhere in the landscape, the current study area is not located in a context considered particularly archaeologically sensitive for the region.

2.3 Landscape assessment

The 'Springvale' property is situated within four kilometres northwest of Mount Bowning, a prominent feature of the local landscape. The study area is located on the foothills and ranges of the Lachlan Fold Belt on the western side of the Southern Highlands of New South Wales. The Lachlan Fold Belt is comprised of a complex series of north to north westerly trending folded bodies of Cambrian to Early Carboniferous sedimentary and volcanic rocks (NPWS 2003).

The geology of the study area is characterised by the Laidlaw rock formation. The Laidlaw Formation contains two members; the Euralie Limestone Member and the Excursion Creek Sandstone Member. The lower of the two, the Euralie Limestone, consists mainly of fossiliferous tuffaceous sandstone, mudstone and limestone. The rocks of the Excursion Creek Sandstone Member include coarse tuff, tuffaceous sandstone and siltstone. The sandstone consists of angular grains of quartz, K-feldspar, plagioclase and volcanic rock fragments in a siliceous groundmass. Quaternary colluvial deposits can be found within the landscape along drainage lines and at the base of slopes, these are comprised of colluvial, poorly sorted para- and orthoconglomerate, sand, silt and clays. Quaternary residual-eluvial deposits are also present in a small portion of the study area to the south, having developed in situ (residual) from the weathering of underlying Laidlaw volcanics.

Soils within the study area are of the Binalong Soil Landscape. The topsoil consists of a fine sandy loam, overlying red or yellow clay loam subsoil. Intact archaeological deposits may occur within these soils due to the low susceptibility to erosion and surface movement where gradient is low and the landform has not been significantly disturbed. Erosion and soil movement processes are generally governed by slope gradient, removal of vegetation, flooding and anthropogenic ground disturbance. In the case of the study area, the intact soil deposit has been heavily disturbed, or removed through erosion.

The study area is located on a hillcrest with a gentle gradient slope descending to the northeast. A number of first order tributaries flow south west over the entirety of the property, into Bowning Creek which eventually joins the Yass River to the south. A series of online dams and other drainage adjustments adjacent on the property have altered the nature and flow of this watercourse. The drainage line in the study area does not retain permanent water and is unlikely to have been a focus for Aboriginal landscape use considering the proximity of the more varied and permanent resource zones of Bowning and Derringullen Creeks.

The paddock comprising the study area has been cleared of native vegetation and is covered with introduced pasture grasses. Regrowth vegetation and single large trees are present within the property with larger tree coverage marking the boundary of the property to the west. Land use in the study area and surrounding local area is primarily associated with rural farming activities.

Implications for the study area

Environmental factors contribute directly to the type and survivability of archaeological sites within the landscape. In the study area, archaeological sites are most likely to occur as isolated finds or open artefact scatters on the ground surface. The study area is located on a hillcrest with a gentle gradient slope. The modified drainage line within the vicinity of the study area does not retain permanent water and the soil and geology in this portion of the study area has been subject to colluvial erosion processes.

Despite the overall low levels of archaeological sensitivity identified for the study area, the drainage line landscape feature within the study area (i.e. within 200m of water) is associated with Aboriginal occupation/activity as determined by the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. The occurrence of this landscape feature in an undeveloped area necessitated a visual inspection and as such the due diligence process progressed to the next step.

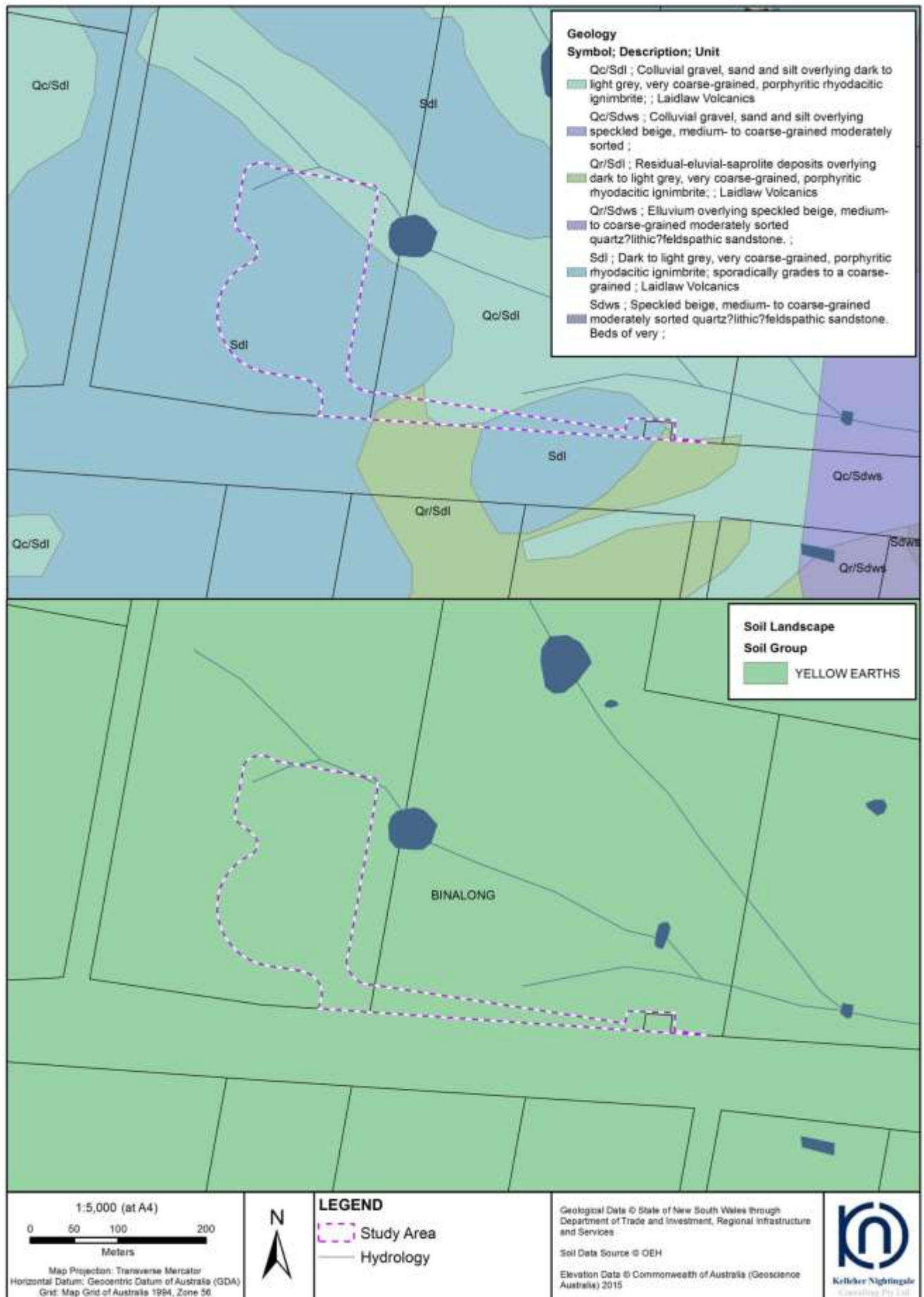


Figure 3. Geology and soil landscapes of the study area

2.4 Impact Avoidance

Background research identified no Aboriginal heritage items or Aboriginal archaeological sites either within or in the vicinity of the study area.

The proposed development on the property would impact the ground surface within the study area and therefore have the potential to harm any Aboriginal objects which may be present. The study area is located in a landscape context identified as sensitive by OEH (within 200m of waterways).

2.5 Desktop review summary

The desktop review and assessment combined the results of heritage register searches, previous investigations and landscape assessment.

No previously recorded Aboriginal archaeological sites or Aboriginal places are located within the boundaries of the study area.

Aboriginal archaeological assessments within the wider local area have found that environmental factors contribute directly to the type and survivability of archaeological sites within the landscape. Analysis of the landscape and location of previously identified Aboriginal archaeological sites suggests that stone artefacts situated on raised areas in close proximity to water sources are the most likely Aboriginal archaeology to be encountered within the study area. The soil landscapes within the study area are generally conducive to the preservation of Aboriginal archaeological deposits where disturbance levels are low.

Landscape assessment identified the potential for Aboriginal sites in the form of open artefact scatters to occur on the underlying geology. The preservation of open context archaeological sites in the study area would be differentially affected by environmental factors including erosion and land use disturbance. Ground disturbance has occurred across the entirety of the property in the form of vegetation clearance, dam construction and farming practices. Regarding other site types, outcropping sandstone suitable for grinding grooves, rock engravings or rock shelters do not occur within the study area. Culturally modified trees do not exist due to vegetation clearance.

OEH identifies particular landscape features that are often linked with the presence of Aboriginal objects, including waterways. The study area contains a first order creekline and is located approximately 1.5 kilometres from the landscape feature of Bowning Creek.

Visual inspection of the study area was therefore the next step of the due diligence assessment process.

2.6 Visual inspection

The study area was inspected and assessed by KNC on 3 March 2017. The visual inspection included a pedestrian walk-over covering the entirety of the study area. Visual inspection aimed to assess the extent of disturbance and integrity of the landforms within the study area and identify any Aboriginal archaeological sites which may be present.

No Aboriginal objects or areas of archaeological potential were identified within the study area during the visual inspection.

The study area is situated within a paddock on the property which contains a large dam. The study area is characterised by a crest in central portion of the paddock and encompasses the majority of the study area. A low to moderate gradient slope runs to the northeast boundary of the paddock. The majority of the paddock is unmaintained pasture and its primary use is for sheep grazing. The ground surface exposure was low due to thick grass cover.



Plate 1. View facing west showing study area and extensive grass cover.



Plate 2. View across the study area from southeast boundary. Photo shows gentle sloping across the study area and vehicle track disturbance.



Plate 3. View facing east showing the proposed slip lane route. Vehicle track erosion present in foreground.



Plate 4. Example of exposed ground, demonstrating soil erosion.

Observed soils in exposed areas, predominantly along vehicle tracks or at the gate entrance, were eroded across the study area. Exposed bedrock was present across the landscape in the form of large rock boulders and had been subject to erosional processes. Exposed areas where the grass has been removed due to disturbance demonstrate an eroded soil profile, with the majority consisting of clay material. These exposed areas were inspected for Aboriginal objects. No artefacts or areas of potential archaeological deposit were identified.

The route of the proposed slip lane was also inspected. Due to the extensive cut and fill works associated with the construction of the Hume Highway, this corridor was determined to be highly disturbed.



Plate 5. Example of rock boulders present across the site.



Plate 6. View facing south across entire study area, with the Hume Highway on the horizon.



Plate 7. View to the south showing rock boulders with the cut and fill works associated with the Hume Highway in the background.



Plate 8. View of the road corridor showing the fill in the front left corner and the cut in the back right corner, associated with the Hume Highway construction.

Overall, contemporary farming practices and land use practices (including vegetation clearance and grazing) had disturbed the study area and reduced its archaeological sensitivity. No Aboriginal objects or areas of Aboriginal archaeological potential were identified within the property. There is a very low likelihood of any intact archaeological deposit remaining within the study area.

3 Statutory Requirements

The *National Parks and Wildlife Act 1974* is the primary statutory control dealing with Aboriginal heritage in New South Wales. Items of Aboriginal heritage (Aboriginal objects) or declared Aboriginal places are protected and regulated under the Act.

An “Aboriginal object” is defined under the 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 New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains”. As such, Aboriginal objects are confined to physical evidence and are commonly referred to as Aboriginal sites.

It is an offence to harm or desecrate an Aboriginal object, either knowingly [section 86 (1)] or unknowingly [section 86 (2)]. Harm includes to destroy, deface, damage or move. An Aboriginal heritage impact permit (AHIP) issued under section 90 (1) of the Act is required for any activity which will harm an Aboriginal object or declared Aboriginal place.

Section 87 (2) of the Act provides a defence against prosecution under section 86 (2) if “the defendant exercised due diligence to determine whether the act or omission constituting the alleged offence would harm an Aboriginal object and reasonably determined that no Aboriginal object would be harmed”.

This due diligence assessment report was commissioned to:

- exercise due diligence in relation to Aboriginal objects;
- comply with the requirements of *the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* (DECCW, September 2010);
- identify if the proposal would harm an Aboriginal object and, if so, what measures can be taken to avoid that harm; and
- reasonably determine that no Aboriginal object would be harmed.

No Aboriginal objects were identified in the study area. It has been reasonably determined based on assessment of levels of disturbance and visual inspection that no Aboriginal objects will be harmed by the proposed works within the study area.

4 Discussion

No Aboriginal heritage was identified within the study area of the proposed highway service centre on the Hume Highway, Bowning.

No Aboriginal objects or archaeological sites were identified during background research or visual inspection of the area.

Visual inspection of the study area did not identify any Aboriginal archaeological sites within the study area. Landform and disturbance assessment found that contemporary land use has changed the characteristics of soil development within the study area. Erosion has effectively removed topsoils across the property following vegetation clearance, leading to a very low likelihood of any intact archaeological deposit remaining within the study area. No Aboriginal objects or areas of Aboriginal archaeological potential were identified during the visual inspection and it is considered unlikely that Aboriginal objects remain in open contexts along the slopes or on the crest.

In sum, visual inspection did not identify any Aboriginal objects or areas of archaeological potential within the study area. The archaeological sensitivity of the study area is limited by landform context, soil erosion and existing disturbance and the proposal is considered unlikely to have an impact on items of Aboriginal heritage.

5 Conclusions and Recommendations

There are no previously recorded Aboriginal archaeological sites within the study area and no Aboriginal objects or areas of archaeological potential were identified within the study area during the course of the due diligence assessment. The landscape context of the study area is not considered archaeologically sensitive for the region.

It can be reasonably determined, based on the assessment of landform and visual inspection of the study area, that no Aboriginal objects would be harmed by the proposal.

Based on the results of the due diligence assessment there are no Aboriginal archaeological constraints to the proposal and according to the OEH *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales* the proposed works can proceed with caution.

References

- Crasmsie, Pogson and Baker, 1973. *Geology of the Yass 1:100,000 Sheets*. Geological Survey of New South Wales, Department of Mines.
- Koettig, M. 1986. *Survey for Aboriginal Sites along the Proposed Water Pipeline between Bowring and Yass*. Report to Public Works Department, New South Wales.
- National Parks and Wildlife Service NSW (NPWS), 2003. *The Bioregions of New South Wales: Their Biodiversity, Conservation and History*. National Parks and Wildlife Service NSW, Hurstville NSW.
- New South Wales Archaeology Pty Limited, 2008. *Yass Valley Wind Farm Archaeological and heritage Assessment*. Report prepared for Yass Valley Wind Farm Pty Ltd.
- New South Wales Archaeology Pty Limited, 2012. *Proposed Yass Valley Wind Farm Archaeological and Heritage Assessment Addendum – Transmission Line*. Report prepared for Yass Valley Wind Farm Pty Ltd.
- New South Wales Archaeology Pty Limited, 2013. *Rye Park Wind Farm Aboriginal Cultural heritage Assessment Report*. Report prepared for Epuron.
- Oakley, B, 1995. *Archaeological investigation Optus Communications*. Report to Optus Communications.
- Office of Environment and Heritage (OEH), 2010. *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney.

Appendix A AHIMS Search Results



Office of
Environment
& Heritage

AHIMS Web Services (AWS) Search Result

Purchase Order/Reference : 1831

Client Service ID : 267935

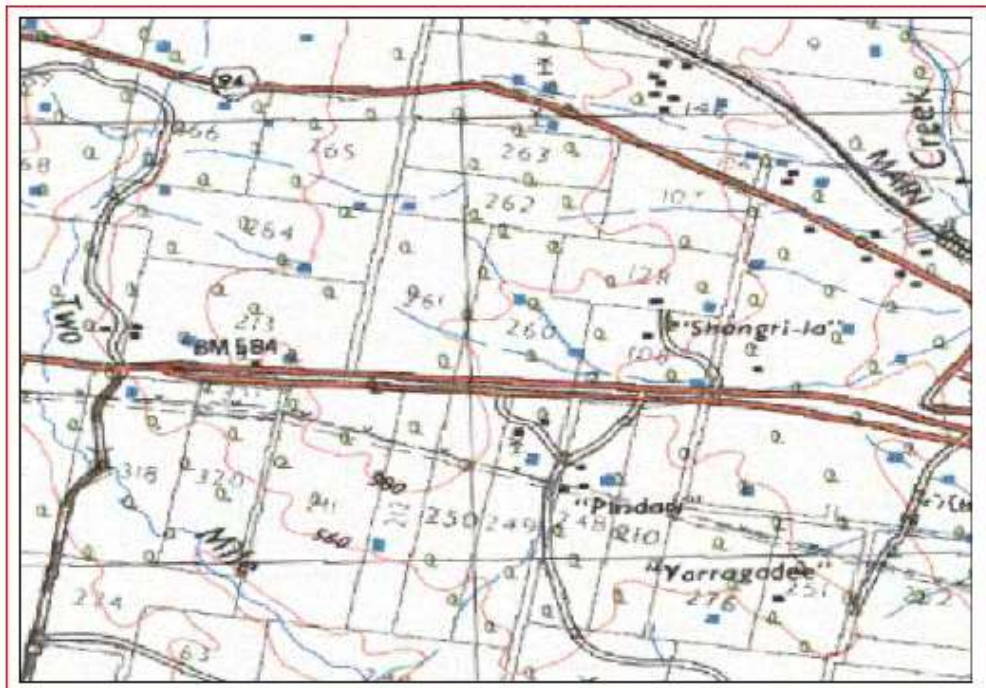
Kelleher Nightingale Consulting Pty Ltd
Level 10 25 Bligh Street
Sydney New South Wales 2000
Attention: Madeline Harding
Email: madeline.harding@knconsult.com.au

Date: 22 February 2017

Dear Sir or Madam:

AHIMS Web Service search for the following area at Datum :GDA, Zone : 55, Eastings : 662700 - 665690, Northings : 6149930 - 6152320 with a Buffer of 0 meters, conducted by Madeline Harding on 22 February 2017.

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 the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. ⁴

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](http://www.nsw.gov.au/gazette) (<http://www.nsw.gov.au/gazette>) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit 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 Office of Environment and Heritage 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.

3 Marist Place, Parramatta NSW 2150
Locked Bag 5020 Parramatta NSW 2220
Tel: (02) 9585 6380 Fax: (02) 9873 8599

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au