

## 6. ASSESSMENT OF IMPACTS

### 6.1. DETAILED ASSESSMENT IMPACTS

#### 6.1.15. Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Assessment (**ACHA**) has been undertaken by Urbis and a final Aboriginal Cultural Heritage Assessment Report (**ACHAR**) is attached as **Appendix AA**.

The ACHA has been undertaken to investigate whether development of the site will harm Aboriginal objects or places that may exist within the site area and determine whether the subject area presents any Aboriginal archaeological and heritage constraints. The current draft ACHA report presents the results of the ACHA.

The ACHA was undertaken in accordance with Part 6 of the *National Parks and Wildlife Act 1974* and Part 5 of the *National Parks and Wildlife Regulation 2019*. The ACHA was further conducted in accordance with the following guidelines:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (Department of Environment, Climate Change and Water).*
- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (Office of Environment and Heritage 2011).*
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010b).*
- *The Australia ICOMOS Charter for Places of Cultural Significance, The Burra Charter, 2013.*

##### 6.1.15.1. Existing Environment

The ACHAR assesses the existing site context including search results from the Aboriginal Heritage Information Management System (**AHIMS**) and considers previous archaeological investigations relevant to the site.

The AHIMS search identified no Aboriginal sites and no Aboriginal places within the subject area. The nearest registered Aboriginal objects located approximately 1km to the south-east of the subject area. In the broader search area, a total of 14 Aboriginal objects and no Aboriginal places are registered.

The following conclusions are drawn from the archaeological background information, including AHIMS results and pertinent regional archaeological investigations:

- No Aboriginal objects or Aboriginal places are registered within the site area.
- No previous Aboriginal archaeological investigations have been identified that directly address the site area.
- Previous archaeological investigations from similar contexts near to the site identified the potential for archaeological resources dating to the Pleistocene within intact natural soils below modern fill layers.

The ACHAR also undertakes an assessment of the archaeological and environmental contexts of site and finds that:

- The site is located within 200m of a former natural waterway, now canalised as Bunnerong Stormwater Channel No. 11, which is an archaeologically sensitive landscape feature.
- Historical activities, including land clearance, construction and demolition of buildings and utilisation of the subject area for industrial purposes, are determined to have caused a high level of ground disturbance across the subject area.
- Geotechnical findings confirm the impact of historical activities on the soil profile, with a minimum inferred disturbance depth based on core penetration testing of 0.8m below the existing ground surface.

- Geotechnical findings further indicate the presence of an intact natural sand body below approximately 0.8m, likely the Tuggerah soil landscape, which is an archaeologically sensitive landform.
- There is nil to low potential for Aboriginal sites within the disturbed soil layers to depths of approximately 0.8m below the existing ground surface.

#### 6.1.15.2. Potential Impacts

The ACHA utilises a predictive model to estimate the nature and distribution of evidence of Aboriginal land use at the site. The predictive model considers the variables that may influence the location, distribution and density of sites, features or artefacts within the area. Variables relate to the environment and topography, such as soils, landscape features, slope, landform and cultural resources.

The likelihood of the occurrence of Aboriginal site types at the site as identified by the draft ACHAR is shown in **Table 16** below. It is concluded that the site has low – moderate archaeological potential for artefact scatters / campsites, burials, isolated finds, middens and potential archaeological deposits (**PADS**) dating to the Pleistocene within intact natural soil at depths exceeding approximately 0.8m below the existing ground surface.

Table 16 Predictive model for assessment of archaeological potential

Site Type	Assessment	Potential
Art	The site does not include any visible sandstone outcrops or rock overhangs that would be indicative of the potential for rock art. The likelihood of any concealed rock overhangs or sandstone outcrops being present within the subject area is considered to be negligible.	Nil
Artefact Scatters / Campsites	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. A high level of historical ground disturbance across the entire site significantly reduces the potential for artefact scatters / campsites to a depth of approximately 0.8 to 1.4 m below the existing ground surface. However, there is moderate potential for the presence of artefact scatters / campsites within deeper intact natural soils.	Moderate
Bora / Ceremonial	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. However, due to the high level of historical ground disturbance across the entire site area and susceptibility of bora / ceremonial sites to disturbance, the likelihood of such sites being retained is considered to be low.	Low

Site Type	Assessment	Potential
Burial	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. A high level of historical ground disturbance across the entire site significantly reduces the potential for burials to a depth of approximately 0.8 to 1.4 m below the existing ground surface. However, there is moderate potential for the presence of burials within deeper intact natural soils.	Moderate
Contact site	The location of the site within an area of early European settlement is indicative of the potential for contact sites. However, a high level of historical ground disturbance across the entire site significantly reduces the potential for contact sites to be retained.	Low
Grinding Grooves	The site does not include any visible sandstone outcrops that would be indicative of the potential for grinding grooves. The likelihood of any concealed sandstone outcrops being present within the site area is considered to be negligible.	Nil
Isolated Finds	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. A high level of historical ground disturbance across the entire site significantly reduces the potential for isolated finds to a depth of approximately 0.8 to 1.4m below the existing ground surface. However, there is moderate potential for the presence of isolated finds within deeper intact natural soils.	Moderate
Midden	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. A high level of historical ground disturbance across the entire site significantly reduces the potential for middens to a depth of approximately 0.8 to 1.4 m below the existing ground surface. However, there is moderate potential for the presence of middens within deeper intact natural soils.	Moderate
Modified Trees	Historical development of the site has resulted in clearance of all vegetation, removing any potential for the presence of modified trees.	Nil

Site Type	Assessment	Potential
PAD	The site is located within 200m of a former natural waterway and within a sand body, likely the Tuggerah soil landscape. A high level of historical ground disturbance across the entire site significantly reduces the potential for archaeological deposits to a depth of approximately 0.8 to 1.4m below the existing ground surface. However, there is moderate potential for the presence of archaeological deposits within deeper intact natural soils.	Moderate
Shelters	The site does not include any rock overhangs that would be indicative of the potential for shelters. The likelihood of any concealed rock overhangs being present within the subject area is considered to be negligible.	Nil

The ACHAR identifies that if any Aboriginal are retained within intact natural soils below the existing ground surface they would have high scientific significance as rare examples of early Holocene and Pleistocene occupation of the Sydney basin and for their potential to contribute to an understanding of the cultural history of the region at that time. There is limited potential for direct harm to unknown Aboriginal objects due to the proposed works, associated with the sinking of soil mix pile foundations, excavations for storm water infrastructure and landscaping.

The ACHA seeks to undertake an assessment and discussion of the cultural significance of the site, in consultation with the RAPs. The assessment takes into consideration the social, cultural, historic, scientific (archaeological) and aesthetic values of the site area.

Consultation with Aboriginal people has been undertaken in relation to the Aboriginal cultural heritage values (cultural significance) of Aboriginal objects and/or places within the development area. Consultation has been undertaken in accordance with the Consultation Requirements (DECCW 2010) as follows:

- Stage 1 – Notification of project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about the cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

The cultural significance assessment undertaken in consultation with the RAPs determined that the site area is determined to have social and cultural value to the Aboriginal community because of its association with a waterway (Bunnerong Creek). However, the research potential, education potential, representativeness and rarity of the site area is assessed to be low. As the waterway with which the site area is associated it is heavily modified and the surrounding ground highly disturbed, the site area offers no research potential in relation to the cultural importance of waterways to Aboriginal people. The site area is not a rare example of a cultural site associated with a waterway as many such sites are known in the Sydney region. Owing to the highly disturbed and modified state of the subject area, it offers little education potential and is not representative. The subject area is therefore assessed as having low social and cultural significance.

The ACHA also undertakes an assessment of the potential impact of the proposed development on any Aboriginal objects and/or Aboriginal places within the site areas and identifies possible strategies for avoiding or minimising harm to those Aboriginal objects and/or Aboriginal places. The potential harm to Aboriginal cultural heritage arising from the proposed works relates to the sinking of pile footings, or similar, below the existing slab, excavation for installation of a stormwater infrastructure and landscaping of areas along the site boundaries. The pile footings and stormwater infrastructure are deemed necessary for

structural and drainage reasons. The proposed landscaping will minimise impacts to any natural soil to the extent possible.

The desktop assessment undertaken has determined that there are no known Aboriginal objects or Aboriginal places within the subject area. The archaeological potential of the site has been assessed to be moderate for artefact scatters / campsites, burials, isolated finds, middens and PADS within intact natural soil at depths exceeding 0.8m below the existing ground surface. As such, the ACHA finds that there is limited potential for direct harm to Aboriginal objects due to the proposed works.

Owing to the discrete nature of the proposed impacts, the depth of the natural soil and the extent of the Tuggerah sand body in which the subject area is located, the cumulative impact of the proposal is considered to be low. It is likely that numerous potential sites at depth within the same sand body and the proposed impacts will not significantly affect inter-generational equity.

The ACHAR makes the following recommendations based on the assessment undertaken. The recommendations and conclusions of the ACHAR have been endorsed by the RAPs.

- Consultation with RAPs should continue until the finalisation of the proposed development to ensure the opportunity for community input.
- A staged subsurface archaeological investigation program should be undertaken prior to commencement of the proposed works to further minimise the possibility of harming any unknown objects in the site area.
- The subsurface archaeological investigation program should be undertaken with the participation of nominated Aboriginal RAPs and appropriately qualified archaeologists.
- An Archaeological Research Design (**ARD**) and Excavation Methodology (**EM**) should be developed to inform all subsurface archaeological investigations and to develop specific questions in relation to any Aboriginal archaeological resource that might be encountered and how Aboriginal people might have used the subject area in the past.
- A protocol for the handling of any Aboriginal objects and archaeological resources that might be uncovered during the monitoring and the archaeological test and salvage excavation should be developed, consultation with the RAPs, as part of the ARD and EM.
- An Archaeological Technical Report (**ATR**) should be prepared following completion of the archaeological excavation program, with further recommendations based on the findings of the test excavation, including in relation to any Aboriginal objects identified.
- In the unlikely event that human remains are uncovered during any site works, the procedure outlined in the below mitigations measures should be followed.

### **Mitigation Measures**

- Preparation of an Archaeological Research Design (**ARD**) and Excavation Methodology (**EM**).
- Undertake a staged subsurface archaeological investigation program prior to commencement of the proposed works with the participation of nominated Aboriginal RAPs and appropriately qualified archaeologists, including:
  1. A preliminary excavation within areas impact by the proposed works to determine if an intact natural sand body survives below the existing ground surface and whether or not that sand body is likely to retain any Aboriginal artefacts.
  2. A test and salvage excavation, which is only to be undertaken if the preliminary excavation determines that a natural sand body is present and Aboriginal artefacts are likely to be retained within the natural sand body.

### Human Remains Procedure

In the unlikely event that human remains are uncovered during the proposed works, the following steps must be followed:

1. All works within the vicinity of the find must immediately stop. The find must be cordoned-off and signage installed to avoid accidental impact.

2. The site supervisor or other nominated manager must notify the NSW Police and Heritage NSW (Enviroline 131 555).
3. The find must be assessed by the NSW Police, which may include the assistance of a qualified forensic anthropologist.
4. Management recommendations are to be formulated by the NSW Police, Heritage NSW and site representatives.
5. Works are not to recommence until the find has been appropriately managed.