

9.7 Aboriginal cultural heritage

An assessment of the impacts on Aboriginal cultural heritage associated with the project has been undertaken and is presented below. This assessment is supported by *Technical Paper 5 – Aboriginal heritage* (Volume 2).

Director-General's Requirements	Where addressed
<p><i>Aboriginal cultural heritage:</i></p> <ul style="list-style-type: none"> <i>The environmental assessment must include an assessment of the potential Aboriginal cultural heritage impacts of the project, including an assessment of objects, places of significance, natural and landscape values of the corridor and surrounding area, taking into account the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, July 2005).</i> 	<p><i>Section 9.7, Technical Paper 5</i></p>

9.7.1 Description of assessment methodology

The assessment of Aboriginal heritage consisted of desktop research, database searches, Aboriginal community consultation and archaeological field inspections. The assessment included the following elements:

- A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) database.
- A review of previous archaeological surveys undertaken for the M2 Motorway.
- Identification, registration and consultation with Aboriginal stakeholders.
- An archaeological surface survey of the study area was conducted in March and April 2009 and December 2009.
- An assessment of Aboriginal cultural heritage was undertaken, consisting of both interviews and field inspections.

The field inspections were conducted in conjunction with the Aboriginal community, and included ground-truthing existing registered AHIMS sites, inspecting lands in proximity to known Aboriginal sites and in areas previously identified as having potential archaeological value. The inspections conducted in March and April 2009 were conducted in consultation with the Metropolitan Local Aboriginal Land Council (MLALC). The inspections in December 2009 were conducted in consultation with the Aboriginal community in accordance with DECCW's *Interim Community Consultation Requirements for Applicants* (DEC, 2004).

As required by the DGRs, the Aboriginal heritage assessment was conducted in accordance with the *Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (DEC, 2005). The RTA also has its own comprehensive guidelines: *RTA Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (RTA, 2008c). This investigation followed the process stipulated by both these documents, to undertake a two-part Aboriginal heritage assessment process and recommend that Aboriginal community consultation be undertaken in accordance with DECCW's *Interim Community Consultation Requirements for Applicants* (ICCRs) (DEC, 2004).

The ICCRs outline a process of inviting Aboriginal groups to register their interest in being party to consultation (including local newspaper advertising), seeking responses on proposed assessment methodology and seeking comment on proposed assessments and recommendations. The guidelines require proponents to allow ten working days for Aboriginal groups to respond to invitations to

register, and then 21 days for registered Aboriginal parties to respond to a proposed assessment methodology.

Under the DECCW Part 3A guidelines (DEC, 2005) and the RTA Aboriginal heritage consultation guidelines (RTA, 2008c) consultation with the Aboriginal community is also a staged process. Where no constraints are identified in the preliminary assessment, there is no further requirement for consultation and assessment. However it is intended to allow the wider Aboriginal community to provide information on the socio-cultural values of the study area. A program of full Aboriginal consultation was instigated in late October 2009 to seek wider Aboriginal community input into the project.

The purpose of the full Aboriginal consultation is to seek information on the cultural (social) heritage values of the study area. The following processes were undertaken in accordance with the ICCRs and the RTA guidelines. These included:

- Notification and registration of interest. Appropriate organisations were notified of the project with requests for information on suitable Aboriginal stakeholders to be consulted. Specifically, notification included newspapers, letters to Aboriginal stakeholders and land councils, and direct communication with Aboriginal stakeholders and individuals.
- Briefing letter / methodology advice and focus group meeting. The briefing letters advised that a first round of field inspections had been conducted by AECOM archaeologists in March 2009 and no heritage constraints were identified. Stakeholders were also asked to provide information on the Aboriginal socio-cultural heritage values and also described the methodology used to conduct the field inspection. An Aboriginal Focus Group meeting was held on Friday 11 December 2009 and all registered Aboriginal stakeholder groups were invited to take part. The briefing letter also included a response form for stakeholders to endorse the methodology or to provide feedback on alternative methods, and to provide information on the cultural (social) values.
- Fieldwork. A second round of field inspections was conducted from 15 to 17 December 2009 by AECOM archaeologists in conjunction with registered Aboriginal stakeholders. Stakeholders who took part included: Deerubbin Local Aboriginal Land Council (DLALC), Darug Tribal Aboriginal Corporation (DTAC), Yarrawalk Enterprises, Darug Custodian Aboriginal Corporation (DCAC), Darug Aboriginal Cultural Heritage Assessments (DACHA), Darug Land Observations (DLO).
- Aboriginal stakeholder and field survey reports. Aboriginal stakeholder organisations that participated in the field inspections were requested to provide a written field survey report using the *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* template (RTA 2008c). Copies of the reports provided by the Aboriginal stakeholders are provided in full in Appendix D of Technical Paper 5, and the recommendations have been incorporated into the final draft of this report.
- Circulation of the draft report. A complete draft copy of the preliminary Aboriginal heritage assessment report was circulated to the registered Aboriginal stakeholder groups seeking comments on the results of the preliminary assessment, as well as to seek information to inform a socio-cultural heritage significance assessment. Written responses were received from three of the registered Aboriginal stakeholder groups. A summary of responses is provided in Technical Paper 5. Recommendations made by the Aboriginal stakeholders were incorporated in to the final management commitments where relevant.

9.7.2 Existing environment

The environmental conditions of the study area consist mainly of temperate climate with rugged, rolling to very steep hills, hillcrests and ridges on Hawkesbury Sandstone, and medium density drainage net of waterways. The soils of the area are prone to erosion and in some instances water-logging. Large parts of the study area have been impacted by urban development, but relatively undisturbed landscapes and vegetation occurs in nature reserves and some steeper sections of the study area.

The study area lies in predominantly sandstone country with valleys and gullies with cliff margins. The predominant archaeological sensitivity of these areas is their suitability for the formation of sandstone-based sites such as rockshelters, grinding-grooves and, to a lesser extent, art sites (including both pigment and engravings). Rockshelters are covered areas that may have been used by Aboriginal people. Grinding grooves are depressions formed in rock from the sharpening of a stone hatchet head or use of a muller (topstone).

Areas that contain extant native vegetation, such as in the major creeklines and reserves, may also contain culturally modified (scarred) trees. A scarred tree is a tree that bears a scar or scars which are wounds formed from the deliberate removal of bark or wood exposing sapwood by Aboriginal people.

The generally rocky conditions within the landscape are less suitable for open camp sites compared to the flatter and low undulating country of the Cumberland Plain further west. Furthermore, the soils in the study area are generally shallow and skeletal. These soils have little potential for the formation of subsurface archaeological deposit due to the highly erodible nature of the soils.

Urban development, including the development of the M2 Motorway itself, has highly impacted the study area. However while some areas have been extensively disturbed, others have not. Areas of steep-sided valleys and gullies have not been developed due to their unsuitable geography, and retain a large portion of their original vegetation. Many of these areas have also been set aside as reserves and are exempt from development. It is these areas that are considered to hold the greatest archaeological sensitivity. Such areas include the Lane Cove Recreation Area, Berriwerri Reserve, Chilworth Recreation Reserve, Darling Mills State Forest and Bidjigal Reserve.

Registered Aboriginal sites

A search of the DECCW Aboriginal Heritage Information Management System (AHIMS) (undertaken March 2009) register identified 53 sites within one kilometre of the M2 Motorway. However another site, Aboriginal rockshelter DC1, did not appear in the AHIMS search results despite the site being excavated by Haglund (1995) under a Section 87 permit (#653) issued by DEC (now DECCW) in 1994 (Corkill, pers. comm.).

This site occurs under the Devlins Creek bridge (it is not known why DC1 does not appear on the AHIMS database). Of the 54 known sites, two were identified as duplicates of other sites reducing the total of individual sites to 52 (45-5-0886 is a duplicate of 45-6-2548 and 45-6-2513 is a duplicate of 45-6-2472). Table 97 shows the relative frequency of different site types in the AHIMS search area.

Table 97 Summary of archaeological site types within the study area

Site type	Number of sites	Percentage
Axe grinding grooves	3	6
Isolated find	1	2
Open camp site	6	12
PAD	1	2
Rock engravings	3	6
Shelter with art	2	4
Shelter with deposit	31	58
Shelter with midden	2	4
Unknown*	3	6
Total	52**	100

*Site card unavailable; site type unknown

**Total includes 52 AHIMS-registered and one additional known site (DC1) less two duplicate site cards.

Three site cards (AHIMS 45-5-2892, 45-6-0981 and 45-6-1887) were missing from the DECCW library and as a result the site types are unknown, although the site name for AHIMS 45-6-1887 suggests that it is a grinding groove site and discussions with archaeologist Mary Dallas confirmed that AHIMS 45-5-2892 is a rockshelter.

Many sites consist of multiple site types, particularly rockshelters which often have associated archaeological evidence such as art (either pigment or engraved), archaeological deposit, middens and/or axe grinding grooves. One open camp site, AHIMS site 45-5-0970, has an existing Section 90 - Aboriginal Heritage Impact Permit (AHIP) over it. Rockshelter sites AHIMS 45-6-2472, 45-6-2097, 45-5-0886, 45-5-2542, 45-5-2543 and 45-5-2544 have been excavated as has one PAD site 45-6-2653.

Two additional Aboriginal sites occur in the general vicinity but not within the study area. These sites are known to the Aboriginal community and were identified as a result of forestalled development proposal to construct an adventure playground facility within the Darling Mills Creek area. The sites consist of:

- Scarred tree on Excelsior Creek north of the M2 Motorway.
- Rockshelter with deposit, also several hundred metres north of the M2 Motorway.

These sites are not currently recorded within the AHIMS database (L. Watson, DTAC, pers. comm.).

Registered sites within the study area

The sites identified in the AHIMS search were plotted on a map (see Figure F4 to Figure F6 of Technical Paper 5) and sites within the study area (within 100 metres of the M2 Motorway) were identified. Site DC1 (see above) also occurs within the study area. However, two registered sites (45-6-2472 and 45-6-2513) are separate recordings of the same site.

A total of 15 registered or known Aboriginal sites occur within a distance of 100 metres from the M2 Motorway carriageway. All sites were inspected during field inspections conducted during March and

April 2009 and December 2009, with the exception of one site which was found to have erroneous coordinates recorded in AHIMS and is well south of the M2 Motorway. Areas identified in 1989-1992 archaeological reports as being of potential archaeological constraint were also inspected, as were areas of construction impact in the vicinity of known Aboriginal sites.

9.7.3 Impact assessment

The potential impacts of the project on Aboriginal cultural heritage was undertaken, taking into account the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC, 2005). A total of 15 (14 AHIMS and 1 DC1) previously recorded Aboriginal sites and one newly recorded aboriginal site occur within 100 metres of the M2 Motorway (one site has been recorded twice). Two phases of field inspection re-identified all but two of the recorded sites. Of these two sites, one (45-6-2472(2513) was previously destroyed and another (45-6-1953) occurs much further south than AHIMS suggests and is not within the study area.

Of the 15 sites, three sites are considered to be potentially impacted. These sites are:

- AHIMS 45-5-1005 is an isolated artefact that lies in very close proximity to the Beecroft Road bus ramp. The current proposal to remove the ramp is likely to disturb the ground where the artefact is said to occur. However, the artefact is not considered to be in situ, is out of archaeological context and consequently is considered to hold low significance.
- Site M2A1 (45-6-2949), a set of grinding grooves that were identified during the Phase 1 field inspections and occur directly beneath the Terrys Creek bridges. While construction work is intended to occur on the northern side of the M2 Motorway, the current construction plan proposes to provide vehicle access from the southern side. Consequently, there is potential for indirect impact to the site through sedimentation and/or physical impacts through earthworks.
- In addition, Aboriginal stakeholders consider there is potential for indirect impact to one rockshelter (CF3; AHIMS 45-5-2161) through vibration impacts. Although previous monitoring suggests that such impacts are unlikely, it is proposed that technical advice from an expert in noise and vibration is sought. Aboriginal stakeholders request that monitoring take place during construction works in the vicinity.

It is considered that there would be no direct impacts and unlikely to be indirect impacts to the other sites resulting from the proposed M2 Upgrade project. However, it is considered prudent to erect some form of protective fencing at rockshelters within 50 metres of construction works to minimise the potential for indirect impacts resulting from access by construction workers.

The sites considered to be within 50 metres of construction works are:

- AHIMS 45-6-2097.
- AHIMS 45-6-2160.
- AHIMS 45-6-2161.
- AHIMS 45-6-2162.
- AHIMS 45-6-2163.
- AHIMS 45-6-2543.
- AHIMS 45-6-2544.
- DCI.

9.7.4 Mitigation measures

The design has, as far as possible, avoided impacts on Aboriginal heritage. The following management measures that are proposed to be implemented for identified sites of Aboriginal significance.

- If Aboriginal objects are identified during the course of construction, work would cease in that part of the study area and DECCW, MLALC and Deerubbin Local Aboriginal Land Council (DLALC) would be notified immediately.
- If Aboriginal skeletal materials are identified during construction, work would cease immediately and Police, DECCW and the relevant Local Aboriginal Land Council (LALC) notified immediately.
- An Aboriginal Heritage Management Plan (AHMP) would be prepared as part of the CEMP. An outline of the CEMP is shown in the Construction Environmental Management Framework (refer to Appendix F). The AHMP would be prepared for the 15 known sites within the study area would be prepared providing guidance on the management of these sites during the construction phase of the M2 Upgrade project and during the subsequent operational phase of the M2 Motorway. The AHMP would provide more detailed guidance than outlined in this report (for example, detailed location mapping, fencing specifications, and the like). The AHMP would include, but not be limited to, the following protective measures (measures do not include the sites that are impacted):
 - Erecting temporary protective fencing at Aboriginal rockshelters within 50 metres of the M2 Upgrade project construction works, to minimise the potential for inadvertent damage by construction workers. The sites include: CF3; AHIMS 45-5-2161, AHIMS 45-6-2097, 45-6-2160, 45-6-2161, 45-6-2162, 45-6-2163, 45-6-2543, 45-6-2544 and DC1.
 - Erecting temporary sedimentation barriers and fencing along the banks of Terrys Creek, on the southern side of the bridges, to minimise potential for indirect impacts to site M2A1 (45-6-2949) through sedimentation and/or personnel access during construction.
 - Regular toolbox talks conducted with emphasis on Aboriginal cultural heritage and the potential for impacts to the sites.
 - Aboriginal community stakeholders have requested that monitoring take place at sites during construction works. However, this assessment considers that further impacts to, or identification of, Aboriginal objects is unlikely. Therefore further monitoring is not considered necessary.
 - The Aboriginal community stakeholders have requested that an exclusion zone be placed around site M2A1 (45-6-2949) on the southern side of the M2 Motorway bridge. Construction activity would avoid this side of the bridge where practical and access to the area would be gained from the northern side of the M2 Motorway where possible. If this is not possible, and access is required on the southern side (passing under the bridge) then access would be made as close as possible to the concrete abutment.
 - AHIMS 45-5-1005 is not considered to hold cultural heritage significance and the absence of the single artefact suggests that it has been lost from the area. Therefore, the site has already been effectively destroyed and the impact from the M2 Upgrade project is minimal as it is a destroyed site. The AHIMS register would be amended to reflect this status.