



Transport for NSW

Beaches Link and Gore Hill Freeway Connection

Appendix A –

Updated mapping and assessment of
Aboriginal cultural heritage sites

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1 Introduction

1.1 Background

This updated mapping and assessment of Aboriginal cultural heritage sites report has been prepared as an appendix to the Beaches Link and Gore Hill Freeway Connection project (the project) submissions report.

Eleven Aboriginal cultural places of local significance were identified in the project study area in the Aboriginal Cultural Heritage Assessment Report (ACHAR) and Archaeological Assessment Report (AAR). Both the ACHAR and AAR formed part of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). Approximate locations and details of these eleven sites were presented in Figure 4-2 to Figure 4-6 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-1 to Figure 15-5 of Chapter 15 (Aboriginal cultural heritage) of the environmental impact statement.

The environmental impact statement was placed on public exhibition from 9 December 2020 to 1 March 2021. Public exhibition provided the community, interested parties and key stakeholders (including government agencies and councils) with an understanding of the project and the opportunity to make a submission on the environmental impact statement.

1.2 Purpose of this assessment

A submission was received from Northern Beaches Council that included issues raised by the Aboriginal Heritage Office regarding concerns that two Aboriginal cultural heritage sites in the environmental impact statement had been incorrectly mapped (refer to Section B11.14 of this submissions report for further details). In addition to the Northern Beaches Council submission, the Aboriginal Heritage Office also contacted Transport for NSW separately in relation to these sites.

As a result of issues raised, a new search of the Aboriginal Heritage Information Management System (AHIMS) register was carried out in February 2021 to confirm site locations for Aboriginal cultural heritage sites along the project alignment. Following this, a site inspection of AHIMS site 45-6-2111 (Clive Park 3, Northbridge) was also carried out on 20 May 2021 to confirm site coordinates in the field.

In addition, further site inspections were carried out on 22 January 2021 and 20 May 2021 in an attempt to locate AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway), which was previously unable to be confirmed as was likely covered by gravel/vegetation. A potential engraving site located adjacent to Wakehurst Parkway was found during the 22 January 2021 field inspection. This site was further inspected on 20 May 2021 to confirm its potential as an engraving site and to establish its potential relationship to AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway).

The purpose of this updated mapping and assessment of Aboriginal cultural heritage sites is to confirm the location of all AHIMS sites along the project alignment and update the assessment of sites confirmed within the study area as presented in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Chapter 15 (Aboriginal cultural heritage) of the environmental impact statement.

The updated mapping and assessment of all AHIMS sites along the project alignment, and the potential engraving site noted above, is addressed in sections 2, 4 and 5 of this report.

Further to the above, the assessment also includes a clarification in Section 4 regarding the reference (Sefton, 1996) and its relevance to findings at AHIMS site 45-6-0654 (Clive Park 1, Northbridge).

1.3 Approach to assessment

The description of the project can be found in Section 1 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

The 'study area' used for this assessment is consistent with that described in Section 1.8 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and includes the construction footprint associated with surface works, plus land above the tunnel alignments, plus a 50 metre search area around the surface works and tunnel alignments.

The legislative context of this assessment can be found in Section 2 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

A summary of Aboriginal stakeholder engagement and involvement activities carried out for the project is outlined in Section 3 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). The Metropolitan Local Aboriginal Land Council (MLALC), as the applicable local Aboriginal land council in the study area, has been consulted on the findings of this report.

Background information associated with the study area can be found in Section 4 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

Previous AHIMS searches carried out for the assessment are included in Section 4.10 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and discussed further in Section 1.4 of this report. Updated AHIMS search results are summarised in Section 2 and provided as Annexure A of this report.

The assessment methodology associated with this report is consistent with that described in Section 6.1 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

Potential impacts to Aboriginal cultural places and archaeological sites recorded within the study area are in detailed in Section 8 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). An updated impact assessment covering all AHIMS sites recorded within the study area, and the potential engraving site adjacent to Wakehurst Parkway, is included in Section 5 of this report.

Management recommendations are included in Section 9 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). Updated recommendations are included in Section 6 of this report.

1.4 AHIMS searches prior to exhibition of the environmental impact statement

As part of the environmental impact statement, and as discussed in Section 4.10 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report), a search of AHIMS and Commonwealth and State Heritage Registers and relevant local environmental plans was carried out for a search area extending 300 metres from the project's construction footprint. As project refinements were made during the Stage 3 *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (Roads and Maritime, 2011) process, this search area was refined to 50 metres. Eleven AHIMS sites were identified from the AHIMS register as being within the study area.

The location and condition of one of the sites, AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) was unable to be confirmed during multiple field inspections and the Aboriginal Heritage Office advised that the site was likely covered by gravel/vegetation. As such, a desktop assessment of this site was carried out, basing findings on settlement and vibration modelling. It was recommended, where possible, a further visit of this site should be carried out as part of any further detailed assessment before the start of construction works. Environmental management measure AH1, as presented in the environmental impact statement, provided for the management of this site.

Three additional sites were initially identified within the study area, AHIMS site 45-5-2222 (Clive Park 4), AHIMS site 45-6-0994 (Northbridge) and AHIMS site 45-6-1587 (Seaforth), but these were later confirmed as being incorrectly mapped and were determined to sit outside the study area. These sites did not form part of the eleven sites identified within the study area and were not considered further in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

As part of the assessment described in Section 4.10 of Appendix L (Technical working paper: Aboriginal cultural heritage) a further search of AHIMS sites was carried out on 8 April 2020 to determine if any new AHIMS sites were apparent. No new AHIMS sites were determined in addition to those that were already identified in the 2017 search.

2 Updated AHIMS sites in the study area

2.1 Overview

As discussed in Section 1.2 of this report, in response to issues raised by Northern Beaches Council and the Aboriginal Heritage Office, a new AHIMS search was carried out on 19 February 2021. The results of the updated search are included in Annexure A of this report. In addition, a site inspection of AHIMS site 45-6-2111 (Clive Park 3, Northbridge) was also carried out on 20 May 2021 to confirm site coordinates of this site in the field (refer to Section 3.2 below).

As a result of the updated AHIMS search carried out on 19 February 2021, no new AHIMS sites were determined in the search area in addition to those that were already identified in the 2017 and 2020 searches. However, the site coordinates of some AHIMS sites were found to have changed as a result of the AHIMS search carried out on 19 February 2021 with some sites moving closer to the project alignment.

Accordingly, revised AHIMS site mapping has been prepared and this updated mapping supersedes the AHIMS site mapping shown in the environmental impact statement. Updated mapping is included in Section 2.2 below.

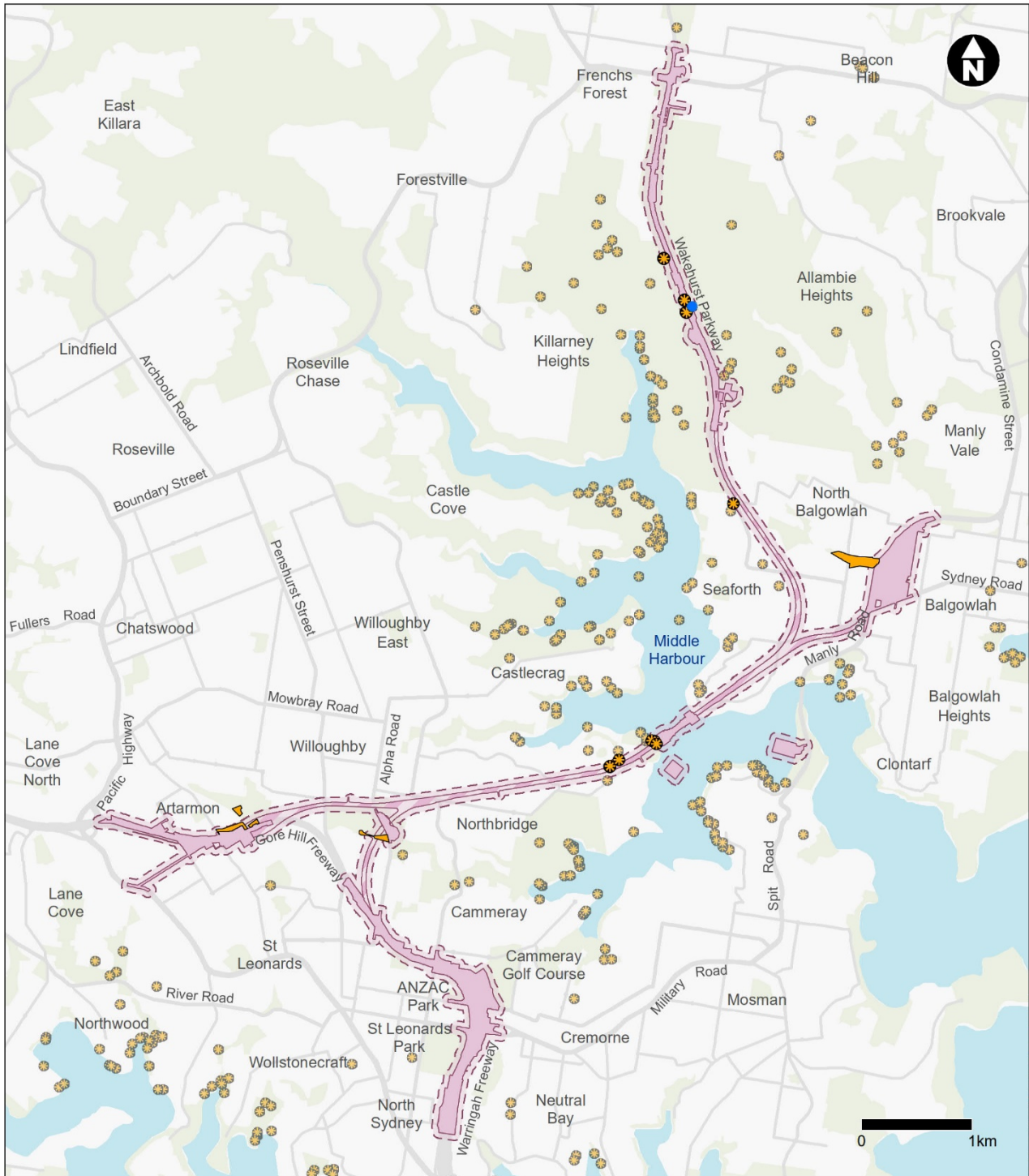
A description and explanation of the AHIMS site locations that have changed as a result of the February 2021 AHIMS search, as compared to locations shown in the environmental impact statement, is included in Section 2.3 below.

2.2 Updated AHIMS site mapping

Figure 4-2 to Figure 4-6 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-1 to Figure 15-5 of Chapter 15 (Aboriginal cultural heritage) of the environmental impact statement show the location of the eleven Aboriginal sites registered in AHIMS within the study area, as understood at the time of preparation of the environmental impact statement.




Following the AHIMS search carried out on 19 February 2021, and a site inspection of AHIMS site 45-6-2111 (Clive Park 3, Northbridge) carried out on 20 May 2021, Figure 4-2 to 4-6 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-1 to Figure 15-5 of Chapter 15 (Aboriginal cultural heritage) of the environmental impact statement have been updated to reflect the confirmed locations of sixteen AHIMS sites located within the study area. The updated figures are shown as Figure 2-1 to Figure 2-5 of this report, and these figures now supersede those shown in the environmental impact statement.

Due to scale, Figure 2-1 does not show the previous AHIMS site locations which have changed based on the February 2021 AHIMS search. However, locations of sites which have changed are shown on Figure 2-2 to Figure 2-5 for ease of reference.



Legend

Construction features

-  50 metre area around construction footprint
-  Construction footprint
-  Tunnel

AHIMS sites





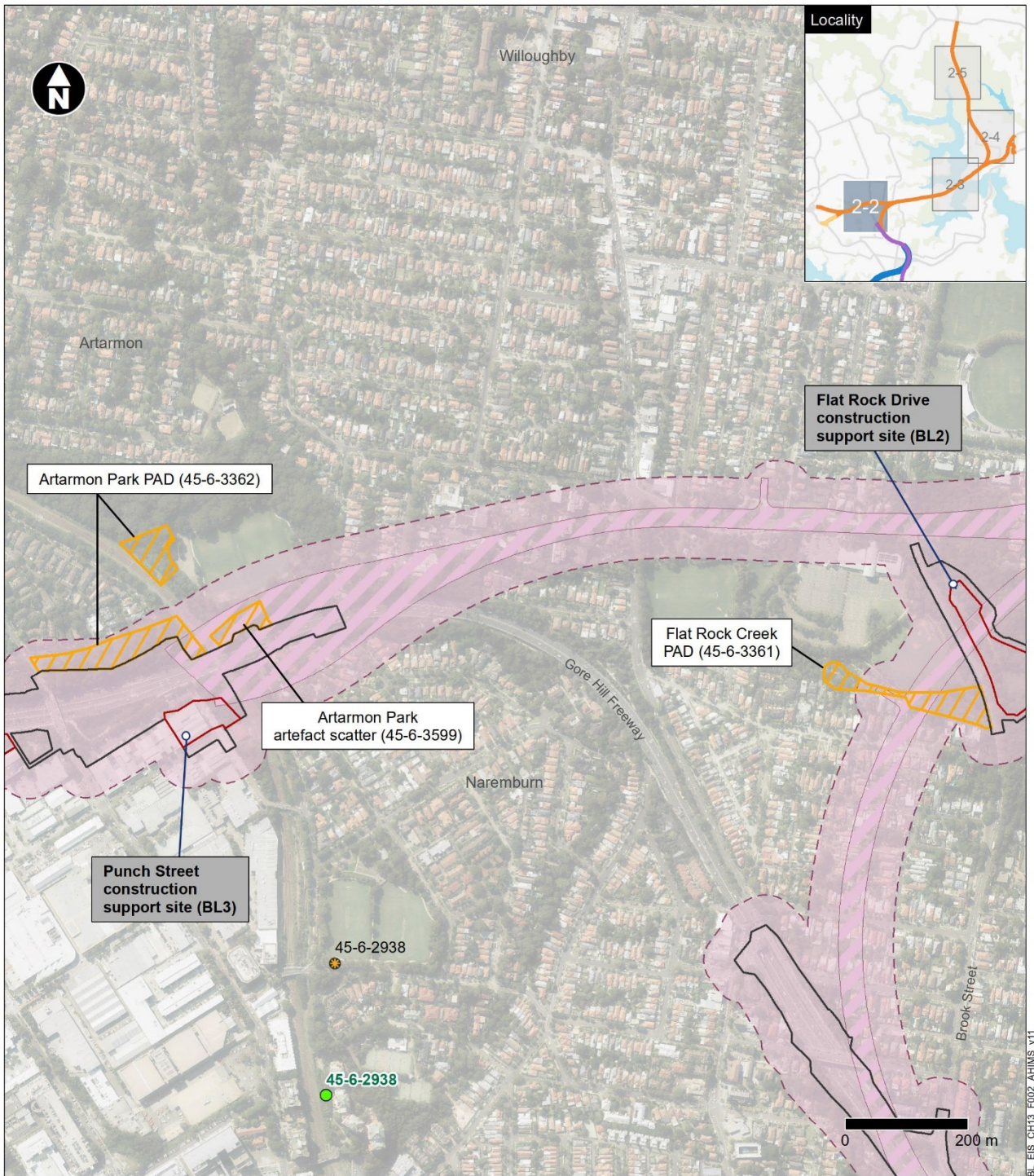
-  AHIMS site within 50 metres of the construction footprint
-  AHIMS site over 50 metres from the construction footprint
-  Potential engraving site – AHIMS register notified in July 2021
-  Potential Archaeological Deposit

Figure 2-1 AHIMS sites in the region around the project (update to Figure 15-1 of the environmental impact statement and Figure 4-2 of Appendix L (Technical working paper: Cultural heritage assessment report))



Legend

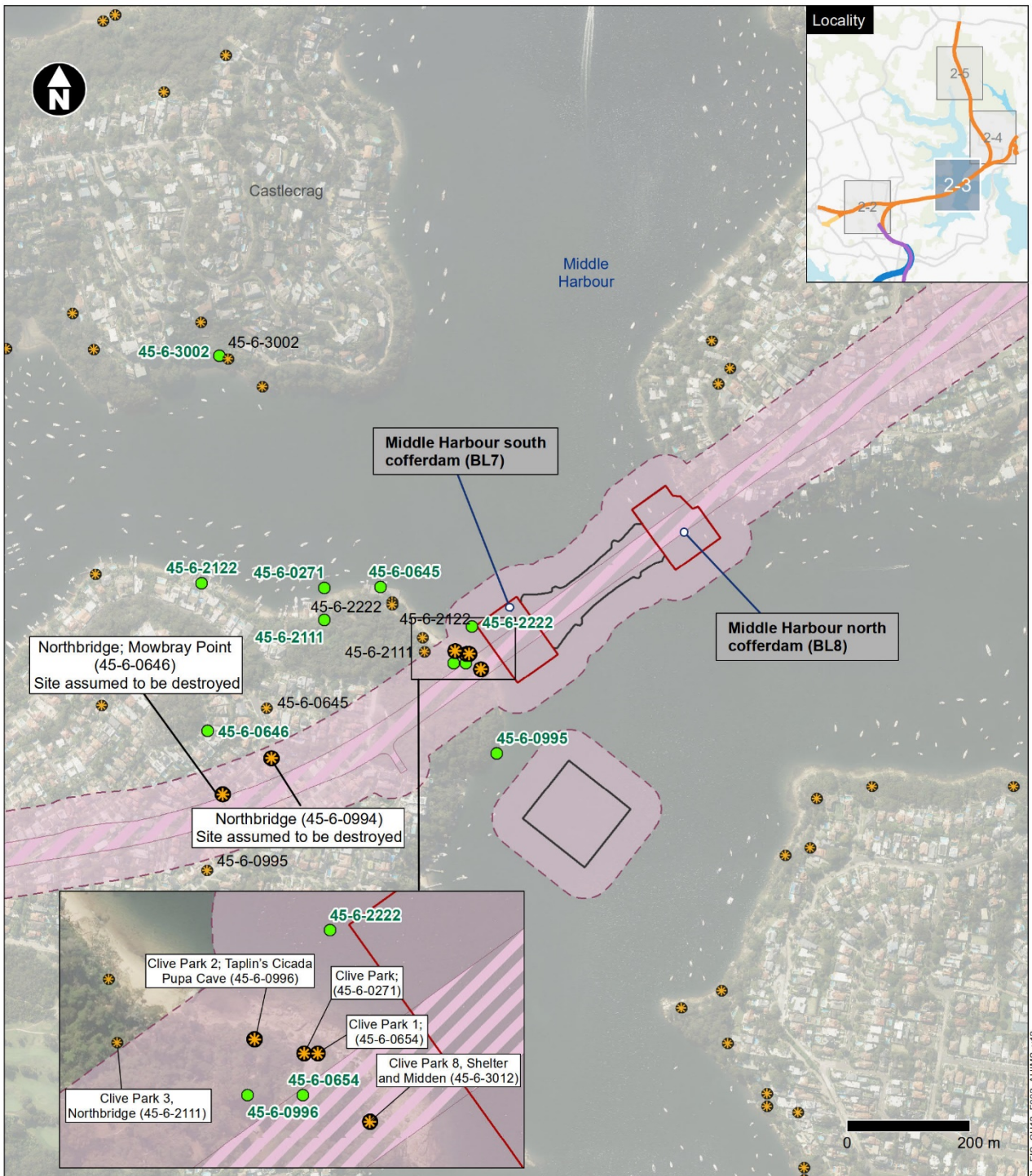
Construction features

- 50 metre area around construction footprint
- Construction footprint
- Construction support site
- Tunnel

AHIMS sites

- AHIMS site over 50 metres from the construction footprint
- Previous site locations as shown in the environmental impact statement (prior to the updated February 2021 AHIMS search)
- Potential Archaeological

Figure 2-2 AHIMS sites within 50 metres of the project construction footprint (Gore Hill Freeway and Flat Rock Creek) (update to Figure 4-3 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-2 of the environmental impact statement)



Legend

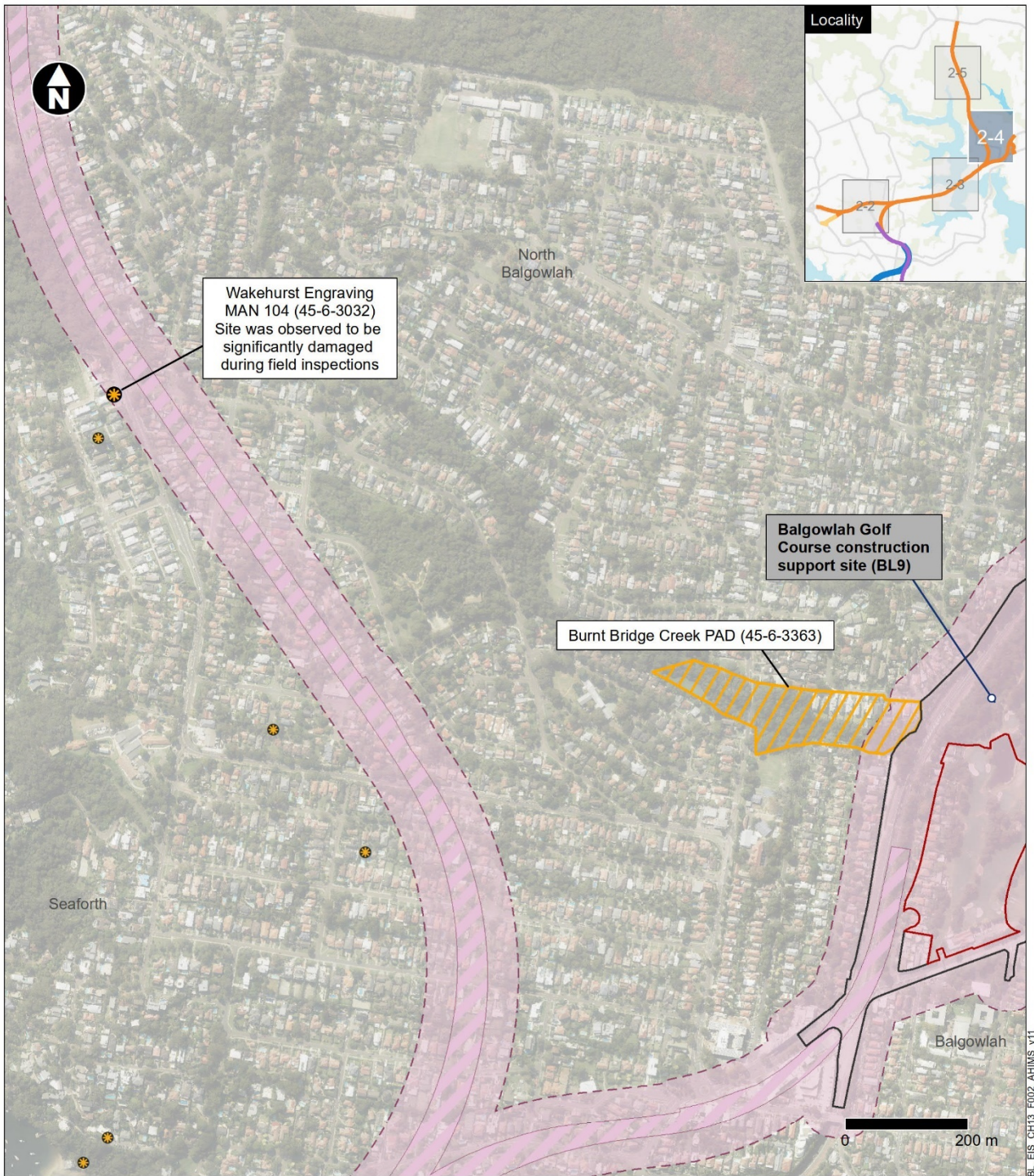
Construction features

- 50 metre area around construction footprint
- Construction footprint
- Construction support site
- Tunnel

AHIMS sites

- AHIMS site within 50 metres of the construction footprint
- AHIMS site over 50 metres from the construction footprint
- Previous site locations as shown in the environmental impact statement (prior to the updated February 2021 AHIMS search)

Figure 2-3 AHIMS sites within 50 metres of the project construction footprint (Middle Harbour) (update to Figure 4-4 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-3 of the environmental impact statement)



Legend

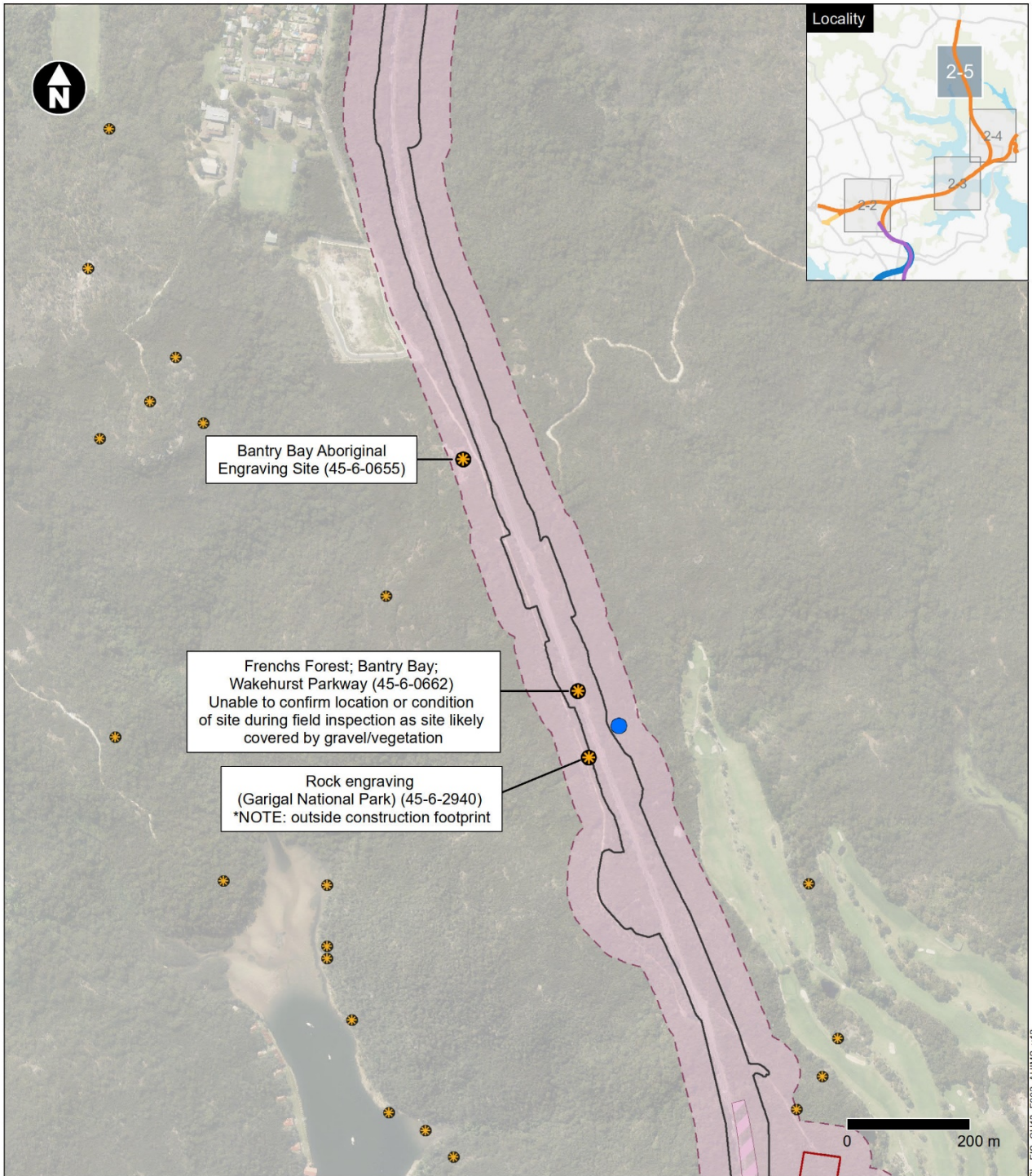
Construction features

- 50 metre area around construction footprint
- Construction footprint
- Construction support site
- Tunnel

AHIMS sites

- AHIMS site within 50 metres of the construction footprint
- AHIMS site over 50 metres from the construction footprint
- Potential Archaeological Deposit

Figure 2-4 AHIMS sites within 50 metres of the project construction footprint (Seaforth to Balgowlah) (update to Figure 4-5 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-4 of the environmental impact statement)



Legend

Construction features

- 50 metre area around construction footprint
- Construction footprint
- Construction support site
- Tunnel

AHIMS sites

- AHIMS site within 50 metres of the construction footprint
- AHIMS site over 50 metres from the construction footprint
- Potential engraving site – AHIMS register notified in July

Figure 2-5 AHIMS sites within 50 metres of the project construction footprint (Wakehurst Parkway) (update to Figure 4-6 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) and Figure 15-5 of the environmental impact statement)

2.3 Description of location changes for updated AHIMS sites

As a result of the updated search of the AHIMS register carried out on 19 February 2021, the following AHIMS site locations of interest were determined to have changed as compared to the locations shown in the environmental impact statement:

- Naremburn Park (45-6-2938)
- Chatswood/Green Door Cave (45-6-0995)
- Northbridge; Mowbray Point (45-6-0646)
- Northbridge (45-6-0994)
- Clive Park, Northbridge (45-6-0271)
- Clive Park 1, Northbridge (45-6-0654)
- Clive Park 2, Taplin's Cicada Pupa Cave (45-6-0996)
- Clive Park 3, Northbridge (45-6-2111)
- Clive Park 4; Northbridge (45-6-2222).

Table 2-1 includes a description and explanation of the AHIMS site locations of interest that have changed as a result of the updated AHIMS search, as compared to locations shown in the environmental impact statement.

Table 2-1 Updated AHIMS site location descriptions for sites where location has changed from that presented in the environmental impact statement

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
<p>Naremburn Park (45-6-2938) Artefact scatter</p>	<p>Refer to Figure 2-2. The site is shown in the environmental impact statement as being located outside of the study area. Updated mapping (using February 2021 AHIMS search data) shows that the site has moved to the north but still remains outside the study area.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). The updated site location remains outside the study area and so this site was not assessed further.</p>
<p>Chatswood/Green Door Cave (45-6-0995) Shelter with midden</p>	<p>Refer to Figure 2-2. The site is shown in the environmental impact statement as being located outside of the study area and on the shoreline. Updated mapping (using February 2021 AHIMS search data) shows that the site location has moved inland and is now around 400 metres south-west of the location shown in the environmental impact statement. However, the site still remains outside of the study area.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). The reason for the updated (February 2021) site coordinates is not known. However, it is noted that the updated easting coordinate is the same as for AHIMS site 45-6-0994 and so it is assumed that the updated location may be the result of an AHIMS coordinates data entry error. Transport for NSW notified AHIMS of this potential issue in April 2021. As the site location remains outside the study area this site was not assessed further.</p>
<p>Northbridge; Mowbray Point (45-6-0646) Rock engraving</p>	<p>Refer to Figure 2-3. The site is shown in the environmental impact statement as being located outside of the study area. Updated mapping (using February 2021 AHIMS search data) shows that the site location has moved and is now located within the study area, adjacent to the tunnel alignment.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). The AHIMS site card states that this site has been destroyed. The location of this site as shown in the updated mapping (using February 2021 AHIMS search data) was generally surveyed as part of the archaeological assessment carried out for the project ACHAR in 2017-2018. This has been confirmed in the specialist site inspection notes taken at that time, which state that the location reflected in the updated (February 2021 AHIMS search data) mapping on Dalmeny Road was previously visited, and that the inspection included a search all along Dalmeny Road. Refer to Annexure B for an update to the archaeological survey area from the environmental impact statement (update to Figure A-4 of Annexure D of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) to reflect that Dalmeny Road, Byora Crescent and the adjacent</p>

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
		<p>Broomham Park and was surveyed as part of the archaeological assessment carried out for the project ACHAR in 2017-2018.</p> <p>There was no obvious large projecting rock, rock petroglyph or any possible other locations identified on Dalmeny Road during the site inspection. In addition, the inspection covered a search of the Knoll on Byora Crescent to assess the highest vantage point in Northbridge. The general area, particularly parks and recreation areas, were also surveyed to try and locate the site. It was concluded in 2017-2018 that the site was destroyed as stated on the AHIMS site card.</p> <p>As the site could not be located during the 2017-2018 inspection, and is listed on the AHIMS site card as destroyed, this site has not been reinspected.</p> <p>However, for the purposes of this assessment, the site has been conservatively assessed in terms of potential indirect impacts (refer to Table 5-1 below).</p>
<p>Northbridge (45-6-0994) Midden</p>	<p>Refer to Figure 2-3.</p> <p>This site was not mapped in the environmental impact statement as it was determined to be located outside the study area, close to the water in Sailors Bay.</p> <p>Updated mapping (using February 2021 AHIMS search data) shows that the site has moved inland is now located within the study area.</p>	<p>There is very limited site information for this site on the AHIMS site card. The site card states that this site is a <i>'dug-up midden on gardened over point adjoining a boat shed'</i>, which suggests a location close to the water. The original mapping reference from the AHIMS site card indicates a location on Minimbah Road, Northbridge (houses that front onto the water), which aligns with the AHIMS site card reference to a location close to water. As per Section 4.10 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report), this site was confirmed to sit outside the study area was not assessed further in the environmental impact statement.</p> <p>Updated mapping (using February 2021 AHIMS search data) suggests the site is located inland, about 315 metres southeast of the original location on Minimbah Road, within the study area. It is believed that the updated site location may be an error, as it does not reflect the original site card mapping coordinates, Transport for NSW notified the AHIMS register of this issue in April 2021.</p>

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
		<p>Notwithstanding the above, it has been assumed for the purposes of this assessment that this site is located within the study area, within 50 metres of the tunnel alignment. The updated (February 2021 AHIMS search data) site coordinates show the site to be located on Dalmeny Road, Northbridge. Examination of aerial photos shows that there has been significant disturbance over time at the location due to residential development. If the site was located in this area, disturbance of the midden would have rendered the midden to be covered or removed and so it is assumed to have been destroyed. Refer to Annexure B for an update to the archaeological survey area from the environmental impact statement (update to Figure A-4 of Annexure D of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) to reflect that Dalmeny Road, Byora Crescent and the adjacent Broomham Park was surveyed as part of the archaeological assessment carried out for the project ACHAR in 2017-2018.</p> <p>However, for the purposes of this assessment, the site has been conservatively assessed in terms of potential indirect impacts (refer to Table 5-1 below).</p>
<p>Clive Park, Northbridge (45-6-0271) Rock engraving</p>	<p>Refer to Figure 2-3. The site is shown in the environmental impact statement as being located outside of the study area. Updated mapping (using February 2021 AHIMS search data) shows that the site is now located within the study area, adjacent to AHIMS site 45-6-0654.</p>	<p>For the environmental impact statement, the coordinates of this site were located outside of the study area. It was therefore not realised that this site was a standalone site, and the site was inadvertently recorded as part of AHIMS site 45-6-0654 during the 2017-2018 archaeological site inspection for the project ACHAR. Inspection of this site in 2017-2018 has been confirmed via a comparison of site inspection notes and sketches, with the AHIMS site card for this site and also from the GPS coordinates recorded during the archaeological assessment.</p> <p>As a result of the 2017-2018 site inspection, an Aboriginal site recording form for 45-6-0654 was provided to the AHIMS register to include the 45-6-0271 rock engraving, and the site was assessed as part of AHIMS site 45-6-0654 in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).</p>

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
		<p>Following the updated (February 2021 AHIMS search data) search results, the AHIMS site card for site 45-6-0271 has been further updated to reflect the distinct nature of this site from AHIMS site 45-6-0654.</p> <p>AHIMS site 45-6-0271 comprises a large fish/whale engraving on a vertical sandstone rock face, located to the west of the rock shelter that forms part of AHIMS site 45-6-0654.</p> <p>The statement of significance for this site is the same as the statement of significance for AHIMS site 45-6-0654, as included in Table 7.2.5 of Appendix L (Technical working paper: Aboriginal cultural heritage).</p> <p>An assessment of this site, as a standalone site, is included in Table 5-1 below.</p>
<p>Clive Park 1, Northbridge (45-6-0654) Shelter with art, burial/s, shelter with midden, artefact scatter</p>	<p>Refer to Figure 2-3. The site is shown in the environmental impact statement as being located within the study area, above the tunnel alignment. Updated mapping (using February 2021 AHIMS search data) shows that the site has moved further away from tunnel alignment, but still remains within the study area.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). The site was inspected, recorded and assessed in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). This is confirmed via a comparison of site notes and sketches with the AHIMS site card for this site, and also from the GPS coordinates recorded during the archaeological assessment for the project ACHAR carried out in 2017-2018.</p> <p>Following the updated (February 2021 AHIMS search data) search results, the AHIMS site card has been updated for the site to reflect the distinct nature of this site from AHIMS site 45-6-0271.</p> <p>The assessment outcomes for this site remain unchanged and are included in Table 5-1 below.</p>
<p>Clive Park 2, Taplin's Cicada Pupa Cave (45-6-0996) Shelter with art, shelter with midden</p>	<p>Refer to Figure 2-3. The site is shown in the environmental impact statement as being located within the study area. Updated mapping (using February 2021 AHIMS search data) shows that the site has moved further away from tunnel alignment, but still remains within the study area.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). However, it has been verified that the site was inspected, recorded and assessed in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). This has been confirmed via a comparison of site inspection notes and sketches with the AHIMS site card for this site, and also from the</p>

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
		<p>GPS coordinates recorded during the archaeological assessment for the project ACHAR carried out in 2017-2018 which align closely with the updated (February 2021 AHIMS search data) site coordinates.</p> <p>The assessment outcomes for this site remain unchanged and are included in Table 5-1 below.</p>
<p>Clive Park 3, Northbridge (45-6-2111) Shelter with rock engraving</p>	<p>Refer to Figure 2-3.</p> <p>The site is shown in the environmental impact statement as being located outside of the study area.</p> <p>Updated mapping (using February 2021 AHIMS search data) shows that the site location has moved and is now around 150 metres south-east of the location shown in the environmental impact statement. The site is located very close to the edge of the study area boundary line, but outside of the study area, as shown on the zoomed-in insert at the bottom of Figure 2-3.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4). The site was previously inspected as part of the archaeological assessment carried out for the project ACHAR in 2017-2018, and this has been confirmed by review of site inspection notes taken at that time.</p> <p>As updated mapping (using February 2021 AHIMS search data) shows that the site is located immediately adjacent to the study area boundary line, the site was revisited on 20 May 2021 to confirm the site location and accurately record GPS coordinates. The GPS coordinates recorded during the site inspection on 20 May 2021 were consistent with the updated mapping (using 2021 AHIMS search data) and confirm that the site is located very close to the edge of the study area boundary line but is just outside the study area. However, for the purposes of this assessment, the site has been assessed.</p> <p>Refer to Section 3.2 of this report for further information on the site inspection</p> <p>The assessment outcomes for this site are included in Table 5-1 below.</p>
<p>Clive Park 4; Northbridge (45-6-2222) Shelter with midden</p>	<p>Refer to Figure 2-3.</p> <p>The site is shown in the environmental impact statement as being located outside of the study area, in an offshore location.</p> <p>Updated (using February 2021 AHIMS search data) shows that the site is located on the Clive Park foreshore. The site remains outside of the study area.</p>	<p>The environmental impact statement mapping was based on previous AHIMS search coordinates (refer to Section 1.4) which showed this site to be located offshore. In Section 4.10 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report), this site was confirmed as being incorrectly mapped and determined to sit outside the study area. The site was therefore not assessed in the environmental impact statement.</p>

Site name, AHIMS ID and site type	Updated AHIMS site location and description of change	Comments on AHIMS site location change and assessment outcomes
		As the updated site location (using February 2021 AHIMS search data) remains outside the study area this site has not been assessed further.

3 Additional site inspections

3.1 Further site inspection of AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway)

As outlined in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report), the location and condition of AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) was unable to be confirmed during several field inspections carried out for the environmental impact statement, and the Aboriginal Heritage Office advised that the site was likely covered by gravel/vegetation.

During exhibition of the environmental impact statement, a further attempt to locate AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) was carried out during a site inspection on 22 January 2021. The inspection was organised by Transport for NSW and was attended by Lee Davison (Transport for NSW Aboriginal Cultural Heritage Officer), Phil Hunt (Aboriginal Heritage Office representative), Jack McGovern (Transport for NSW, Beaches Link Environment Manager) and Kerry Radford (Transport for NSW Planning and Environment staff member). During the site inspection, AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) could not be located.

Between April 2021 and May 2021 Transport for NSW liaised with Fire and Rescue NSW to determine if any hazard reduction burns were planned over the winter months for the area in the vicinity of AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway). If planned, inspection after any hazard reducing burning would assist with possible location of the site as ground vegetation would be cleared. However, it was confirmed by the NSW Rural Fire Service in May 2021 that hazard reduction burning at this location was last carried out in 2017 and it was unlikely there would be hazard reduction burning in this area in the near future.

During the 22 January 2021 site inspection, a potential engraving site was identified in a nearby location (further discussed in Section 3.3 below). The potential engraving site was inspected again on 20 May 2021. The May 2021 site inspection of the potential engraving site was carried out by Andrew Costello (Associate Archaeologist, Jacobs). The site inspection was also attended by Kevin Telford (Aboriginal Site Officer, Metropolitan Local Aboriginal Land Council), Lee Davison (Transport for NSW Aboriginal Cultural Heritage Officer), and Lucy Smith and Kerry Radford (Transport for NSW Planning and Environment staff members). During the 20 May 2021 inspection a further search for AHIMS site 45-6-0662 was also carried out, but the site could not be located.

As a result of the above further site inspections and searches for AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway), which were both subsequent to the searches carried out for the environmental impact statement, it is recommended that environmental management measure AH1 is updated to reflect that prior to construction, an archaeological investigation will be carried out at the possible site location and the careful removal of overlying gravel and vegetation will occur in the presence of a representative from the Metropolitan Local Aboriginal Land Council. This will allow the presence of the site at this location to be confirmed, its condition to be recorded and an assessment of potential impacts to be made (refer to Section 6 for further information).

3.2 Site inspection of AHIMS site 45-6-2111 (Clive Park 3, Northbridge)

This site was previously inspected as part of the archaeological assessment carried out for the project ACHAR in 2017-2018.

As shown in Figure 2-3, updated mapping (using February 2021 AHIMS data) locates AHIMS site 45-6-2111 (Clive Park 3, Northbridge) around 150 metres south-east of the location shown in the environmental impact statement. The site is located just outside of the study area, immediately adjacent to the study area boundary line which identifies a distance of 50 metres from the construction footprint.

Given its close proximity to the study area boundary line, a targeted site inspection of AHIMS site 45-6-2111 (Clive Park 3, Northbridge) was carried out on 20 May 2021 to confirm the site location and accurately record its GPS coordinates. The site inspection was carried out by Andrew Costello (Associate Archaeologist, Jacobs). The site inspection was also attended by Kevin Telford (Aboriginal Site Officer, Metropolitan Local Aboriginal Land Council), Lee Davison (Transport for NSW Aboriginal Cultural Heritage Officer) as well as Lucy Smith and Kerry Radford (Transport for NSW Planning and Environment staff members).

The site was noted to comprise a rock shelter with hand stencils. The rock shelter is partially covered by vegetation, including tree branches and is adjacent to a small creek. The stencils are relatively faint, though visible. The stencils have been made with white ochre and appear to be adult and children in size. The site is considered to have moderate integrity and structure and high representativeness.

The GPS coordinates recorded during the site inspection on 20 May 2021 were consistent with the updated mapping (using 2021 AHIMS search data) and confirm that the site is located very close to the edge of the study area boundary line, but just outside the study area. However, for the purposes of this assessment, the site has been assessed.

The assessment outcomes for this site are included in Table 5-1 below.

3.3 Site inspection of potential engraving site adjacent to Wakehurst Parkway

As outlined in Section 3.1, a potential engraving site located adjacent to Wakehurst Parkway was identified during a site inspection on 22 January 2021. This site was not registered with AHIMS at the time of inspection but was a potential site of interest. The site was then further inspected on 20 May 2021.

The purpose of the site inspection on 20 May 2021 was to determine if the site comprises a cultural engraving and to accurately record GPS coordinates. This site was also inspected to establish its proximity and potential association with AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway). A further search to try and locate AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) was also carried out during this inspection, but the site could not be located.

The site inspection was carried out by Andrew Costello (Associate Archaeologist, Jacobs). The site inspection was also attended by Kevin Telford (Aboriginal Site Officer, Metropolitan Local Aboriginal Land Council), Lee Davison (Transport for NSW Aboriginal Cultural Heritage Officer), and Lucy Smith and Kerry Radford (Transport for NSW Planning and Environment staff members).

The location of the potential engraving site is shown in Figure 2-5 and is adjacent to Wakehurst Parkway, north of Seaforth. The site is located within the study area but outside of the construction footprint.

The site is situated at the edge of a horizontal rock platform exposure that is currently used as part of the Manly Warringah War Memorial State Park Mountain Bike Trail. It is noted that the area surrounding Wakehurst Parkway contains undisturbed remnant landscape with rock outcrops and the potential for intact soil profiles. A number of engravings have been previously recorded in this area as discussed in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

The potential engraving is not in good condition, appearing to be quite eroded. It appears to contain linear features and is potentially a zoomorph (animal or fish). Zoomorph engravings are quite common in this area.

Following the site inspection, on 21 July 2021 Jacobs sent the necessary site recording information to the AHIMS register and have requested the site be registered as a new AHIMS site. Jacobs and Transport for NSW are currently awaiting confirmation from AHIMS of this process. The AHIMS number for the site is currently pending.

The assessment outcomes for this site are included in Table 5-1 below.

4 Updated statements of significance and Sefton (1996) clarification

As a result of the updated AHIMS search in February 2021 and the information presented in Section 2 and Section 3 of this report, statements of significance have been prepared for AHIMS site 45-6-2111 (Clive Park 3, Northbridge) and the potential engraving site located adjacent to Wakehurst Parkway. These are included in Table 4-1 and Table 4-2 below.

Significance assessments for the sites 45-6-0646 (Mosman; Mowbray Point) and 45-6-0994 (Northbridge) have not been provided as these sites are assumed to have been destroyed, as detailed in Table 2-1 above.

4.1 AHIMS site 45-6-2111 (Clive Park 3, Northbridge)

Table 4-1 Statement of significance – Clive Park 3, Northbridge (45-6-2111)

Criterion	Assessment
Social significance	Consultation with Registered Aboriginal Parties has identified that all Aboriginal cultural heritage sites in the study area are considered to be of high cultural (social) significance (refer to consultation in sections 3 and 5 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report)). Clive Park 3 is a rock shelter with hand stencils. This site has high significance at a local level as it provides tangible evidence of the use of the area by Aboriginal people.
Historical significance	This site does not meet this criterion, there are no known written or oral historical references to this site.
Scientific significance	This site has moderate to high scientific significance at the local level as it has moderate integrity, moderate structure and high representativeness/rarity as it is a shelter with stencils that still exists within the urbanised Sydney environment. The stencils are relatively faint, though visible. The rock shelter is relatively undisturbed and protected by the surrounding vegetation.
Aesthetic significance	The site has high aesthetic significance as it is located in a bushland setting that is indicative of how the area would have been when the stencils were made. This

Criterion	Assessment
	provides a context that indicates how the local environment would have looked when the shelter was used. This allows us to have a better understanding of the site.
Overall significance	Overall, Clive Park 3 is of moderate-high significance at a local level as it provides tangible evidence of use of the area by Aboriginal people. It has high aesthetic significance and moderate to high scientific significance. It has moderate research and high educational potential about the way Aboriginal people lived in the area in the past.

4.2 Potential engraving site adjacent to Wakehurst Parkway

Table 4-2 Statement of significance – potential engraving site adjacent to Wakehurst Parkway

Criterion	Assessment
Social significance	Consultation with Registered Aboriginal Parties has identified that all Aboriginal cultural heritage sites in the study area are considered to be of high cultural (social) significance (refer to consultation in sections 3 and 5 of the Appendix L (Technical working paper: Aboriginal cultural heritage assessment report)). This engraving is potentially a zoomorph, which is relatively common in this area. It is located adjacent to a popular mountain bike trail. The continued existence of the engraving increases its significance, as this is a relatively high pedestrian and cyclist traffic area. This site has high significance at a local level as it provides tangible evidence of the use of the area by Aboriginal people.
Historical significance	This site does not meet this criterion, there are no known written or oral historical references to this site.
Scientific significance	This site has low scientific significance at the local level as it has poor integrity. The engraving has survived at the edge of a relatively intensively used mountain bike trail in the urbanised Sydney environment, but is in poor condition, appearing to be highly eroded. It has been afforded a level of protection from the surrounding vegetation, but this has not provided sufficient protection to reduce erosion.
Aesthetic significance	The site has low aesthetic significance, as it appears highly eroded.
Overall significance	Overall, the Wakehurst Parkway engraving is of low to moderate significance at a local level. It provides tangible evidence of use of the area by Aboriginal people but has low scientific and aesthetic significance. Its continued existence in an area of relatively high pedestrian and cyclist traffic provides tangible evidence of the use of the area by Aboriginal people, however, due to erosion, the engraving is unclear and difficult to interpret.

4.3 Clarification regarding Sefton (1996) and AHIMS site 45-6-0654 (Clive Park 1, Northbridge) rock shelter

The Sefton (1996) study into the effects of subsidence on rock shelters, referenced in Section 8.2.1.2 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) showed that larger Aboriginal rock shelters (greater than 50 cubic metres) were at greater risk of impact. The study concluded that no rock shelter site less than 50 cubic metres was found to have been impacted by subsidence, and that impacts to larger shelters were also rare. The findings of Appendix L (Technical working paper: Aboriginal cultural heritage) were that all rock shelters

within the study area are significantly smaller than 50 cubic metres, suggesting that harm from subsidence related impacts would be unlikely.

Following exhibition of the environment impact statement, several clarifications and updates have been provided by the specialist archaeological consultant Jacobs Group (Australia) Pty Ltd who prepared Appendix L (Technical working paper: Aboriginal cultural heritage assessment report). These clarifications and updates to the environmental impact statement are included in Table 4-3 below.

Table 4-3 Clarifications on Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) with regard to Sefton (1996) and AHIMS site 45-6-0654 (Clive Park 1, Northbridge)

Error/discrepancy	Clarification
<p>Reference to Sefton (1996), Section 8.2.1.2 and Section 10 (References) of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) superseded</p>	<p>The publication reference Sefton (1996) in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) was the foremost in a series of publications by Sefton on the subject of sandstone rock overhangs and has been updated to a more appropriate, later publication of Sefton (2000) as follows:</p> <p style="text-align: center;"><i>Sefton, C. 2000. Overview of the Monitoring of Sandstone Overhangs for the effects of Mining Subsidence on Illawarra Coal Measures, for Collieries Division, BHP Coal.</i></p> <p>Sefton (2000) provides the results of a ten year monitoring program assessing the impacts of longwall coal mining in the Illawarra Coal Measures under the South Sydney Basin and Woronora Plateau on sandstone overhang Aboriginal heritage sites. This included inspecting and monitoring of over 50 sandstone overhang sites, prior to, during and after long wall mining. One of the key outcomes of monitoring program was a number of recommended criteria that should be considered when determining the potential risk of subsidence to sandstone overhangs in addition to the size of the rock shelter/overhang.</p>
<p>Updated statement about rock shelters in the study area, Section 8.2.1.2 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report)</p>	<p>The third paragraph of Section 8.2.1.1 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) has been updated and should read:</p> <p>“For the greater Sydney region, Sefton’s (Sefton 20001996) investigation of the effects of mining-related subsidence on Aboriginal rock shelter sites remains the most useful study into the effects of subsidence on rock shelters specifically (note, rock engravings are not covered in this study). The results of Sefton’s analysis showed that the determining probability of subsidence related impacts to a rock shelter was overhang size, with a measurement of greater than 50 cubic metres being of importance, with larger shelters (greater than 50 cubic metres) at greater risk of impact. Wetness of overhang is another criteria. No rock shelter site less than 50 cubic metres was found to have been impacted by subsidence, and impacts to larger shelters were also rare (Sefton 20001996).</p> <p>All rock shelters within the study area, with the exception of Clive Park 1 (45-6-0654), are significantly smaller than 50 cubic metres, suggesting that harm from subsidence related impacts would be unlikely to these Aboriginal site types. The Clive Park 1 (45-6-0654) rock shelter has a volume of greater than 50 cubic metres, and the overhang is considered to be dry. The size of the rock shelter and large overhang at Clive Park 1 (45-6-0654) has been considered in the impact assessment outcomes and is recommended to be managed through appropriate environmental management measures for vibration.”</p>

Error/discrepancy	Clarification
Updated statement about Clive Park 1; Northbridge (45-6-0654) in Table 8-3 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report)	<p>The description column finding for Clive Park 1; Northbridge (45-6-0654) in Table 8-3 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report) has been updated following a further site visit and should read:</p> <p style="padding-left: 40px;">Rock shelter is greater less than 50 cubic metres in size.</p> <p>It should be noted that the significance of potential impact of Minor remains unchanged as the large overhang and high significance of this site were already considered and already increased the significance outcome of potential impact for this finding.</p>

5 Updated impact assessment

Potential impacts to Aboriginal cultural places and archaeological sites recorded within the study area are detailed in Section 15.4 of the environmental impact statement and Section 8 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report).

This section presents an updated impact assessment covering all AHIMS sites recorded within the study area, and the potential engraving site adjacent to Wakehurst Parkway.

As discussed in Appendix L (Technical working paper: Aboriginal cultural heritage assessment report), most potential impacts to Aboriginal sites would occur during construction, and may include:

- Direct impacts such as the removal or destruction of an Aboriginal site
- Indirect impacts associated with construction vibration generated by surface works in proximity to Aboriginal sites.

Potential impacts during operation are expected to be limited and may include indirect impacts associated with Aboriginal site setting (visual impacts, changes to vistas/landscapes), changes to ongoing use or environmental association.

The potential for these impacts to occur at sixteen known Aboriginal sites is summarised below in Table 5-1. Based on the updated mapping included in Section 2.2 and results of this updated assessment, it is anticipated that:

- One Aboriginal site (45-6-0662, Frenchs Forest; Bantry Bay; Wakehurst Parkway) is considered likely to be within the construction footprint. The location and condition of this site could not be confirmed during field inspections conducted for the environmental impact assessment or during additional attempts made during site inspections conducted on 22 January 2021 and 20 May 2021. This site could have partial/potential direct impact but this would need to be determined through further investigation as part of environmental management measure AH1
- Six Aboriginal sites (45-6-0655, Bantry Bay Aboriginal Engraving Site; 45-6-2940, Rock engraving (Garigal National Park); 45-6-3362, Artarmon Park PAD; 45-6-3361, Flat Rock Creek PAD; 45-6-3363, Burnt Bridge Creek PAD; and the potential engraving site adjacent to Wakehurst Parkway) are located within 50 metres of surface works including two sites that may be subject to indirect impacts associated with vibration and settlement (45-6-0655, Bantry Bay Aboriginal Engraving Site and 45-6-2940, Rock engraving (Garigal National Park))
- Six Aboriginal sites (45-6-3032, Wakehurst Engraving MAN 104; 45-6-3012, Clive Park 8, Shelter and Midden; 45-6-0654, Clive Park 1; Northbridge; 45-6-0996, Clive Park 2; Taplin's Cicada Pupa Cave; 45-6-3599, Artarmon Park artefact scatter; and 45-6-0271, Clive Park 3) are located above or within 50 metres of the tunnel alignment and may be subject to indirect impacts associated with vibration and settlement

- One Aboriginal site (45-6-2111, Clive Park 3, Northbridge) is located just outside 50 metres of the tunnel alignment and may be subject to indirect impacts associated with vibration
- Two Aboriginal sites are assumed to be destroyed (45-6-0646, Northbridge; Mowbray point and 45-6-0994, Northbridge). Notwithstanding, these two sites are located within the study area adjacent to the tunnel alignment and for the purposes of this assessment have been conservatively assessed as being potentially subject to indirect impacts associated with vibration and settlement
- Operational impacts are considered to be negligible.

Table 5-1 Assessment of potential impacts to known Aboriginal cultural heritage sites (update to Table 15-7 of the environmental impact statement and Table 8-3 of Appendix L (Technical working paper: Aboriginal cultural heritage assessment report))

Changes to this table from those in the environmental impact statement are included in **bold** font.

Site	Site type	Overall site significance	Potential impact and description	Risk of potential impacts
Artarmon Park artefact scatter (45-6-3599)	Sub-surface artefact scatter	Low-moderate	Site is a sub-surface artefact scatter and would not be impacted by the project.	No impact
Artarmon Park PAD (45-6-3362)	Potential archaeological deposit	N/A	Site is a potential archaeological deposit and would not be impacted by the project.	No impact
Flat Rock Creek PAD (45-6-3361)	Potential archaeological deposit	N/A	Site is a potential archaeological deposit and would not be impacted by the project.	No impact
Clive Park 8, Shelter and Midden (45-6-3012)	Shelter and midden	High	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
			Indirect – settlement Settlement is predicted to be between 25-30 millimetres.	Negligible
Clive Park 1; Northbridge (45-6-0654)	Shelter with art, burial/s, shelter with midden, artefact scatter	High	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible

Site	Site type	Overall site significance	Potential impact and description	Risk of potential impacts
			Indirect – settlement Settlement is predicted to be between 20-25 millimetres. Large overhang and high significance of this site increased significance outcome of potential impact.	Minor
Clive Park 2; Taplin's Cicada Pupa Cave (45-6-0996)	Shelter with art, shelter with midden	Moderate-high	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
			Indirect – settlement Settlement is predicted to be 10-15 millimetres.	Negligible
Clive Park, Northbridge (45-6-0271)	Rock engraving	High	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
			Indirect – settlement Settlement is predicted to be 20-25 millimetres.	Negligible
Clive Park 3, Northbridge (45-6-2111)	Shelter with hand stencil	Moderate-high	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible

Site	Site type	Overall site significance	Potential impact and description	Risk of potential impacts
Northbridge (45-6-0994)	Midden	Not assessed	Site assumed to be destroyed. Notwithstanding, indirect vibration impact would be outside the minimum working distance for unsound structures and indirect settlement would be predicted to be 5 millimetres.	Negligible
Mosman; Mowbray Point (45-6-0646)	Rock engraving	Not assessed	Site assumed to be destroyed. Notwithstanding, indirect vibration impact would be outside the minimum working distance for unsound structures and indirect settlement would be predicted to be 5 millimetres.	Negligible
Burnt Bridge Creek PAD (45-6-3363)	Potential archaeological deposit	N/A	Site is a potential archaeological deposit and would not be impacted by the project. Rock shelter is less than 50 cubic metres in size.	No impact
Wakehurst Engraving MAN 104 (45-6-3032)	Rock engraving on outcrop	High	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
			Indirect – settlement Settlement at this location is predicted to be 10-15 millimetres, which poses a minor risk, however the existing site is already significantly impacted/damage and risk is therefore considered negligible.	Negligible

Site	Site type	Overall site significance	Potential impact and description	Risk of potential impacts
Rock engraving (Garigal National Park) (45-6-2940)	Rock engraving	High	Indirect – change to environmental setting and access There is the potential for changes to the visual setting and surrounding landscape due to the removal of mature native trees during construction. There is the potential for changes to the site access during construction works.	Negligible
			Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
Frenchs Forest; Bantry Bay; Wakehurst Parkway (45-6-0662)	Rock engraving	Not assessed	Direct (partial/potential) Location and condition not confirmed during site inspection as site was likely covered by gravel/vegetation.	Minor
Bantry Bay Aboriginal Engraving Site (45-6-0655)	Large rock engraving site with multiple engravings	High	Indirect – change to environmental setting and access There is the potential for changes to the visual setting and surrounding landscape due to the removal of mature native trees during construction. There is the potential for changes to the site access during construction works.	Negligible

Site	Site type	Overall site significance	Potential impact and description	Risk of potential impacts
			Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible
Potential engraving site adjacent to Wakehurst Parkway	Rock engraving	Low	Indirect – vibration Vibration impact would be outside the minimum working distance for unsound structures.	Negligible

6 Environmental management measures

As outlined in Section 3.1 and 3.3, the location and condition of AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway) was unable to be confirmed during field inspection carried out for the environmental impact assessment and the Aboriginal Heritage Office advised that the site was likely covered by gravel/vegetation. Environmental management measure AH1 allows for the management of this site.

Further site inspections carried out on 22 January 2021 and 20 May 2021 following exhibition of the environmental impact statement have not resulted in confirmation of the location of AHIMS site 45-6-0662 (Frenchs Forest; Bantry Bay; Wakehurst Parkway).

As a result, it is recommended that environmental management measure AH1 is updated to reflect that, prior to construction, an archaeological investigation will be carried out at the possible site location and the careful removal of overlying gravel and vegetation will occur in the presence of a representative from the Metropolitan Local Aboriginal Land Council. This will allow the presence of the site at this location to be confirmed, its condition to be recorded and an assessment of potential impacts to be made.

The proposed update to environmental management measure AH1 is shown in Table 6-1. Where new text has been added it is in bold text. Where text has been deleted, it appears as strikethrough text.

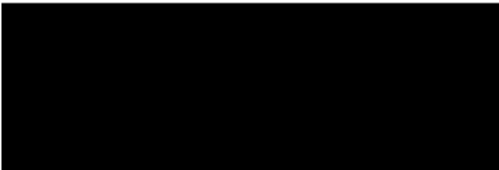
Table 6-1 Proposed update to Environmental management measure AH1

Ref	Phase	Impact	Environmental management measure	Location
AH1	Pre-construction and construction	Aboriginal heritage – vibration, and settlement impacts	<p>Before the start of construction, further consultation with Heritage NSW, the Metropolitan Local Aboriginal Land Council, the Aboriginal Heritage Office and the Registered Aboriginal Parties will be carried out to decide an appropriate course of action for the Aboriginal site 45-6-0662 on Wakehurst Parkway, as the location of this site could not be confirmed during field inspection (site is likely covered by gravel/vegetation).</p> <p>If considered appropriate, an archaeological investigation may will be carried out at the possible Aboriginal heritage site 45-6-0662 location to carefully remove the gravel/vegetation, to try and locate and confirm its presence and record the underlying site condition. This will occur in the presence of a representative from Metropolitan Local Aboriginal Land Council.</p> <p>If new information regarding site condition is identified during consultation suggesting the site may be subject to impacts due to vibration and settlement, environmental management measures AH2, AH3 and AH4 will apply.</p>	Frenchs Forest; Bantry Bay; Wakehurst Parkway (45-6-0662)

Ref	Phase	Impact	Environmental management measure	Location
			In the absence of confirming the site, if during construction works a site is located, the unexpected finds protocol prescribed in AH5 would apply. Further, Heritage NSW, an appropriately qualified archaeologist and the Metropolitan Local Aboriginal Land Council will be contacted and the site will be re-recorded in situ.	

All other management recommendations and environmental management measures relating to Aboriginal heritage are unchanged as a result of this and are the same as those detailed in the environmental impact statement, as outlined in Table D2-1 of this submissions report.

Annexure A. AHIMS search results from 19 February 2021



Dear Sir or Madam:



The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.



A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

87	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

Note: This Excel report shows the sites found in AHIMS on the 19/02/2021. If this date is not the same as the original date of the Search Results letter obtained during the Basic Search, then the search results might be different. The PDF version of this report will always coincide with the Basic Search Results letter.

Site ID	Site name	Context	Site status	Site features	Site types
45-6-2222	Clive Park 4,Northbrid		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2225	Beauty Point 11,Beau		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2226	Beauty Point 10,Beau		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2227	Beauty Point 9,		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2228	Beauty Point 8,Beauty		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2351	Fisher Bay 6,		Open site Valid	Artefact : -	Open Camp Site
45-6-2372	Remnants In shelter,		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2285	Pickering Pt. 2 Seafort		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2286	Bilgh Cres,Seafort;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1088	The Split,Pearl Bay,		Closed al Valid	Art (Pigment or Engrave Shelter with Art	
45-6-1527	Quakers Hat Bay,		Closed al Not a Site	Artefact : -	Not an Aboriginal Site
45-6-1528	Slippery Jack Cave;M		Closed al Valid	Art (Pigment or Engrave Shelter with Art,Shelter	
45-6-1529	Quakers Hat Bay;Mos		Closed al Valid	Art (Pigment or Engrave Shelter with Art	
45-6-1437	Beauty Point,Beauty P		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-0271	Clive Park,Northbridge		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-1448	Castlesorg,Edinburgh		Closed al Valid	Art (Pigment or Engrave Shelter with Art	
45-6-2070	Chinaman's Beach Ca		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1380	Sugarloaf Bay (South		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2111	Clive Park 3;		Closed al Valid	Art (Pigment or Engrave Shelter with Art	
45-6-2122	NSC Cave;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-0644	Northridge Golf Links		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-0645	Northridge;Mowbray		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-0646	Northridge;Mowbray		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-0654	Clive Park One;North		Closed al Valid	Shell : -, Artefact : -, Art Burials,Shelter with Art	
45-6-1234	Burn Head,Foot Cave,		Closed al Valid	Shell : -, Artefact : -, Art Shelter with Art,Shelter	
45-6-2079	Old Fish cave;Mosm		Closed al Valid	Art (Pigment or Engrave Rock Engraving,Shelte	
45-6-1987	Beauty Point 6,Beauty		Closed al Valid	Art (Pigment or Engrave Shelter with Art,Shelter	
45-6-1988	Beauty Point 7;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1989	Beauty Point 4;		Open site Valid	Shell : -, Artefact : -	Midden
45-6-0487	Northridge Golf Links		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2025	Sangrado Reserve 1;		Open site Valid	Artefact : -, Shell : -	Midden,Open Camp Site
45-6-2026	Sangrado Reserve 2;		Open site Valid	Artefact : -, Shell : -	Midden,Open Camp Site
45-6-2027	Sangrado Reserve 3;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2037	Pearl Bay,Beauty Poi		Open site Valid	Artefact : -	Open Camp Site
45-6-0751	Mosman,Quakers Hat		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-0654	Mosman,Beauty Point		Closed al Valid	Art (Pigment or Engrave Shelter with Art	
45-6-0676	Split Bridge;Seafort;		Open site Valid	Art (Pigment or Engrave Rock Engraving	
45-6-1024	Balgowlah;South End		Closed al Valid	Shell : -, Artefact : -, Art Shelter with Art,Shelter	
45-6-1025	Balgowlah;Nearly Join		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1026	Balgowlah,Beds and B		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1027	Balgowlah;Fishmans B		Open site Valid	Shell : -, Artefact : -	Midden
45-6-1028	Balgowlah;Fisher Bay		Open site Valid	Shell : -, Artefact : -	Midden
45-6-1978	Pearl Bay 1,Beauty Po		Open site Valid	Shell : -, Artefact : -	Midden
45-6-1979	Pearl Bay 2,Beauty Po		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1980	Pearl Bay 3,Beauty Po		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1981	Pearl Bay 4,Beauty Po		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1982	Pearl Bay 5;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1983	Beauty Point 1;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1984	Beauty Point 2;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1985	Beauty Point 3;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1986	Beauty Point 5;		Open site Valid	Shell : -, Artefact : -	Midden
45-6-1908	Seafort;		Open site Valid	Shell : -, Artefact : -, Bur Burials,Midden	
45-6-0244	NGL 6;Northbridge;		Closed al Valid	Artefact : -	Shelter with Deposit
45-6-0993	Chalswood;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-0994	Chalswood;		Open site Valid	Shell : -, Artefact : -	Midden
45-6-0995	Chalswood;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-0996	Clive Park Two;North		Closed al Valid	Art (Pigment or Engrave Shelter with Art,Shelter	
45-6-0997	Mosman;Northbridge		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-0998	Mosman;		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-0999	Mosman,;		Open site Valid	Shell : -, Artefact : -	Midden
45-6-2628	311-313 Edinburgh Rd		Closed al Valid	Shell : -	
45-6-2692	H.R.R.3 - Will-118		Open site Valid	Shell : -	
45-6-2782	KURING-GAI CHASE		Closed al Valid	Shell : -, Potential Archaeological Deposit (PAD	
45-6-2784	Sugarloaf Point, WILL		Open site Valid	Shell : -	
45-6-2909	Old Trident		Open site Valid	Art (Pigment or Engraved) : -	
45-6-2810	Old Goanna		Open site Valid	Art (Pigment or Engraved) : 1	
45-6-2817	Beauty Point 14		Open site Valid	Earth Mound : 1	
45-6-1023	Balgowlah;Fallen Forw		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-1022	Balgowlah;Split Bridge		Closed al Valid	Shell : -, Artefact : -	Shelter with Midden
45-6-2913	Will 164-304 Edinburg		Open site Valid	Art (Pigment or Engraved) : -	
45-6-2945	Castlehaven Reserve		Closed al Valid	Shell : 1	
45-6-2959	WILL174, Castlehaven		Closed al Valid	Shell : -, Potential Archaeological Deposit (PAD	
45-6-3002	Castlehaven Reserve		Open site Valid	Shell : -	

45-6-3003	Linden Way Shelter 1	[REDACTED]	[REDACTED]	Open site Valid
45-6-3011	Clive Park Midden WIL	[REDACTED]	[REDACTED]	Open site Valid
45-6-3012	Clive Park 8, Shelter M	[REDACTED]	[REDACTED]	Closed sit Valid
45-6-3018	Sailors Bay Park 1- WI	[REDACTED]	[REDACTED]	Closed sit Valid
45-6-3019	Castlehaven Engravin	[REDACTED]	[REDACTED]	Open site Valid
45-6-3020	Castlehaven Midden 3	[REDACTED]	[REDACTED]	Open site Valid
45-6-3119	Castlecrag Northern M	[REDACTED]	[REDACTED]	Open site Valid
45-6-3120	Castlecrag Northern S	[REDACTED]	[REDACTED]	Open site Valid
45-6-3122	The Scarp Shelter 1	[REDACTED]	[REDACTED]	Open site Valid
45-6-3123	The Scarp Shelter 2	[REDACTED]	[REDACTED]	Open site Valid
45-6-3161	Castlecrag Northern S	[REDACTED]	[REDACTED]	Open site Valid
45-6-3162	Castlecrag Northern S	[REDACTED]	[REDACTED]	Closed sit Valid
45-6-3672	David Shelter MAN-11	[REDACTED]	[REDACTED]	Open site Valid
45-6-3650	Long Bay Shelter Art ([REDACTED]	[REDACTED]	Closed sit Valid

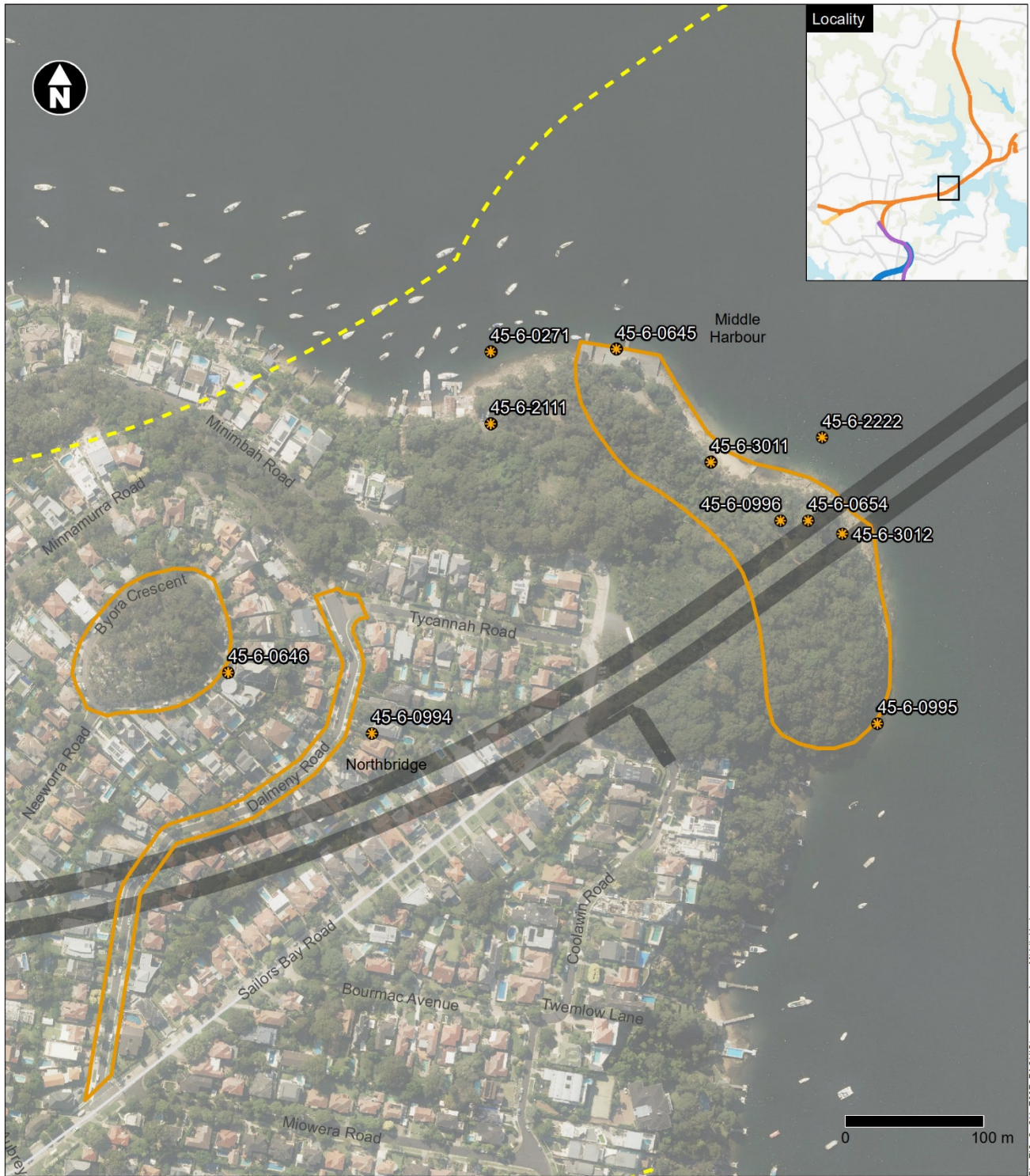
Shell : -
Shell : 1
Shell : -
Shell : -
Art (Pigment or Engraved) : -
Shell : -
Shell : -
Potential Archaeological Deposit (PAD) : -
Shell : -
Shell : -
Art (Pigment or Engraved) : -, Shell : -
Shell : -
Potential Archaeological Deposit (PAD) : 1
Art (Pigment or Engraved) : 5

Beaches Link and Gore Hill Freeway Connection

Submissions report





Appendix A – Updated mapping and assessment of Aboriginal cultural heritage sites

Annexure B. Archaeological survey areas (update to Figure A-4 of Appendix L (Technical working paper: Cultural heritage assessment report))



BL_EIS_Spoch_F007_PACHISStage2surveyArea_MiddleHarbour_v1

Legend

-  AHIMS (OEH)
-  PACHI stage 2 survey area
-  Study area (300 m buffer of the project area)
-  The project area

Archaeological survey areas (update to Figure A-4 of Appendix L (Technical working paper: Cultural heritage assessment report))