

Chapter 16

Aboriginal cultural heritage

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16 Aboriginal cultural heritage

This chapter summarises the Aboriginal cultural heritage assessment carried out for the upgrade of the Great Western Highway between Blackheath and Little Hartley (the project). The full Aboriginal cultural heritage assessment is provided in Appendix L (Technical report – Aboriginal heritage).

16.1 Assessment approach

The Aboriginal cultural heritage assessment has been informed by an Aboriginal Cultural Heritage Assessment Report carried out in accordance with the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (Roads and Maritime Services, 2011c), which included:

- a PACHCI Stage 3 for the Great Western Highway Duplication – Katoomba to Lithgow (the Upgrade Program). This report is referred to as PACHCI 2021 and provided in Annexure A of Appendix L (Technical report – Aboriginal heritage))
- a PACHCI Addendum for the project (referred to as PACHCI Addendum and provided in Appendix L (Technical report – Aboriginal heritage)). This addendum was required based on further design refinement between Blackheath and Little Hartley and areas that couldn't be accessed for survey in 2019-2020.

The Aboriginal cultural heritage impact assessment methodology for the project included:

- defining a study area for the Aboriginal cultural heritage assessment (see Figure 16-1). A broader study area was defined for the PACHCI 2021 and refined for the PACHCI Addendum
- desktop-based activities including review of previous reports, relevant registers and databases including:
 - the World Heritage List (WHL), the Australian Heritage Database (AHD), the State Heritage Register (SHR), Blue Mountains Local Environmental Plan (LEP) 2015 and Lithgow LEP 2014 for listed Aboriginal places
 - the Aboriginal Heritage Information Management System (AHIMS) for registered Aboriginal sites surrounding the project
 - review of the landscape context of the project, with specific consideration to its implications for past Aboriginal land use (archaeological potential)
- development of a predictive model to determine landforms of high archaeological potential
- consultation with Registered Aboriginal Parties (RAPs), including to understand the cultural values significant to Aboriginal people
- the PACHCI 2021 including site surveys conducted between November 2019 and March 2020, a total of fifteen days
- the PACHCI Addendum targeted site surveys with RAPs occurred over three days in May 2022 to confirm the extent of known Aboriginal sites and places and identify potential new sites
- assessment of the potential direct and indirect Aboriginal cultural heritage impacts of the project
- identification of mitigation measures to minimise the risk of potential impacts to Aboriginal cultural heritage.

Further details of the Aboriginal cultural heritage assessment methodology are provided in Appendix L (Technical report – Aboriginal heritage).

16.2 Existing environment

16.2.1 Cultural landscape

The project would be located on Dharug, Deerubbin, Gundungurra and Wiradjuri country with surrounding language groups including Darkinung to the north and Kuring-gai, Eora, and Tharawal to the east. The Dharug tribes are likely to have intertwined borders with the Gundungurra and the Wiradjuri tribes who also inhabited parts of the Blue Mountains.

The Dharug people were described to have tribal boundaries expanding from the mouth of the Hawkesbury River inland to Lithgow and the Newnes Plateau, with differing dialects spoken in the coastal and mountain areas (Tindale, 1974). The Blue Mountains area occupied by the Dharug people was known as Muru Marak or mountain pathway (Attenbrow, 2003). Similarities existed amongst the tribal groups in their use of traditional material culture. Wood, stone, shell and bone comprised the raw materials of this world, most of which have little chance of being preserved in an archaeological record. Culturally modified trees, which were used in the production of items such as canoes, containers, shelters and bowls have the potential to be present within the region as do carved trees associated with ceremonial sites. Evidence of campsites, with deposits of stone artefacts, hearths or middens, in contrast, are likely to be found where the landscape has not been subject to ground disturbance.

The upper Blue Mountains are characterised by dense vegetation, steep cliffs, valleys and watercourses, which lie on an undulating plain. Flowering vegetation such as Eucalyptus and Banksias would have been used as valuable resources by Aboriginal groups in the Blue Mountains area.

The area between Blackheath and Mount Victoria is underlain by Narrabeen Group sandstones and is comprised of abrupt cliffs and exposed sandstone. This landform pattern is representative of a dissected plateau, an elevated area that has undergone severe erosion, which creates sharp cliffs. The Great Western Highway is located on a relatively narrow ridgeline and a steep slope at Victoria Pass. It is anticipated that unidentified areas of Aboriginal cultural heritage value may occur on slopes such as these.

The project is adjacent to numerous watercourses situated in valleys including tributaries of the Coxs River to the west, the River Lett to the north, the Grose River to the east, and Govetts Creek to the south. Waterways were used by Aboriginal groups within the upper Blue Mountains for a variety of resources including fishing and making tools from raw stone materials such as basalt. Waterways were central elements of the cultural landscape, and governed Aboriginal people's choice of living places, travel routes, and gathering places for cultural and ceremonial activities (Annexure A of Appendix L (Technical report – Aboriginal heritage)). As such, many places of Aboriginal cultural significance occur along waterways. There is potential for unidentified areas of Aboriginal cultural heritage value to be present within topsoil nearby watercourses in the form of open stone artefact sites, and slopes near valley heads and Victoria Pass, in the form of rock shelters (Annexure A of Appendix L (Technical report – Aboriginal heritage)).

Chapter 17 (Non-Aboriginal heritage) describes the Greater Blue Mountains World Heritage Area including an additional area that has been nominated for inclusion on the National Heritage List (the Greater Blue Mountains Area – (Additional Values)) for containing outstanding natural and cultural values including Aboriginal cultural values.

Generally, the landscape in the direct vicinity of the project has been highly modified. The built form has been influenced by the development of the Great Western Highway and associated features including road and street lighting, secondary roads, picnic areas, and a mix of commercial farming and smaller rural residential farm lots as well as the development of local townships including Blackheath and Mount Victoria. Due to extensive vegetation clearance, landscape modification and infrastructure development, most Aboriginal deposits that were present in these areas are likely to have been destroyed.

The project would traverse a number of unresolved Aboriginal land claims. Land claims under the *Aboriginal Land Rights Act 1983* (NSW) do not necessarily denote Aboriginal cultural or scientific

archaeological values. Land Councils are not required to establish cultural association with lands when making land claims under the *Aboriginal Land Rights Act 1983* (NSW). Further information regarding Aboriginal land claims is included in Chapter 20 (Business, land use and property).

16.2.2 Consultation with Registered Aboriginal Parties

In accordance with the requirements of the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010), consultation was undertaken with RAPs.

As part of the PACHCI 2021, 15 RAPs were involved in site surveys between 2019 and 2020. Aboriginal community consultation was carried out with the Warrabinga-Wiradjuri Native Title Group and Deerubbin and Bathurst Local Aboriginal Land Councils (LALCs). This consultation included identification of key Aboriginal stakeholders, archaeological site survey and engagement with these stakeholders during preparation of the Aboriginal Cultural Heritage Assessment Report.

As part of the project specific PACHCI Addendum, additional site surveys were undertaken in 2022 with the following RAPs:

- Waawaar Awaaa Aboriginal Corporation
- Dharug Ngurra Aboriginal Corporation
- Mingaan Wiradjuri Aboriginal Corporation
- Bathurst LALC.

As identified during these site surveys, sites or places in the landscape found by the RAPs to be associated with intangible cultural heritage are summarised in Table 16-1.

Further details on the Aboriginal community consultation carried out are provided in Annexure A of Appendix L (Technical report – Aboriginal heritage).

Table 16-1 Aboriginal cultural heritage values relevant to the study area

Cultural heritage values	Description
Resource gathering locations and techniques	Indigenous communities note that fish, plants and other foods are still collected throughout the region. The primary resource gathering locations and gathering techniques used are known and passed down through generations.
Campsites	Campsites are culturally significant for Aboriginal people as they provide a link to the ancestral past. Campsites also help identify significant resource zones, landscape pathways taken by their ancestors and communication with other groups.
Culturally modified or scarred trees	Scarred trees are of great importance to knowledge holders as they are of sacred and ceremonial importance. European land use and agricultural practices has resulted in scarred trees often being the only remaining markers for ceremonial sites and burials in the landscape.
Watercourses, waterholes, springs	Permanent water bodies are culturally significant as a central location for the gathering of people, resource collection and camping. Gullies and creeks also provide rich resources for Aboriginal people in the area, as well as provide habitat for platypuses which is a totem within the area.

Cultural heritage values	Description
Transit routes, pathways through the landscape and songlines	<p>The pathways and routes taken by ancestors are culturally valuable to Aboriginal people. These pathways connect ceremonial and spiritual sites, as well as providing a connection route for trading and meeting with neighbouring tribes.</p> <p>The Blue Mountains is interwoven with songlines, with many knowledge holders believing that the Great Western Highway is built over one of the main songlines of the area connected to other pathways such as Mount York and Bells Line of Road. Songlines are an intangible cultural value as Aboriginal people feel connection to these spiritual pathways.</p>
Plants and animals	Flora and fauna are not only seen as resources but hold cultural significance in spiritual and ceremonial values. Key animals preside within the rivers and waterways in the area surrounding the project. Platypus and eels have been specifically identified by community members.
Rock art engravings at Mount Victoria	A large goanna rock art engraving incorporating various art styles located at Mount Victoria (location not disclosed) is highly significant due to the styles incorporated into the art, that can be connected to Central Western art styles. The goanna also has three eyes on its head, which could be concerned with Diamond Lore. This Lore is associated with your identity and who you are.
Burial sites	Burial sites are of great importance and their protection is a high concern to Aboriginal people as the locations of burials are rarely documented. No known burial sites are located within proximity of the project. Knowledge holders have noted that scarred trees can be a marker for burial within the landscape.
Post-contact sites	Post-contact sites are places that have gained significance to Aboriginal people since the arrival of European settlers and are defined as an area where Indigenous people would have had a deep interaction with settlers. Contact sites predominantly depict an altering and destructive process.
Ridgelines	Knowledge holders commented on the importance of ridgelines as routes for travel and connectors to ceremony, resources and the receiving of sacred knowledge.
Cultural knowledge	Knowledge holders expressed that possessing cultural knowledge is both a sacred and a cultural right, and that sharing and passing on this knowledge can be a culturally burdensome task. Conversely, knowledge holders also noted that there is a strong history of losing cultural knowledge. Community members asserted that the loss of cultural knowledge that began with early colonisation and settlement has been exacerbated by the ongoing development in the region.
Ceremony or teaching sites in Blackheath	There are likely to be several sites used for ceremonies or teaching on Hat Hill Road, Blackheath.

Cultural heritage values	Description
Astronomy	Indigenous Australians are the world's oldest astronomers, presenting an unprecedented knowledge of the stars over the span of thousands of years of observation. Astronomy was used by indigenous Australians to develop calendars and navigate the land. Each tribe lived according to the cycle of the stars, which influenced what they hunted and ate, and where they travelled. Aboriginal people would likely have taken advantage of the high elevation of certain ridgelines and mountains within the project area.

16.2.3 Recorded Aboriginal sites

Aboriginal Heritage Information Management System

As part of the PACHCI 2021, an initial search of the AHIMS database was undertaken in 2019. An updated search was undertaken in 2021 which identified 36 registered Aboriginal sites within the search area comprising:

- 20 isolated artefacts
- one modified tree (carved or scarred)
- seven open camp sites
- one isolated artefact and modified tree (carved or scarred)
- six habitation structures (rockshelters), and PAD
- one habitation structure (rockshelter), PAD, and modified tree (scarred tree).

An updated search of the Aboriginal Heritage Information Management System (AHIMS) conducted for the PACHCI Addendum in June 2022 identified 93 registered sites. No AHIMS sites were identified within the study areas at Soldiers Pinch or Blackheath. Seven registered Aboriginal sites were identified in study area at Little Hartley as summarised in Table 16-2.

AHIMS sites are not presented in the public exhibition version of this chapter.

Table 16-2 AHIMS sites within the study area

Site ID	Site type
45-4-1075	Open artefact scatter
45-4-1076	Isolated find
45-4-1077	Open artefact scatter
45-4-1078	Open artefact scatter
45-4-1079	Open artefact scatter
45-4-1080	Open artefact scatter
45-4-1112	Scarred tree and isolated find

16.2.4 Site survey results

Previous archaeological investigations in the Upper Blue Mountains have demonstrated the presence of Aboriginal objects such as rock shelters and camp sites throughout the region, with certain areas such as heads of valleys and major creek lines as showing more archaeological potential.

As part of the PACHCI 2021, archaeological survey of the project area was carried out between November 2019 and March 2020 (Annexure A of Appendix L (Technical report – Aboriginal heritage)). These surveys indicate that rock shelters are anticipated on slopes at Victoria Pass, but there was low potential for them to be located elsewhere within the project study area. Scarred trees were predicted to occur at Victoria Pass, however due to extensive disturbance and the presence of farmed land the potential for them to be present in this location is reduced.

Further site surveys carried out between 2019 and 2022 confirmed that the study area has been subject to substantial and widespread previous disturbance. All sites listed in Table 16-2 were surveyed and found to be invalid for reasons including no artefacts being present, previous site disturbance and no evidence of cultural modification.

Three additional Aboriginal sites, shown on Figure 16-2 and Figure 16-3 were identified within the study area during surveys, including a culturally modified tree, an isolated find and an artefact scatter. These sites, as well as a description of their status and location relevant to the project are listed in Table 16-3.

These unregistered sites are not presented in the public exhibition version of this chapter.

Table 16-3 Additional Aboriginal sites identified during site surveys

Site name	Feature(s)	Location	Site status
Blackheath Portal Scar Tree 1	Culturally modified tree (carved or scarred)	Blackheath	Located within the part of the Blackheath construction footprint that will be used for the Katoomba to Blackheath Upgrade. This site will be subject to the conditions of an Aboriginal Heritage Impact Permit (AHIP) obtained for the Katoomba to Blackheath Upgrade if impacts cannot be mitigated. This site will have been managed in accordance with an AHIP, prior to disturbance of the site by the project.
Hammer Stone 1 GWH	Isolated find	Little Hartley	Located outside the Little Hartley construction footprint.
Hartley Grange 2	Artefact: 9	Little Hartley	Located outside the Little Hartley construction footprint, but within the construction footprint for the Little Hartley to Lithgow Upgrade. This site will be subject to the conditions of an AHIP obtained for the Little Hartley to Lithgow Upgrade if impacts cannot be mitigated.

Figure 16-1 Overview of Aboriginal cultural heritage study area and values near the project

Figure 16-2 Aboriginal cultural heritage values at Blackheath

Figure 16-3 Aboriginal cultural heritage values at Little Hartley

16.3 Potential impacts – construction

Impacts on Aboriginal cultural heritage due to the project can be either direct or indirect. Direct impacts include the removal, modification or destruction of an Aboriginal site, while indirect impacts are associated with construction vibration generated by tunnelling or surface works and the settlement of land due to tunnelling below or in proximity to Aboriginal sites, as well as indirect impacts to the Aboriginal site setting (visual impacts, changes to vistas/landscapes) and changes to ongoing use or environmental association.

16.3.1 Avoidance and minimisation of impacts

The overall guiding principle for cultural heritage management is that where possible Aboriginal sites would be conserved. If conservation is not practical, measures would be taken to mitigate against impacts to Aboriginal sites. No direct impacts to Aboriginal sites would occur as a result of the project (refer to Section 8.1 of Appendix L (Technical report – Aboriginal heritage)).

Where unavoidable impacts occur then measures to mitigate and manage impacts are proposed. Mitigation measures primarily concern preserving the heritage values of sites beyond the physical existence of the site. The most common methods involve detailed recording of Aboriginal objects, archaeological salvage excavations, artefact analysis and, where appropriate, reburial of Aboriginal objects in a location determined by the RAPs.

The key design feature adopted to minimise impacts on Aboriginal heritage is selection of a tunnel option between Blackheath and Little Hartley to minimise surface disturbance and the potential to impact Aboriginal heritage sites located between these two locations. Further detail on efforts to avoid and minimise potential environmental impacts is described in Chapter 3 (Project alternatives and options).

The water supply pipeline between the Little Hartley construction footprint and Lithgow would be located wholly within existing and/or new road reserves and the indicative alignment has been designed to avoid impacts to Aboriginal cultural heritage and high risk Aboriginal landscapes such as waterways.

16.3.2 Direct impacts

The valid Aboriginal sites detailed in Section 16.2 are located outside the construction footprint for the project, therefore no direct Aboriginal cultural heritage impacts are anticipated as a result of the project.

The project would directly affect the Greater Blue Mountains Area – (Additional Values) nomination for the National Heritage List, including:

- the majority of the Blackheath construction footprint, and then through permanent operational infrastructure at Blackheath
- the north east corner of the Soldiers Pinch construction footprint.

Although not yet included on the National Heritage List, the Greater Blue Mountains Area – (Additional Values) is nominated for containing outstanding natural and cultural values. This nomination for additional values includes Aboriginal cultural values, and other natural values not covered by the Greater Blue Mountains World Heritage Area listing, such as scenic values and geological formations. In relation to cultural values, further research has come to light since the World Heritage List and National Heritage List entries, providing additional evidence for cultural values, such as rock art and the importance of the Greater Blue Mountains Area to the contemporary Aboriginal community. Further discussion of the scope of the Greater Blue Mountains Area – (Additional Values) is provided in Appendix M (Technical report – non-Aboriginal heritage).

The project construction footprint has been subject to assessment of Aboriginal archaeological potential. Both the Soldiers Pinch and Blackheath construction footprints have been assessed as having low archaeological potential (see Figure 16-2). This, combined with the absence of Aboriginal cultural heritage items and high levels of disturbance in both areas support the

conclusion that neither site would present significant Aboriginal cultural heritage values in the context of the Greater Blue Mountains Area – (Additional Values) nomination. Further, site disturbance at the Soldiers Pinch construction site would be temporary, and subject to rehabilitation at the conclusion of works. Overall, the project would not have a significant impact on Aboriginal cultural heritage values associated with the Greater Blue Mountains Area – (Additional Values) nomination.

The Little Hartley construction site has been located and configured to avoid known Aboriginal cultural heritage items and areas of high archaeological potential (see Figure 16-3).

The cumulative Aboriginal cultural heritage impacts of the Upgrade Program including this project are addressed in Chapter 24 (Cumulative impacts).

16.3.3 Indirect impacts

Based on tunnel depth and location, vibration from tunnelling is unlikely to impact Aboriginal sites.

Hartley Grange 2 (see #45-4-1190 in Figure 16-3) is around 30 metres from the construction footprint and within the minimum working distance for some types of vibration intensive plant. However, this site consists of individual stone artefacts which are unlikely to be damaged by vibration and are within or adjacent to a dirt road regularly traversed by light vehicles and farming machinery, therefore potential impacts would be unlikely (refer to Chapter 11 (Noise and vibration)).

Based on the settlement analysis provided in Chapter 13 (Groundwater and geology), predicted settlement calculations indicate that no known Aboriginal heritage items would be affected by settlement.

Transport for NSW recognises the potential for the project to indirectly impact the cultural heritage values identified in Table 16-1. Findings of the PACHCI 2021 included identification of:

- potential impacts to cultural values associated with a goanna rock art engraving at Mount Victoria and that further engagement with knowledge holders is recommended to assess this goanna rock art engraving. The project would not impact this Aboriginal site
- potential impacts to the Great Western Highway which is recognised as a culturally significant songline and walking track including its historic use as a connector to other pathways such as Mount York and Bells Line of Road.

Previous and ongoing consultation with Aboriginal stakeholders is outlined in Chapter 7 (Community and stakeholder engagement). The process to integrate connection to Country, and Aboriginal culture and heritage into the project design is outlined in Chapter 4 (Project description).

A preliminary Aboriginal Narrative Report and Body of Story Report has been prepared for the Upgrade Program to assist with the interpretation and integration of intangible Aboriginal cultural values collected during Aboriginal consultation and exploratory workshops by giving Aboriginal communities a voice in the design of the Upgrade Program. The report includes a series of core narratives and stories and outlines a set of overarching cultural design principles to inform the projects design principles. These highlight opportunities to develop a design that would deepen the understanding of place and the rich history of the Aboriginal cultural, spiritual and physical connection to the area and importantly will facilitate greater Aboriginal visibility.

Examples of how some of the cultural values identified in this chapter would be considered in the project design are discussed in Section 5.6 of Appendix N (Technical report – Urban design, landscape and visual).

16.4 Potential impacts – operation

No direct impacts to Aboriginal cultural heritage are expected during the operation of the project.

Potential indirect impacts largely relate to changes to landscape character and visual amenity. Design development for the project has minimised the extent of surface infrastructure by locating most of the project's infrastructure underground to minimise visual impacts and to be sympathetic

to the surrounding landscape context. The process to integrate connection to Country, and Aboriginal culture and heritage into the project design is outlined in Chapter 4 (Project description).

16.5 Environmental mitigation measures

16.5.1 Performance outcomes

Performance outcomes for the project in relation to Aboriginal cultural heritage are listed in Table 16-4 and identify measurable performance-based standards for environmental management.

Table 16-4 Aboriginal cultural heritage performance outcomes

SEARs desired performance outcome	Project performance outcome	Timing
<p>The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of Aboriginal objects and places.</p> <p>The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of Aboriginal objects and places.</p>	Avoid or minimise direct and indirect impacts on known or unexpected Aboriginal values, objects and places.	Construction
	Incorporate Aboriginal heritage interpretation and Aboriginal cultural design principles into the design of the project in consultation with Aboriginal stakeholders.	Design

16.5.2 Mitigation measures

Mitigation measures to avoid, minimise or manage potential Aboriginal cultural heritage impacts as a result of the project are detailed in Table 16-5. A full list of mitigation measures for the project is provided in Appendix R (Compilation of environmental mitigation measures).

Table 16-5 Environmental mitigation measures – Aboriginal cultural heritage

ID	Mitigation measure	Timing
AH1	If unexpected items of potential Aboriginal cultural heritage significance, including potential Aboriginal burials or skeletal material, are discovered during construction of the project, all relevant activities in the vicinity of the find will cease and the unexpected/chance finds requirements specified in the Unexpected Heritage Items Procedure (Transport for NSW, 2022d) will be followed.	Construction