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**Ms Odette Adams**  
**King & Wood Mallesons**  
Level 61, Governor Phillip Tower,  
1 Farrer Place, Sydney NSW 2000

3<sup>rd</sup> March 2017

Dear Ms Adams,

**RE:      Aboriginal Archaeological Due Diligence Assessment  
            25 & 25A Ocean View Drive, Wamberal**

This letter provides a due diligence assessment relating to the potential for Aboriginal objects to be present within the Subject Area (as defined below) which could be affected by the proposed development.

The Subject Area consists of 25, 25A & 25B Ocean View Drive, Wamberal (Lots 1, 2 & 3 DP 524938), part of an area known as "The Ruins". The Subject Area covers approximately 2540 sqm, as shown in Figure 1.

We understand that works for the construction of protection works (a rock revetment with piled toe) are proposed on the eastern boundary of the 6 properties immediately south of the Subject Area (Works).

**Proposed Development Works and Potential Impacts**

Plans documenting the Works for the project have been prepared by James Taylor and Associates. The plans reviewed in making this assessment were given the reference Project 5968 S.01-S.11, prepared in March 2017.

From these plans it is clear that no works are proposed to be carried out within the Subject Area. It should be noted, however, that works will occur along the southern margin of the Subject Area.

Generally, the Works involve the construction of a rock revetment and piled toe on land to the south of Subject Area. A detailed description of the Works is included in a report prepared by Horton Coastal Engineering.

If the Works are completed, there may be changes to the erosion patterns along the beach in severe storms. The Works may have a so called *end effect* on part of The Ruins. The details of the Works are outlined in the Development Application. A diagram detailing the Potential End Effect Impacts, provided by Horton Coastal Engineering is presented as Figure 2. Horton Coastal Engineering advised that this Figure, completed for the SOFC in Reply on 10 January 2017, was also suitable for describing the end effects at The Ruins for the design assessed for this report.

### Landscape Features

The Subject Area is situated on the sand dune system that separates Terrigal Lagoon from the ocean. The lagoons and lakes on the Central Coast formed during the Holocene period (last 10,000 years) after the sea level rose and sandy barriers developed to separate the lagoon and lakes from the ocean. During that period, the floodplains of many of the major low-lying coastal creeks (eg. Ourimbah) would have formed estuarine water bodies that gradually infilled with sediment, transforming into less saline swamps, and in the most recent past, into wetlands. Wamberal Lagoon and Terrigal Lagoon, to the north and west of the present Subject Area, would also have formed in a similar manner in the Holocene period however they still remain saline water bodies as their connection to the ocean has been maintained and they remain tidal.

It has been suggested that the elevated lands further west of the Subject Area, in the foot hills, would have been a primary location for Aboriginal habitation right through the mid-late Holocene. The immediate environs of the Subject Area does, however, provide an environment rich in subsistence resources. The estuarine/saline water bodies, such as Wamberal Lagoon and Terrigal Lagoon, would have also hosted fish and shellfish, such as cockle, mud whelk and mud oyster waterbirds. Locations for permanent and semi-permanent camps would have been reliant upon proximity to potable water. Potable water would have been available, often on an ephemeral basis, from the many local creeks (eg. Bangalow and Chittaway Creeks and their tributaries). Resources of the coastline were also in close proximity.

The Subject Area is in close proximity to landscape features which may be associated with Aboriginal occupation activities. However, examination of each feature as part of an archaeological survey (refer below), indicates that there is a low potential for the existence of Aboriginal archaeology.

### Land-Use Disturbance

The Subject Area has previously been utilised for residential dwellings. Section 4 of the SEE prepared by Horton Coastal Engineering provides photographic evidence of the levels of disturbance within the Subject Area that occurred in 1978. From this photography it is clear that the area that may be impacted by the proposed works has already been substantially altered, and as a result, it is highly unlikely that any Aboriginal objects remain *insitu* at the location.

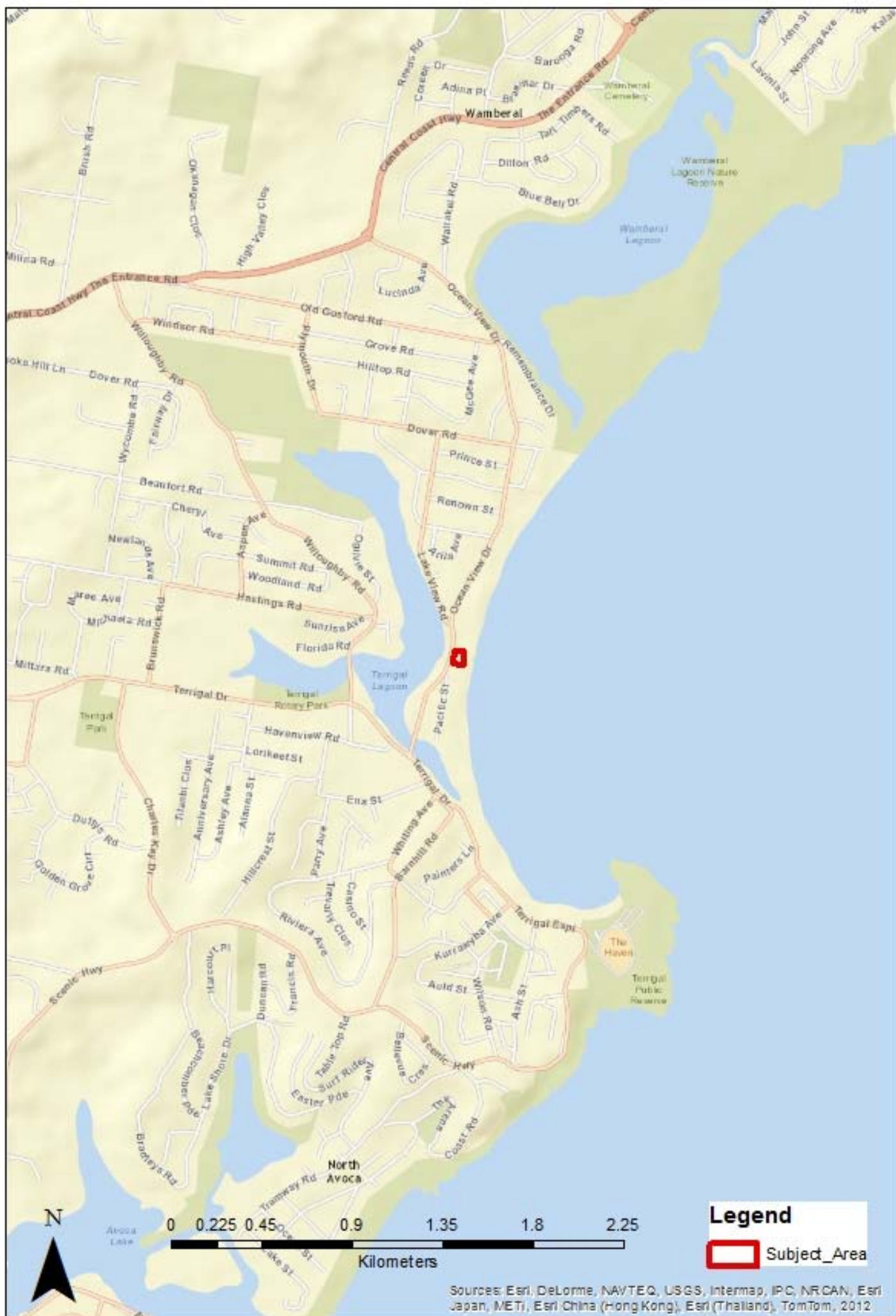


Figure 1: Project Location





**Figure 1: Indicative end effects related to existing and proposed protection works based on Carley et al (2013), with red line being the existing 100 year ARI storm extent of erosion, blue line being the existing end effect from the Manyana revetment, magenta line being the existing end effect from the 33 and 35 Ocean View Drive revetment, and yellow line being the end effect from the proposed revetment (2014 aerial photograph)**

**Figure 2: Indicative End Effect Impacts**

### Archaeological Background

KAS has consulted the Aboriginal Heritage Information Management System (AHIMS) maintained by the Office of Environment and Heritage (OEH) to ascertain if there are known instances of Aboriginal heritage within the Subject Area. The results of the search of AHIMS indicate that a number of Aboriginal sites are known to occur within 8km of the Subject Area. These sites also exhibit a range of Aboriginal sites types (refer to Table 1). From Table 1 it is clear that sites containing Shell and Artefacts are the dominant type of site. These sites are generally referred to as "Middens", 63% of the AHIMS recorded sites in the area can be classified in to this category. The next highest ranking major site type is Rock Arts Sites, these represent 35% of sites, although it should be noted that a small percentage of these types are also in the Midden category.

Burial sites have also been identified, in our search results there are 2 sites clearly identified as being burials and another site that is restricted. It has been assumed that the restricted site is also a burial in this instance. Burials represent 3% of the sites in the general area. This is higher than would typically be expected in more general models of Aboriginal occupation, however given the environmental context (See Landscape Features) of the immediate area it is not unusual, and simply reinforces that position that sand dune systems are known to be preferred locations for the internment of remains.

Site Types	Total	%
Art (Pigment or Engraved)	28	27
Art (Pigment or Engraved), Artefact	1	1
Art (Pigment or Engraved), Grinding Groove	1	1
Art (Pigment or Engraved), Shell	1	1
Art (Pigment or Engraved), Artefact, Shell	4	4
Artefact	15	15
Artefact, Shell	33	33
Restricted	1	1
Burial, Shell, Artefact	2	2
Earth Mound	1	1
Grinding Groove	6	6
Potential Archaeological Deposit (PAD)	4	4
Shell	6	6
Shell, Artefact, Grinding Groove	1	1
Grand Total	104	100%

**Table 1: Site Types from AHIMS**  
(1km buffer)

The location of these sites in proximity to the Subject Area can be seen in Figure 4.



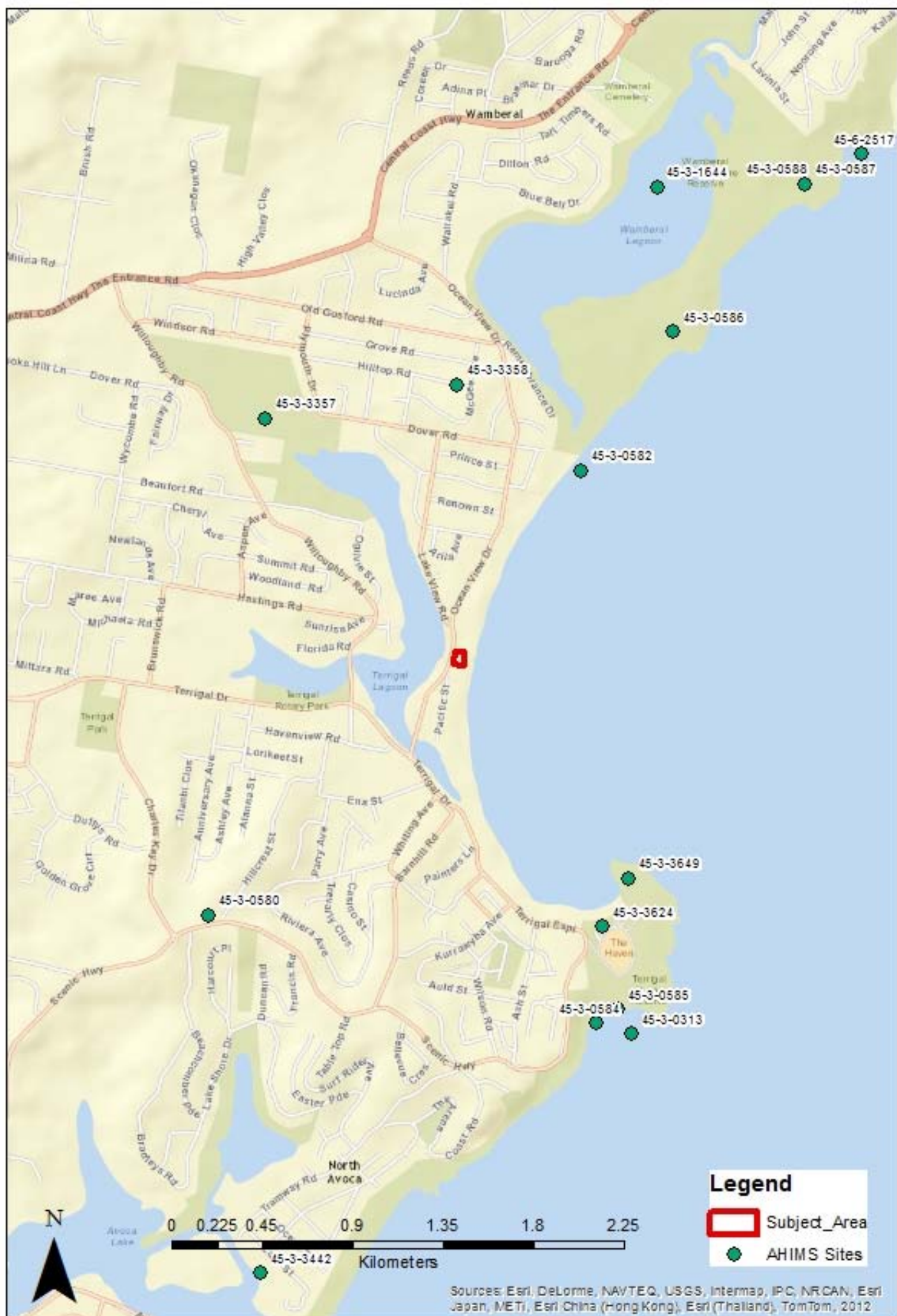


Figure 3: AHIMS Search Results

### Archaeological Inspection

A pedestrian survey was conducted on the 1 March 2017 by Lance Syme, Principal Archaeologist. The field assessment included the completion of visual inspections throughout all readily accessible portions of the Subject Area. Detailed inspections were carried out at the location of ground surface exposures, which may contain stone artefacts and of the exposed sand dune at the tidal edges. All mature trees were also inspected for evidence of cultural modification.

No trees were identified within the Subject Area that exhibited diagnostic attributes of culturally modified trees as defined by Long (2008).

No Aboriginal objects were identified during the survey.

### Due Diligence Assessment

Kayandel Archaeological Services was asked to conduct an Aboriginal archaeological assessment of the Subject Area in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*, published by the Department of Environment, Climate Change and Water (now the Office of Environment and Heritage) in 2010 (DECCW, 2010). This Due Diligence Code sets out the matters which are to be addressed when assessing whether or not an activity may harm Aboriginal Objects.

When applied, the Due Diligence Code, with reference to the DECCW process (Appendix 2), produces the following conclusion in regard to the impact of the proposed works on the Subject Area:

1. The Works are not an activity under Part 3 under s.75B of the EP&A Act;
2. The Works are not exempt under the *National Parks and Wildlife Act, 1974* or *National Parks and Wildlife Regulation, 2009*;
3. The Works will not involve harm that is trivial or negligible;
4. The Works are not within an Aboriginal place and no previous investigations meeting the requirements of this code have identified Aboriginal objects;
5. The Works are not a low impact one for which there is a defense in the *National Parks and Wildlife Regulation, 2009*; and,
6. The Works are not eligible to use an industry specific code of practice.

Consequently, the Generic Due Diligence Code is to be followed. The Office of Environment and Heritage has established a flow chart to assist in determining if an Aboriginal Heritage Impact Permit (AHIP) is required. The responses, as they relate to the Works being assessed, can be found below and in Appendix 1.

1. The Works will disturb the ground surface, but will not disturb any culturally modified trees;
2. a. the Subject Area does not have any previously confirmed site records or other associated landscape feature information on AHIMS;
- b. there are no sites identified within the Subject Area;

- c. there are landscape features that are likely to indicate the presence of Aboriginal objects;
3. The carrying out of the Works cannot be avoided at the relevant landscape features identified over the Subject Area; and,
4. The desktop assessment and visual inspections indicated that the likelihood of Aboriginal objects being present is low.

As such, an AHIP is not required for the Works as currently proposed, however caution must be exercised.

### **Recommendations**

It is recommended that:

1. Based upon the results of the inspection undertaken there are no trees present within the Subject Area that exhibit diagnostic attributes of modification through Aboriginal cultural practices that would restrict further development assessment of the proposed works;
2. The Works as currently specified can proceed with caution. If Aboriginal objects are located, works must cease, and the Office of Environment and Heritage must be notified. If human remains are located, works must cease, the site must be secured and the NSW Police and OEHL be notified;
3. Should the design and/or extent of the proposed development be altered, further archaeological assessment may be required; and,
4. The proponent should advise all relevant personnel and contractors involved in the design and construction of the project of the relevant legislative requirements, and recommendations of this assessment in relation to Aboriginal heritage management requirements.





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If you have any questions about any aspect of this Due Diligence assessment, please contact me on (02) 4627 8622.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lance Syme'.

Lance Syme

Principal

B Arts (Arch/Paleo), Grad Dip (Heritage Conservation)

Full Member International Council on Monuments and Sites (M.ICOMOS)

Expert Member International Committee on Archaeological Heritage Management

Registered Cultural Heritage Advisor

#### Reference List

DECCW, 2010, *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. Department of Environment, Climate Change and Water, Sydney South

Long, A. 2008, *Aboriginal Scarred Tree in New South Wales: A Field Manual*, Department of Environment and Conservation (NSW), Sydney.

Appendix 1: Plates



**Plate 1:** General view looking south



**Plate 2:** General view looking north





**Plate 3:** General view looking south.



**Plate 4:** View of Soil Profile in Lunette

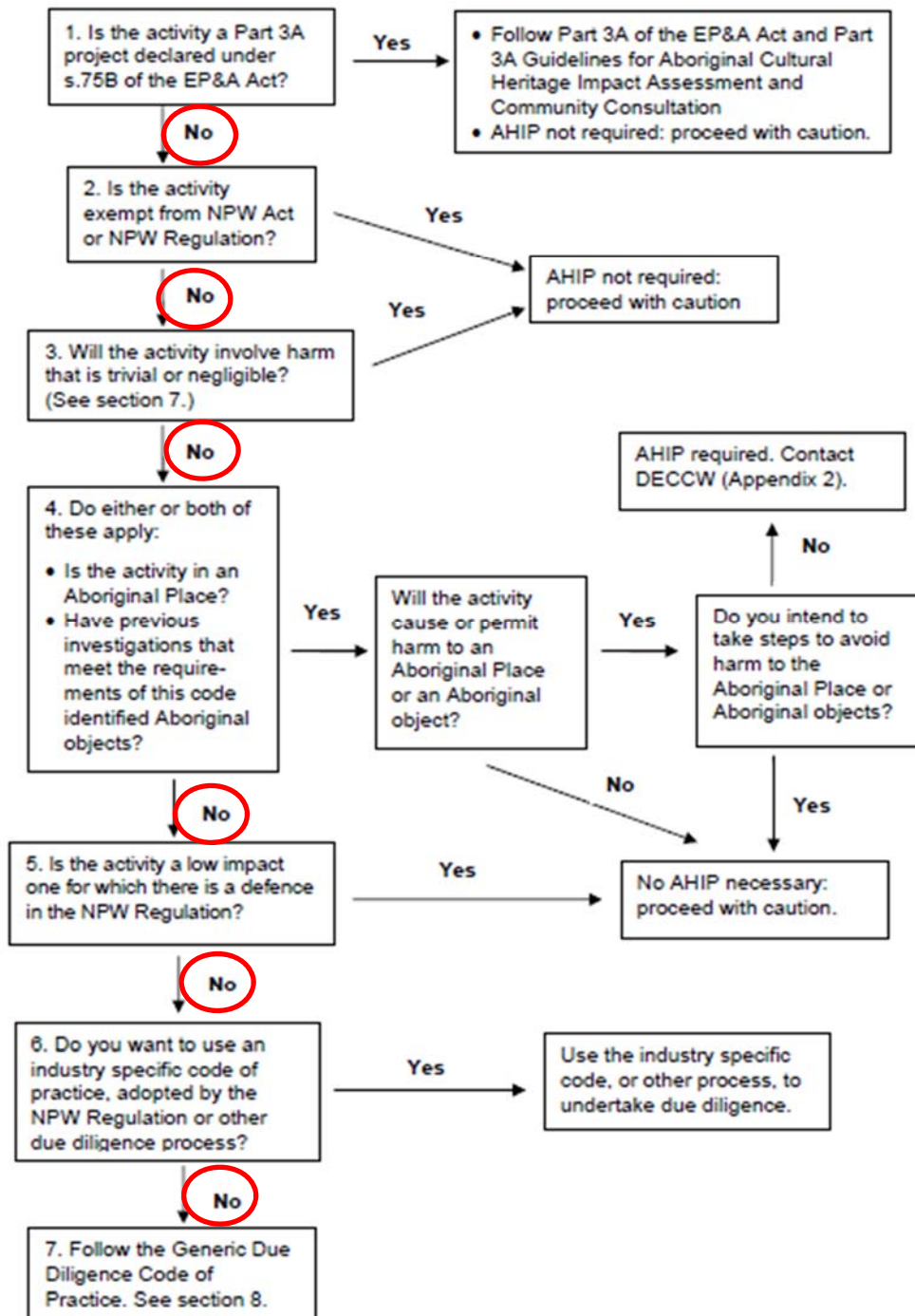




**Plate 5:** View looking west over area potentially subject to end effected

Appendix 2: Due Diligence Decision Process, from DECCW 2010 pages 1 & 10

## 1 Do you need to use this due diligence code?



## 8 The generic due diligence process

