

6.7 Aboriginal heritage

6.7.1 Methodology

Potential impacts to Aboriginal cultural heritage values as a result of the proposal were assessed in accordance with Roads and Maritime's PACHCI (NSW Roads and Maritime Services, 2011), as well as relevant statutory guidelines including the NSW Office of Environment and Heritage's *Guide to Investigation, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011). The PACHCI outlines a four stage process for investigating potential impacts to Aboriginal cultural heritage values as a result of Roads and Maritime road planning, development, construction and maintenance activities and includes a process of community consultation that aims to ensure that the role, function and views of Aboriginal people are considered and respected in the assessment process. The four stages of the PACHCI are detailed in Section 5.3 of this REF.

In accordance with Stage 2 of PACHCI, an Archaeological survey of the proposal area was carried out over five days (26-29 March and 3 April 2018). The survey team consisted of personnel from AECOM, Roads and Maritime, registered native title claimant group PCWP and Wanaruah LALC.

In late 2018 works in accordance with Stage 3 of the PACHCI were carried out for the proposal, including additional archaeological survey and test excavations. The Stage 3 test excavations were carried out for all sites identified as containing Potential Archaeological Deposit (PAD) and as having potential to be impacted by the proposal. They were carried out over 14 days (19 to 23 and 26 to 30 November, 3 to 6 December 2018). The survey team consisted of personnel from AECOM, Roads and Maritime, OEH and site officers representing multiple Representative Aboriginal Parties (RAPs).

An Aboriginal Cultural Heritage Assessment Report (ACHAR), which details the results of the Aboriginal heritage assessment, has been prepared for the proposal and is included in Appendix E. The ACHAR should be read in conjunction with Aboriginal Archaeological Report (AAR) (AECOM, 2019), and Aboriginal Cultural Values Assessment Report (ACVAR) (Waters Consultancy, 2019) which are appended in the ACHAR.

The Aboriginal cultural heritage assessment included:

- Consultation with Aboriginal stakeholders and the local Aboriginal community
- A review of relevant literature and databases
- Field survey
- Archaeological test excavation
- Provision of mitigation measures based on the results of the investigation and the anticipated impacts of the project.

Aboriginal consultation

Aboriginal community consultation was carried out in accordance with OEH's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010a) and Roads and Maritime's PACHCI. Aboriginal consultation that has been carried out to date is detailed in Section 5.3 and Appendix E.

6.7.2 Existing environment

According to Tindale's (1974) tribal map, the proposal area is located within the traditional lands of the Wonnarua people, with surrounding 'tribes' including the Awabakal and Worimi to the east, the Darkinjung to the south, the Geawegal to the north and the Wiradjuri to the west. Historical records indicate that Tindale's division of the Awabakal and Wonnarua into two separate 'tribes' does not adequately capture what was a complex system of social and territorial organisation involving numerous local descent groups (i.e. clans) and bands who spoke the same language. Individual bands would have occupied and used the resources of particular tracts of land within the overall territory of their clan, although the territorial boundaries would have been permeable or elastic in the sense of complex kinship ties.

Available records suggest that residential mobility was generally quite high. Fawcett (1898) notes that the Wonnarua 'had no permanent settlements, but roamed about from place to place within their tribal district, in pursuit of game and fish, which was their chief sustenance, making use periodically of the same camping grounds'. Documented 'ceremonial' activities carried out by the Aboriginal groups occupying the Hunter Valley include corroborees, male initiation ceremonies, marriage, ritual combat and various burial, body adornment and modification practices.

The topography of the proposal area is divided into two broad topographic units, referred to as the 'Hunter River Floodplain' and the 'Northern Hills'. Both topographic units contain landforms amenable to occupation by Aboriginal people in the past.

The proposal area contains parts of several first to greater than fourth order streams. The Hunter River, which bisects the proposal area on an east-west axis, is the primary and only named watercourse, with level to very gently inclined terrain in the southern half of the proposal area comprising part of the river's extensive right bank floodplain.

AHIMS Sites

A search of the Aboriginal Heritage Information Management System (AHIMS) database was completed on 15 January 2019, covering a 20 by 20 kilometre area centred on the proposal area. The search returned 1360 registered sites. Desktop review of these results identified six registered Aboriginal sites located within or immediately adjacent to the proposal area. These include a scarred tree (37-6-0681) and open artefact sites McDougall Hill 2 (37-6-0789), McDougall Hill 3 (37-6-0788), McDougall Hill 4 (37-6-0787), Singleton Golf Course 1 (37-6-1466) and Singleton Golf Course 3 (37-6-1468) (refer to Figure 6-21).

Archaeological Significance

The archaeological field investigations carried out as part of the ACHAR recognised a total of 25 Aboriginal archaeological sites within the proposal area, including 23 open artefact sites, a single area of PAD and a single potential scarred tree. An assessment of scientific significance identified 23 of these sites to be of low scientific significance and the remaining two (Singleton Bypass OAS4 and OAS19) of moderate scientific significance.

Cultural Significance

The cultural values assessment identified one specific site of cultural significance within the proposal area (Cultural Site A: Gathering Place) and two associated sites of cultural significance outside the proposal area (Cultural Site B: Cultural Line of Sight and Cultural Site C: Camping Place). In addition, a number of places of cultural significance have been identified in the surrounding landscape including pathways, a ceremonial ground, camping grounds, resource areas, and high points that provide lines of sight.

Removed due to cultural sensitivity

Figure 6-21: AHIMS registered sites

6.7.3 Potential impacts

Construction

Proposed ground disturbance activities within the proposal area are anticipated to impact 16 of the 25 Aboriginal archaeological sites, with a total loss of value for 13 sites and partial loss of value for the remaining three sites. Proposal impacts to Aboriginal archaeological sites are detailed in Table 6-36 and shown on Figure 6-22 and Figure 6-23

Proposed ground disturbance activities are also anticipated to impact one of the three sites of cultural significance identified within the proposal area, Cultural Site A: Gathering Place, which would result in a partial loss of value, as detailed in Table 6-37 and shown on Figure 6-24.

Table 6-36: Impact assessment for Aboriginal archaeological sites within the proposal area

Site name	AHIMS ID(s)	Site type	Type of harm	Degree of harm	Consequence of harm	Site area (m ²)	Area of Impact (m ²)	Total% Harmed
Singleton Bypass OAS1	37-6-3894	Isolated artefact	Will not be harmed	None	No loss of value	1	-	-
Singleton Bypass OAS2	37-6-3895	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS3	37-6-3896	Artefact scatter	Will not be harmed	None	No loss of value	877	-	-
Singleton Bypass OAS4	37-6-3897	Artefact scatter	Will not be harmed	None	No loss of value	14,156	-	-
Singleton Bypass OAS5	37-6-3890	Artefact scatter	Will not be harmed	None	No loss of value	1003	-	-
Singleton Bypass OAS6	37-6-3893	Artefact scatter	Will not be harmed	None	No loss of value	206	-	-
Singleton Bypass OAS7	37-6-3889	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS8	37-6-3888	Artefact scatter	Will not be harmed	None	No loss of value	4251	-	-
Singleton Bypass OAS9	37-6-3887	Artefact scatter	Direct	Total	Total loss of value	2	2	100
Singleton Bypass OAS10	37-6-3886	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS11	37-6-3892	Artefact scatter	Direct	Total	Total loss of value	438	438	100
Singleton Bypass OAS12	37-6-3891	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS13	37-6-3900	Artefact scatter	Direct	Total	Total loss of value	4	4	100
Singleton Bypass OAS14	37-6-3899	Isolated artefact	Will not be harmed	None	No loss of value	1	-	-
Singleton Bypass OAS15	37-6-3898	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS16	37-6-3901	Isolated artefact	Will not be harmed	None	No loss of value	1	-	-
Singleton Bypass OAS17	37-6-3905	Isolated artefact	Direct	Total	Total loss of value	1	1	100
Singleton Bypass OAS18	37-6-3904	Artefact scatter	Direct	Partial	Partial loss of value	11,171	4205	37.6
Singleton Bypass OAS19	37-6-3903 37-6-1466 37-6-1468	Artefact scatter	Direct	Partial	Partial loss of value	182,481	162,277	88.9
Singleton Bypass OAS21	37-6-3925	Artefact scatter	Direct	Partial	Partial loss of value	59,497	14,309	24

Site name	AHIMS ID(s)	Site type	Type of harm	Degree of harm	Consequence of harm	Site area (m ²)	Area of Impact (m ²)	Total% Harmed
Singleton Bypass OAS22	37-6-3927	Artefact scatter	Direct	Total	Total loss of value	1	1	100
McDougall Hill 2	37-6-0789	Artefact scatter	Direct	Total	Total loss of value	741	741	100
McDougall Hill 3	37-6-0788	Artefact scatter	Direct	Total	Total loss of value	1	1	100
Scarred tree	37-6-0681	Artefact scatter	Direct	Total	Total loss of value	N/A	N/A	100
Singleton Bypass PAD3	37-6-3928	PAD	Will not be harmed	None	No loss of value	27,287	-	-

Removed due to cultural sensitivity

Figure 6-22: Impact assessment - Aboriginal archaeological sites (northern section)

Removed due to cultural sensitivity

Figure 6-23: Impact assessment - Aboriginal archaeological sites (southern section)

Table 6-37: Impact assessment for identified sites of cultural significance

Site name	Description	Cultural significance	Impact (Yes or No)	Degree of harm	Consequence of harm
Site A: Gathering Place	A culturally significant camping, resource and gathering place.	This place has High Significance to the local Aboriginal community as a traditional and historical camping, resource and gathering place.	Yes	Partial direct harm	Partial loss of value
Site B: Cultural Line of Sight	A high point that provides a cultural line of sight.	The Gowrie line of sight has High Significance to the local Aboriginal community as a traditional location for orienting people within the cultural landscape and making visible the links between significant cultural places in the landscape.	No	None	None
Site C: Camping Place	A traditional and historical camp area associated with seasonal and ritual movement patterns within the wider region.	The Maison Dieu camping place is of Medium Significance to the local Aboriginal community. This cultural significance is a result of the areas use as a traditional and historical camp that was associated with seasonal and ritual patterns of movement across the landscape.	No	None	None

Removed due to cultural sensitivity

Figure 6-24: Impact assessment - cultural sites

Operation

The proposal is not expected to impact on any items of Aboriginal heritage or cultural values when it is operational.

6.7.4 Safeguards and management measures

Table 6-38: Summary of Aboriginal heritage mitigation measures

Impact	Environmental safeguards	Responsibility	Timing
Aboriginal heritage	A total of 16 Aboriginal archaeological sites, detailed in Table 6-37 will be impacted by the proposal. Roads and Maritime should apply for an 'all of area' AHIP for land to be impacted by the proposal (the 'AHIP area' shown on Figure 38 of Appendix E). This AHIP will allow impacts to these sites.	Roads and Maritime	Detailed design / pre-construction
Aboriginal heritage	Impacted open artefact site Singleton Bypass OAS19 (37-6-3903, 37-6-1466 and 37-6-1468) has been assessed as being of moderate scientific significance and will be partially impacted by the proposal. To mitigate the impact of the proposal on this site, an archaeological salvage program incorporating surface collection and excavation is recommended for the impacted portion of this site. Salvage activities within OAS19 can only occur after an AHIP has been obtained and should be completed in accordance with the research design and methodology provided in Appendix F of AECOM's AAR.	Roads and Maritime	Detailed design
Aboriginal heritage	Impacted open artefact sites Singleton Bypass OAS2 (37-6-3895), OAS7 (37-6-3889), OAS9 (37-6-3887), OAS10 (37-6-3886), OAS11 (37-6-3892), OAS12 (37-6-3891), OAS13 (37-6-3900), OAS15 (37-6-3898), OAS17 (37-6-3905), OAS18 (37-6-3904), McDougall Hill 2 (37-6-0789) and McDougall Hill 3 (37-6-0788) have been assessed as being of low scientific significance. Regardless, in recognition of their cultural significance, community collection is recommended for these sites, with collection to be limited to the impacted portion of each site. Community collection can only occur after an AHIP has been obtained from OEH and should be completed in accordance with research design and methodology provided in Appendix F of AECOM's AAR.	Roads and Maritime	Detailed design
Aboriginal heritage	Impacted subsurface artefact scatter sites Singleton Bypass OAS21 and OAS22 have been assessed as being of low scientific significance. No further management or mitigation actions are recommended for these sites.	Roads and Maritime	Detailed design
Aboriginal heritage	Should the requirement for impacts to AHIMS registered potential Aboriginal scarred tree 37-6-0681 be confirmed during the detailed design or construction phases of the proposal, a qualified arborist should be engaged to undertake a removal/relocation feasibility assessment of the tree. Subsequent mitigation will depend on the results on this assessment, as follows:	Contractor	Detailed design / pre-construction

Impact	Environmental safeguards	Responsibility	Timing
	<ul style="list-style-type: none"> Should the engaged arborist determine that 37-6-0681 is not suitable for relocation (i.e., due to the health of the tree and/or other factors), a detailed archival recording of the tree and its associated scars should be undertaken by a qualified archaeologist. A minimum of one RAP field representative will be invited to participate in the archival recording. Should the engaged arborist determine that 37-6-0681 is suitable for removal/relocation, the relocation procedure outlined in Section 10.1 of Appendix E should be employed. <p>All RAPs should be given the opportunity to review and comment on the arborist's relocation assessment report and if required, the removal methodology (including equipment), keeping place and ongoing access arrangements.</p>		
Aboriginal heritage	Ten Aboriginal archaeological sites, listed in Table 6-37, will not be impacted by the proposal and should be conserved in situ. The protection of these sites to be retained and those sites identified for partial impact will occur in accordance with the measures outlined in the adopted Aboriginal Heritage Management Plan.	Contractor	Detailed design / pre-construction
Aboriginal heritage	Cultural Site A: Gathering Place (Railway Bridge Camps) will be partially impacted by the proposal. Protective fencing should be erected between the zone of construction activity and the un-impacted area(s) of this site prior to any construction activities, with the un-impacted area(s) of the site to be clearly marked on all operational maps as 'no go zones' of environmental and heritage sensitivities. The location of the fencing at Cultural Site A: Gathering Place (Railway Bridge Camps) should be confirmed by a cultural heritage values consultant to ensure that it accurately reflects the mapped site. Fencing should be maintained throughout the duration of works.	Contractor	Pre-construction
Aboriginal heritage	An Aboriginal Heritage Management Plan (AHMP) will be prepared and implemented as part of the CEMP. The AHMP will provide specific guidance on measures and controls to be carried out to avoid and mitigate impacts on Aboriginal cultural heritage during construction. This will include protection measures to be applied during construction, as well as contractor training in general Aboriginal cultural heritage awareness and management of Aboriginal heritage values. Site locations will be identified in the proposal's CEMP and marked as environmentally sensitive areas or no-go zones.	Contractor	Detailed design / pre-construction
Aboriginal heritage	All relevant staff and contractors working on site are to receive training to ensure awareness of the requirements of the AHMP and relevant statutory responsibilities. Site-specific training is to be given to personnel when working in the vicinity of identified Aboriginal heritage sites.	Contractor	Pre-construction
Aboriginal heritage	In the event that construction works within the study area uncover any unexpected Aboriginal objects, the relevant	Contractor	Pre-construction

Impact	Environmental safeguards	Responsibility	Timing
	provisions of Roads and Maritime's Standard Management Procedure for Unexpected Heritage Items (Roads and Maritime, 2015) should be followed.		
Aboriginal heritage	<p>A project specific Aboriginal cultural heritage interpretation plan will be developed to promote understanding and awareness of the cultural heritage values of the study area. The strategy should be prepared in accordance with Roads and Maritime's draft Heritage Interpretation Guideline (2016) in consultation with the RAPs and identified Aboriginal knowledge holders. The Aboriginal heritage interpretation project plan will include:</p> <ol style="list-style-type: none"> Interpretative signage (or similar) relevant to Cultural Site A: Gathering Place (Railway Bridge Camps) and how it sits within the wider cultural landscape. The content of the signage is to be developed by a cultural heritage specialist in consultation with the identified Aboriginal knowledge holders. Opportunities for input into (aesthetic) design elements of the proposal such as noise walls, bridge piers or abutments to include the interpretation of the Aboriginal cultural values of the area. Provisions for rehabilitation and revegetation of the impacted portion of Cultural Site A: Gathering Place (Railway Bridge Camps) with local Indigenous plant species. The identification of the plant species should be undertaken in consultation with the identified Aboriginal knowledge holders. Opportunities should be provided to local Aboriginal organisations for involvement and potential engagement in the revegetation and landscaping process. 	Roads and Maritime	Detailed design / pre-construction
Aboriginal heritage	An educational booklet (or similar) would be developed by a cultural heritage specialist on the cultural values and historical records relating to the broader cultural landscape of which Cultural Site A: Gathering Place (Railway Bridge Camps) is one element. As part of this process the photographic recording of the cultural landscape should occur prior to any construction impacts. The final content of the booklet (or similar) to be developed in consultation with the RAPs and identified Aboriginal knowledge holders. To assist in the production of the recommended educational booklet, photographic recording of the cultural landscape by a cultural values specialist at Cultural Site A: Gathering Place (Railway Bridge Camps) should occur prior to any construction impacts.	Roads and Maritime	Detailed design / Pre-construction
Aboriginal heritage	In accordance with Requirement 16B of the Code of Practice, all stone artefacts recovered from the proposal area as part of the test excavation program detailed in the AAR is to be stored temporarily at AECOM's head office (Level 8, 420 George Street, Sydney) while options for their long term management are being investigated, as	AECOM / Roads and Maritime	Detailed design / Pre-construction

Impact	Environmental safeguards	Responsibility	Timing
	determined through consultation with RAPs. Requirement 26 of the Code of Practice provides standard procedures for the deposition of stone artefacts dealt with under AHIPs and the Code of Practice. These procedures will be strictly adhered to.		
Aboriginal heritage	Any Aboriginal objects removed from the study area as a result of test excavation and salvage activities authorised by the Code of Practice or an AHIP should be reburied upon completion of all post-excavation analyses, with the location of the reburial to be determined in consultation with RAPs	Roads and Maritime	Construction

Table 6-48: Management recommendations for Aboriginal archaeological and cultural sites located within the proposal area

Site name	AHIMS ID	Site type	Impact	Degree of harm	Management recommendation(s)
Singleton Bypass OAS1	37-6-3894	Isolated artefact	Not impacted	None	Conservation
Singleton Bypass OAS2	37-6-3895	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS3	37-6-3896	Artefact scatter	Not impacted	None	Conservation
Singleton Bypass OAS4	37-6-3897	Artefact scatter	Not impacted	None	Conservation
Singleton Bypass OAS5	37-6-3890	Artefact scatter	Not impacted	None	Conservation
Singleton Bypass OAS6	37-6-3893	Artefact scatter	Not impacted	None	Conservation
Singleton Bypass OAS7	37-6-3889	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS8	37-6-3888	Artefact scatter	Not impacted	None	Conservation
Singleton Bypass OAS9	37-6-3887	Artefact scatter	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS10	37-6-3886	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS11	37-6-3892	Artefact scatter	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS12	37-6-3891	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS13	37-6-3900	Artefact scatter	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS14	37-6-3899	Isolated artefact	Not impacted	None	Conservation
Singleton Bypass OAS15	37-6-3898	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS16	37-6-3901	Isolated artefact	Not impacted	None	Conservation
Singleton Bypass OAS17	37-6-3905	Isolated artefact	Impacted	Total	Salvage (surface collection)
Singleton Bypass OAS18	37-6-3904	Artefact scatter	Impacted	Partial	<i>Impacted portion</i> - salvage (surface collection) <i>Non-impacted portion</i> - conservation
Singleton Bypass OAS19	37-6-3903 37-6-1466 37-6-1468	Artefact scatter	Impacted	Partial	<i>Impacted portion</i> - salvage (surface collection & excavation) <i>Non-impacted portion</i> - conservation
Singleton Bypass OAS21	37-6-3925	Artefact scatter	Impacted	Partial	<i>Impacted portion</i> - no further management / mitigation actions <i>Non-impacted portion</i> - conservation

Site name	AHIMS ID	Site type	Impact	Degree of harm	Management recommendation(s)
Singleton Bypass OAS22	37-6-3927	Artefact scatter	Impacted	Total	No further management / mitigation actions
McDougall Hill 2	37-6-0789	Artefact scatter	Impacted	Total	Salvage (surface collection)
McDougall Hill 3	37-6-0788	Artefact scatter	Impacted	Total	Salvage (surface collection)
Scarred tree	37-6-0681	Scarred tree	Impacted	Total	Arboricultural relocation/removal feasibility assessment. Detailed archival recording or removal/relocation.
Singleton Bypass PAD3	37-6-3928	PAD	Not impacted	None	Conservation
Cultural Site A: Gathering Place (Railway Bridge Camps)	-	Cultural site	Impacted	Partial	<i>Impacted portion</i> - Rehabilitation / revegetation using local Indigenous plant species at completion of construction works; visual documentation of the cultural landscape prior to any construction impacts; interpretative signage <i>Non-impacted portion</i> – conservation (fencing)