



Our Ref: 23067\_R01\_Hornsby Quarry  
Aboriginal Due Diligence

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## 1.0 Introduction

Umwelt (Australia) Pty Ltd (Umwelt) was engaged by Hornsby Shire Council (Council) to undertake an Aboriginal Heritage Due Diligence Assessment to assess the potential impacts associated with construction of embellishments for the proposed Hornsby Park, located in the former Hornsby Quarry and immediate environs (hereafter 'the Project'). This Aboriginal Heritage Due Diligence Assessment will be used to identify risks to Aboriginal cultural heritage and inform a Review of Environmental Factors (REF) currently being prepared for the Project.

This Aboriginal Heritage Due Diligence Assessment report documents the results of Umwelt's assessment and has been compiled with reference to the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW* 2010 (Department of Environment, Climate Change and Water NSW [former], 2010). This code was developed to assist proponents in exercising due diligence when carrying out activities that may result in harm to Aboriginal objects.

## 1.1 The Project

Hornsby Shire Council is currently in the process of converting the former Hornsby Quarry and environs into 'Hornsby Park, a proposed recreation space with water-based recreation opportunities, walking and bike trails. Hornsby Park will cover approximately 60 hectares of bushland and open space and feature a 'Canopy Skywalk'. To date, drainage upgrade works to the east and north of the quarry void have been assessed separately.

The proposed additional development works includes the following work:

- Construction of a lightweight viewing platform on the western end of the Northern Mound, above the deep former quarry. A lightweight bird watching platform would be built on the eastern end of the Northern Mound.
- Minor landscape works to the West Platform area, west of the deep former quarry, to help drain surface water away from the former quarry.

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- Various light-weight boardwalks to the south and east of the deep former quarry.
- Equal access zig zag ramp east of the deep former quarry, with a parallel set of steps to improve pedestrian access to see the quarry landscape.
- Construction of a skywalk and boardwalk with twenty new footings for steel pylons needing to be excavated. The skywalk would have steel trusses extending between the pylons to support the elevated boardwalk.
- The dirt fire trail would be covered in bitumen for improved access to the sports facilities.
- Stabilisation and landscape to the cliff and bank on the east side of the sports oval.
- Landscaping around the approved carparking by the former crusher plant.

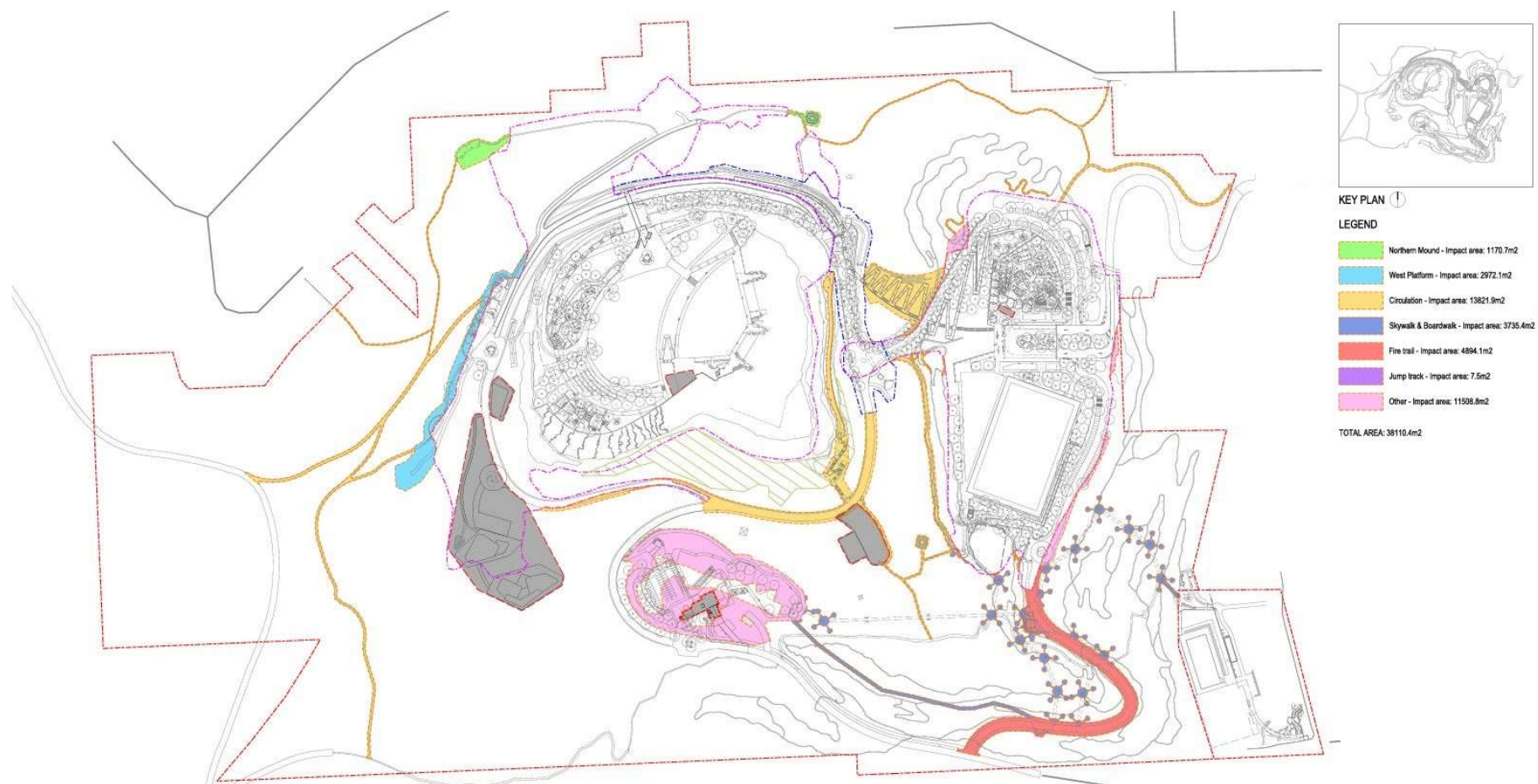
This Aboriginal Heritage Due Diligence Assessment investigates risk to Aboriginal cultural heritage associated with the construction, landscaping and installation of embellishments for the proposed Hornsby Park.

## 1.2 The Project Area

The Project area for this assessment, lies over approximately 60 hectares of bushland and open space made up of seven (7) works areas of the Hornsby Park project site. The Project area and associated works pertinent to the current assessment are shown on **Figure 1.1**, with individual works areas summarised below in **Table 1.1**.

**Table 1.1 Proposed Investigation Locations**

Works Area	Description
Northern Mound	Comprising two (2) discrete areas totalling 1,170.7 m <sup>2</sup> located on the far northern boundary of the Project area.
West Platform	A single area of 2,972.1 m <sup>2</sup> located towards the western boundary of the Project area
Circulation	Multiple pedestrian walkways, including a disabled access route in the central portion of the site. Total area 1,321.9 m <sup>2</sup>
Skywalk and Boardwalk	A raised pedestrian boardwalk requiring approximately seventeen (17) footings and columns, located in the south-eastern portion of the Project area and totally approximately 3735.4 m <sup>2</sup>
Fire Trail	Upgrade of existing fire trail from Quarry Road, located in the south-eastern portion of the Project area, totalling approximately 4.894.1 m <sup>2</sup>
Jump Track	Localised area comprising a footprint of 7.5m <sup>2</sup>
Other	Miscellaneous construction activities throughout the Project area with a total area of 11,508.8 m <sup>2</sup>
<b>Total area</b>	<b>38,110.4 m<sup>2</sup></b>



**Figure 1.1 Project Area.**

*Image Source: Clouston Associates (A Division of Beveridge Williams), 30 September 2022*

### **1.3 The Proponent**

The proponent for this investigation is **Hornsby Shire Council** (ABN: 20 706 996 972), the local governing body for the Hornsby Shire, and located on the Upper North Shore and Northern Suburbs of Sydney.

### **1.4 Authorship**

Luke Wolfe (Umwelt, Principal Archaeologist) was the primary author of this report. Management assistance and peer review was undertaken by Brad Vale (Umwelt, Principal Heritage Consultant).

### **1.5 Disclaimer**

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No consultation with Aboriginal groups and/or individuals was undertaken for the current assessment.

This report does not address risks to historic heritage, which is managed under standalone legislation. Umwelt has prepared a Heritage Impact Assessment for the Project which specifically addresses historic heritage risks and constraints.

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## 2.0 Statutory Context

### 2.1 Commonwealth

#### 2.1.1 Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) provides for the statutory protection of all items of National environmental significance, and includes protection to heritage items of Commonwealth, National and World significance. The EPBC Act and its regulations also set out the processes for undertaking works within (or in the vicinity of) World, National or Commonwealth heritage items, including where approvals under the EPBC Act are required.

The full extent of requirements for environmental approvals are set out in Subdivision A and AA or Part 4 of the Act. The key trigger for requiring approval is whether works – referred to as an ‘action’ in the Act, will have a significant impact on the item of National environmental significance. If the proposed action is assessed as having, or likely to have, a significant impact, the matter must be referred to the Minister for Environment for approval.

### 2.2 State

#### 2.3 Environmental Planning and Assessment Act 1979

The EP&A Act enables responsibility for heritage (both Aboriginal and Non-Aboriginal) to be shared by state and local government agencies. The Act provides local government with the power to protect items and places of heritage significance in the local area through local environmental plans (LEPs) and development control plans.

The EP&A Act requires consideration be given to environmental impact – including heritage – as part of the land use planning process, and the provisions of the EP&A Act allow for the implementation of LEPs which provide the statutory framework for heritage conservation within a particular local government area (LGA).

##### 2.3.1 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act), administered by the Department of Planning and Environment, is the primary legislation for the protection of Aboriginal cultural heritage in NSW. The NPW Act is accompanied by the *National Parks and Wildlife Regulation 2019* (the Regulation). The NPW Act gives the Heritage NSW the responsibility for the proper care, preservation and protection of ‘Aboriginal objects’ and ‘Aboriginal places’, defined under the Act as:

- An **Aboriginal object** is any deposit, object or material evidence (that is not a handicraft made for sale) relating to the Aboriginal habitation of NSW, before or during the occupation of that area by persons of non-Aboriginal extraction (and includes Aboriginal remains)
- An **Aboriginal place** is a place declared so by the Minister administering the NPW Act because the place is or was of special significance to Aboriginal culture. It may or may not contain Aboriginal objects.

Part 6 of the NPW Act provides specific protection for Aboriginal objects and places by making it an offence to harm them and includes a ‘strict liability offence’ for such harm. A ‘strict liability offence’ does not require someone to know that it is an Aboriginal object or place they are causing harm to in order to be prosecuted. Defences against the ‘strict liability offence’ in the NPW Act include the carrying out of certain

'Low Impact Activities', prescribed in Clause 80B of the National Parks and Wildlife Amendment Regulation 2010 (NPW Regulation), and the demonstration of due diligence.

In general, an Aboriginal Heritage Impact Permit (AHIP) issued under Section 90 of the NPW Act is required if impacts to Aboriginal objects and/or places cannot be avoided. An AHIP is a defence to a prosecution for harming Aboriginal objects and places if the harm was authorised by the AHIP and the conditions of that AHIP were not contravened.

## **2.4 Local**

The Project area falls within the Hornsby Shire Local Government Areas (LGA) of which the relevant Environmental Planning Instrument (EPI) is the Hornsby Local Environmental Plan (LEP) 2013.

Part 5.10 of the LEP provide specific provisions for the protection of heritage items and relics within the Hornsby Shire LGA, in order to:

- a. to conserve the environmental heritage,
- b. to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views,
- c. to conserve archaeological sites,
- d. to conserve Aboriginal objects and Aboriginal places of heritage significance.

Under the LEP, development consent is required for any of the following:

- a. demolishing or moving any of the following or altering the exterior of any of the following (including, in the case of a building, making changes to its detail, fabric, finish or appearance):
  - i. a heritage item,
  - ii. an Aboriginal object,
  - iii. a building, work, relic or tree within a heritage conservation area,
- b. altering a heritage item that is a building by making structural changes to its interior or by making changes to anything inside the item that is specified in *Schedule 5* in relation to the item,
- c. disturbing or excavating an archaeological site while knowing, or having reasonable cause to suspect, that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed,
- d. disturbing or excavating an Aboriginal place of heritage significance,
- e. erecting a building on land:
  - i. on which a heritage item is located or that is within a heritage conservation area, or
  - ii. on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance,
- f. subdividing land:
  - i. on which a heritage item is located or that is within a heritage conservation area, or
  - ii. on which an Aboriginal object is located or that is within an Aboriginal place of heritage significance.

Schedule 5 of the LEP provides a list of heritage items within the Hornsby Shire LGA. There are no items of Aboriginal cultural heritage significance currently listed on the LEP within the current Project area.

### **3.0 Aboriginal Heritage**

#### **3.1.1 Data Sources**

Information regarding the known and potential Aboriginal heritage resource of the Project area was obtained from:

- A review of the landscape context of the Project area and surrounds.
- A review of existing Aboriginal Heritage Information Management System (AHIMS) data for land within and surrounding the Project area, obtained from Heritage NSW on 28 November 2022 (AHIMS search #73626).
- A search of the National Native Title Register (NNTR) and Register of Native Title Claims (RNTC) administered by the National Native Title Tribunal (NNTT) for land within and surrounding the Project area (28 November 2022).
- A review of the findings of past Aboriginal archaeological investigations within the Project area and surrounds.
- A visual inspection of the Project area by Umwelt Principal Archaeologist Luke Wolfe 28 November 2022.

#### **3.1.2 Landscape Context**

Consideration of the landscape context of the Project area is based on the concept that the nature and distribution of Aboriginal sites are connected to the environments in which they occur. Environmental variables such as topography, geology, hydrology and local vegetation and faunal communities are a key consideration to determining how Aboriginal peoples lived and utilised their Country prior to, and around the time of colonisation. In practical terms, these variables would have influenced the suitability of campsites, travelling routes, drinking water, plant and animal resources, and raw materials for the manufacture of stone and organic implements. Finally, a review of historical and contemporary land use activities contributes to a critical understanding of how these processes have potentially impacted the integrity of archaeological deposits.

Key observations from a review of the landscape context of the Project area is presented in **Table 3.1**.



**Table 3.1 Review of landscape context of the Project area**

Environmental Variable	Key Observations
<b>Topography</b>	<p>The Project area lies within the Hornsby Plateau, an elevated geographic region which rises from the Cumberland Plain in the south along a warp line from Cattai to Botany Bay. Elevations within the Plateau range from approximately 200-220m, with topography characterised by steep sandstone escarpments and gullies which descend between 80-100 m into drainage lines. The topography of land within the Project area relative to its suitability for Aboriginal occupation, suggests that landscape elements within it would have been favourable to occupation, comprising freshwater sources and sandstone overhangs suitable for periodic occupation.</p> <p>Portions of the natural landscape form of the Project have been highly impacted from historical quarrying activities, resulting in a large void in the central to northern portion of the Project area.</p>
<b>Hydrology</b>	<p>The primary watercourse within the Project area environs is Old Mans Creek, a minor c. second order watercourse which drains to the more regionally notable Waitara Creek approximately 1 km west of the Project area. Additionally, a minor first order, ephemeral drainage line passes through the central portion of the Project area.</p>
<b>Geology and Soils</b>	<p>Reference to the <i>1:100,000 Geological Map Sheet for Sydney (9130)</i> indicates that the surface geology of the Project area is dominated by the Hornsby diatreme, a geological deposit comprising material ejected from the earth's crust through a violent volcanic explosion and resulting in a breccia of material bonded with sandstones and shales. Peripherally, geological materials of the Project area are largely mapped as the Hawkesbury Sandstone group, a massive sandstone comprising fine to coarse grained, quartz-lithic sands within a siliceous matrix. Prone to block failure (fracturing along linear cracks to produce blocky fragments) and susceptible to wind and water erosion, areas dominated by Hawkesbury Sandstone geology are often characterised by steep escarpments and deeply-dissected terrain, the former generating overhangs suitable for occupation.</p> <p>Raw materials suitable for flaked artefact manufacture are generally absent from the Project area and environs, though opportunistic alluvial sources (e.g., gravel deposits in creeks etc). Tertiary alluvial units known to contain raw materials (i.e., the St Marys formation) are mapped approximately 30 km northwest of the Project area near Maroota. These geological formations/phenomena are of demonstrated Aboriginal archaeological significance. The St Marys formation consists of alluvial channel remnants incised into Triassic Wianamatta Group shales, and contains abundant quantities of silcrete, as well as silicified wood, quartzite and quartz (Corkhill, 1999):56). Recorded deposits, which occur on ridge flanks and crests across the northern Cumberland Plain, vary in thickness from approximately 1 to 10 m. Silcrete from the St Marys formation is typically light red or yellowish brown in colour, with a bleached weathering rind, and occurs in the form of complete and fragmentary pebbles, cobbles and boulders (Corkill 1999).</p> <p>Chapman and Murphy (1989) map soils within the Project area as belonging to the Hawksbury soil (<i>ha</i>) and Hornsby (<i>ho</i>) soil landscapes. Soils of the Hawksbury soil (<i>ha</i>) landscape are described as forming on rugged, rolling to very steep hills on Hawkesbury Sandstone, generally comprising shallow (&lt;50 cm), discontinuous lithosols/siliceous sands associated with rocky sandstone outcropping, earthy sands, yellow earths and localised deep sands on inside of benches and localised yellow and red podzolic soils,</p>



Environmental Variable	Key Observations
	<p>associated with shale lenses; siliceous sands and secondary yellow earths along drainage lines. As a result of the low cohesion of these soil materials, severe sheet erosion is typical following major storm activity, particularly when surface vegetation is destroyed by bushfire. Soils of the Hornsby (<i>ho</i>) soil landscape are associated with the deeply weathered Hornsby Breccia, which are concentrated within the central portion of the Project area. Soils are identified as “complex and variable” (Chapman and Murphy, 1989:35), comprising 20-40 cm of organic loams overlying pedal light clays where they occur on steep sideslopes. On footslopes, these soils are characterised by organic loams overlying deep (200 cm) of yellow-brown sandy clay, which in turn grade to weathered breccia.</p> <p>Existing archaeological, environmental and historical reference materials for the Project area and environs suggest that a range of geomorphic processes are likely to have affected the Aboriginal archaeological record of the Project area. Potentially significant phenomena include bioturbation, erosion and quarrying activities. Possible effects of these processes include:</p> <ul style="list-style-type: none"> <li>• Reduced archaeological site visibility in areas of sediment deposition.</li> <li>• Stratigraphic mixing and translocation of cultural deposits.</li> <li>• Truncation of archaeological deposits.</li> <li>• Creation of thicker and potentially stratified archaeological deposits in floodplain and slope base contexts.</li> </ul>
<b>Flora and Fauna</b>	<p>Natural vegetation communities within the Project area have been extensively cleared to accommodate activities associated with the Hornsby Quarry. Much of the vegetation present today is regrowth and is dominated by invasive weed species. Chapman and Murphy (1989:33) characterise the broader vegetation of the Project area as tall open-forest (wet sclerophyll forest) on side slopes to closed-forest (depauperate rainforest) on valley floors. Area of remnant wet sclerophyll forest are dominated by Sydney blue gum (<i>Eucalyptus saligna</i>), with other woody vegetation species comprising white mahogany (<i>E. acmenoides</i>), Blackbutt (<i>E. pilularis</i>) and forest oak (<i>Allocasuarina torulosa</i>). Typical understorey species include bracken fern (<i>Pteridium esculentum</i>) which dominate the valley floor areas, with particular concentrations around drainage lines. Tree ferns (<i>Dicksonia antarctica</i>) and <i>Cyathea australis</i> are also common, with sassafras (<i>Doryphora sassafras</i>), coachwood (<i>Ceratopetalum apetalum</i>) and black wattle (<i>Callicoma serratifolia</i>) also represented within the basaltic derived soils in the valley floors. Invasive weed species including and privet are common.</p> <p>As with vegetation, determining the pre-European occupation faunal landscape of the Project area and environs is difficult to determine with any certainty due to past land use practices. However, consideration of pre-European vegetation regimes suggests that a range of terrestrial faunal resources would have been present in the area. Locally occurring resources from valley floor and freshwater environs, for example, are likely to have consisted of localised of fish and other freshwater mammals. A diverse array of terrestrial mammals (e.g., echidna, possums and macropods), as well as birds, reptiles and amphibians, would have also been available in open woodland areas.</p>

## 3.2 Aboriginal Archaeological Context

### 3.2.1 Aboriginal Heritage Information System (AHIMS)

The Aboriginal Heritage Information System (AHIMS) database, administered by Heritage NSW, contains records of all Aboriginal objects reported to Heritage NSW in accordance with Section 89A of the NPW Act. It also contains information about Aboriginal places, which have been declared to have Aboriginal cultural significance. Recorded Aboriginal objects and declared Aboriginal places are defined under the NPW Act as 'Aboriginal sites'.

A search of the AHIMS register undertaken on the 28 November 2022 for an approximate 1 km buffer centred on the Project area (i.e., the 'AHIMS search area'; AHIMS search #73626) identified 10 Aboriginal sites (**Table 3.2**). As is typical for areas dominated by sandstone geology, rock engraving sites were the most common site type represented within the AHIMS search area, accounting for 80% (n = 8) of known sites. Grinding grooves (associated with ground-edge axe manufacture) were relatively less common, accounting for 20% (n=2) of the total search results.

Of those Aboriginal sites reported in the AHIMS search results, none fall within the Project area. Review of available literature for the current Project area and environs however identifies that that a 'rockshelter and PAD site recorded in 2015 (AECOM Australia Pty Ltd 2015) lies within the current Project area but does not appear on the AHIMS register. The rockshelter was recorded during an archaeological survey of the Project area and environs by AECOM (2015) but was not registered. This is discussed further in **Section 3.4** and **Section 4.0**.

**Table 3.2 AHIMS Search Results**

Aboriginal Site Type	Frequency (n)	Percentage
Grinding Groove	2	20%
Rock Engraving	8	80%
<b>Total</b>	<b>10</b>	<b>100%</b>

Source: Department of Planning and Environment, 28/11/2022, AHIMS Search ID #73626).



### **3.3 Native Title**

A search of the National Native Title Register (NNTR) and Register of Native Title Claims (RNTC) administered by the National Native Title Tribunal was undertaken for the City of Parramatta LGA, inclusive of land within and surrounding the Project area. No current Native Title listings or claims were identified within or near the Project area.

### **3.4 Previous Aboriginal Archaeological Assessments**

The Hornsby Shire LGA and environs have been subject to a limited series of Aboriginal cultural heritage and archaeological investigations, with those primarily associated with urban development and infrastructure upgrades. For contextual purposes, the results of a selection of these investigations, including those undertaken within and/or near the current Project area, are summarised in **Table 3.3**.



**Table 3.3 Previous Aboriginal Heritage Assessments**

Assessment	Description	Location
AECOM Australia Pty Ltd 2015	AECOM undertook a survey of the Hornsby Quarry and general environs for the proposed infilling of 1.5 million cubic metres of excavated natural material (ENM) and virgin excavated natural material (VENM) from the construction of roads and road infrastructure facilities associated with the NorthConnex project. The survey was undertaken under the <i>Procedure for Aboriginal Cultural Heritage Consultation and Investigation</i> (PACHCI) process, comprising a systematic survey with a site officer from Metropolitan Aboriginal Land Council. The survey identified a single sandstone overhang which was assessed as a rockshelter with associated area of potential archaeological deposit. Impact to the rockshelter was ultimately avoided by the NorthConnex project and no further management action was required. The rockshelter and associated PAD was not registered on the AHIMS database by AECOM.	Within current Project area (partial)
Artefact Heritage Services Pty Ltd 2017	Artefact undertook a due diligence assessment for the initial stages of the proposed Hornsby Quarry rehabilitation works. Artefact undertook a site visit of the proposed impact footprint and noted that the majority of the study area appeared disturbed and did not demonstrate archaeological sensitivity. Two areas on the eastern and northern margins of the study area (inclusive of the current Project area) were identified as retaining some archaeological sensitivity associated with anticipated natural sandstone outcrops.	Within current Project area (partial)
Artefact Heritage Services Pty Ltd 2018	Artefact undertook an archaeological survey of the Hornsby Quarry environs to support the proposed rehabilitation of the Hornsby Quarry void for future development as community parkland. The desktop predictive model prepared by Artefact suggested that art sites and grinding groves would be the primary site type expected to be within the Hornsby Quarry environs, expected to be located on exposed sandstone surfaces. The overall archaeological potential of the study area was assessed as low, with no Aboriginal archaeological site or areas of PAD identified within the study area.	Within current Project area (partial)
Eco Logical Australia Pty Ltd 2020	Eco Logical undertook an Aboriginal Cultural Heritage Assessment for the proposed redevelopment Masterplan of the Loreto Normanhurst School. A site inspection identified significant disturbance across the study area from vegetation clearance, landscaping and construction of school buildings and associated infrastructure. No Aboriginal objects or sites were identified, and the assessment determined that the study had experienced moderate to high disturbance and retained low Aboriginal archaeological sensitivity.	2.5 km south

### 3.5 Key Observations

Key observations to be drawn from a review of both the environmental and Aboriginal archaeological context of the Project area and environs are as follows:

- The topography and geology of the Project area suggests that localised landscape elements within it would have been favourable to occupation, through largely restricted to opportunistic sandstone overhangs. Instances of sandstone bedrock exposure may also have retained evidence of engraved and/or pecked art and grinding grooves, as suggested by sub-regional Aboriginal site modelling.
- Soil materials of the Project area, i.e., Hornsby and Hawksbury soils, may have limited potential to retain archaeological evidence within biомantle strata (i.e., topsoil). However, such soils are susceptible to erosion and impacts from bushfire, which may have translocated archaeological evidence, if present. Sandy soils within overhangs, where present, would be likely to retain archaeological deposits.

### 4.0 Visual Inspection

A visual inspection of the Project area was undertaken by Umwelt Principal Archaeologist Luke Wolfe on 30 November 2022. The primary aim of the inspection was to record the existing conditions of the Project area, with particular emphasis on areas of proposed construction activities. The visual inspection also aimed to identify any existing surface evidence of past-Aboriginal occupation and activity within the Project area and immediate environs. The inspection path was tracked in real-time using a handheld GPS unit, with associated transect data (e.g., Ground Surface Visibility (GSV) and Ground Integrity (GI) ratings) and photographs recorded. Photographs of the Project area are provided below. The following key observations were made during the visual inspection:

- Ground surface visibility in the inspected areas of the Project area was generally good, though hampered by leaf litter and vegetation. Localised asphaltic paved and/or concrete hardstand surfaces were present throughout the site and associated with vehicle roads and mountain bike trails. Areas of bulk earthworks and construction was observed within the central portion of the Project area in association with previously approved construction activities.
- Generally, areas that contained built elements and trafficable areas, including mountain bike trails or earthworks were assessed as retaining a low degree of GI.
- Native vegetation within the Project area has been extensively modified as a result of historical activities. Mature trees were observed within the Project area, though none exhibiting cultural modification were identified during the visual inspection.
- The rockshelter and PAD identified by AECOM (2015) was reinspected to determine the current condition and evaluate AECOM's initial assessment (**Photo 4.1, 4.2**). The sandstone overhang appeared to be in good condition, with only minor rubbish noted on the ground. No graffiti and/or other damage was observed on the sandstone or surrounds. The overhang exhibited characteristics suitable to satisfy the criteria as a potential rockshelter, i.e., flat, wide floor, sufficient shelter and large enough for one or more people. In addition, the sandy ground surface appeared to be relatively intact and likely retained some thickness of deposit, thereby possibly retaining archaeological evidence (i.e., artefacts etc).



**Photo 4.1** Rockshelter and PAD site, looking south from existing mountain bike trail



**Photo 4.2** Detail view of rockshelter/PAD site. Looking south

## 5.0 Summary of Key Findings

The key findings of this assessment are as follows:

- No existing, registered Aboriginal sites are present within the Project area. The rockshelter and PAD first identified by AECOM (2015) was reinspected to determine the current condition and evaluate AECOM's initial assessment. The results of the visual inspection confirmed that the overhang was likely suitable for intermittent occupation and exhibited intact sandy soils that have potential to retain archaeological evidence and warranted registration on the AHIMS database.
- No other areas of Aboriginal archaeological sensitivity were identified.

## 6.0 Impact Assessment

The previous sections have presented a review of the environmental and archaeological context of the Project area and environs, with particular emphasis on the immediate footprints of each proposed works activity listed in **Table 1.1**, to develop a framework for identifying risks to Aboriginal heritage resource of the Project area. This information is then contextualised in **Table 6.1** to identify the potential risks and/or constraints associated with each of the proposed works locations.

**Table 6.1** Assessment of potential heritage impacts

Works Area	Description
Northern Mound	No recorded Aboriginal sites mapped within the proposed works location/s. Areas of archaeological potential identified by Artefact (2017) immediately adjacent to the works areas associated with the potential for sandstone bedrock exposure and/or sandstone overhangs (i.e., rockshelters). Low Aboriginal archaeological potential within works footprints. No Aboriginal heritage constraints.
West Platform	No recorded Aboriginal sites mapped within the proposed works location/s. An area of archaeological potential identified by Artefact (2017) west of the works areas associated with the potential for sandstone bedrock exposure and/or sandstone overhangs (i.e., rockshelters). Low Aboriginal archaeological potential within works footprint. No Aboriginal heritage constraints.



Works Area	Description
Circulation	No recorded Aboriginal sites mapped within the proposed works location/s. In general, works areas to be undertaken in areas of existing earthworks and/or disturbed areas. Low Aboriginal archaeological potential within works footprints associated with steep slopes. No Aboriginal heritage constraints.
Skywalk and Boardwalk	No recorded Aboriginal sites mapped within the proposed works location/s. The rockshelter and PAD site identified by AECOM (2015) and revaluated by Umwelt is located approximately 40 m north of proposed boardwalk works location. The proposed works are sufficiently distant from the site and will not result in direct impact. Ancillary disturbance from construction activities and/or vibration-related impacts will require management. Low Aboriginal archaeological potential within remaining works footprints.
Fire Trail	No recorded Aboriginal sites mapped within the proposed works location/s. Low Aboriginal archaeological potential within works footprint associated with existing fire trail. No Aboriginal heritage constraints.
Jump Track	No recorded Aboriginal sites mapped within the proposed works location/s. Low Aboriginal archaeological potential within works footprint. No Aboriginal heritage constraints.
Other	No recorded Aboriginal sites mapped within the proposed works location/s. Low Aboriginal archaeological potential within works footprint associated with existing infrastructure. No Aboriginal heritage constraints.

## 7.0 Conclusions

The potential impacts of the Project have been assessed in **Table 6.1** of this report through a review of environmental and archaeological context for the Project area and environs. No Aboriginal sites are located within the footprints of any proposed works locations and the majority of proposed works locations retain no or low archaeological potential. A single rockshelter/PAD site ('Hornsby Quarry Rockshelter'; AHIMS ID# 45-6-4077) near Quarry Road is located within 40 m of the proposed works associated with the skywalk and boardwalk. Works in this area must be managed to avoid indirect impact to the site, including any future land use, Council must maintain a record of the site's location and include it in any future and/or ongoing management.

In view of the above, the Project will have negligible impact to known and/or potential Aboriginal sites. These works may proceed without any further archaeological assessment, approvals or associated constraint.

## 8.0 Management Recommendations

On the basis of the above findings, the following recommendations are made:

**Recommendation 1.** Works in the vicinity of the identified Aboriginal site 'Hornsby Quarry Rockshelter' (AHIMS ID# 45-6-4077) near Quarry Road must be managed to ensure works do not result in any direct and/or indirect impact to the site. The proposed embellishment works, including any required heavy plant/machinery, should be reviewed by a qualified engineer to determine if any vibration is likely to exceed acceptable thresholds in the vicinity of the rockshelter. Council must also include 'Hornsby Quarry Rockshelter' (AHIMS ID# 45-6-4077) in any future and/or ongoing management and ensure the site is protected from harm.

**Recommendation 2.** All relevant contractors and personnel should be made aware of the nature and location of previously recorded Aboriginal sites that lie within and near the Project area. All relevant contractors and personnel should also be made aware of their legal responsibilities under the *NP&W Act 1974* and the need to avoid impacts to Aboriginal sites.

**Recommendation 3.** If, in the unlikely event that Aboriginal objects/sites are identified during the Project, all works in the area must cease immediately and the ***Unexpected Heritage Finds Procedure*** presented in **Appendix B** must be implemented.

**Recommendation 4.** In the event that the proposed design of the embellishment works is altered for any reason, or impact to areas to land that has not been assessed in this report, further Aboriginal heritage assessment may be required. Any proposed alteration must be evaluated by a qualified heritage consultant to determine if the location represents a risk to Aboriginal cultural heritage.

## 9.0 References

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Chapman, G.A., Murphy, C.L., 1989. Soil Landscapes of the Sydney 1:100,000 Sheet Report. Soil Conservation Service of NSW, Sydney, New South Wales.

Corkhill, T., 1999. Here and There. Links between Stone Sources and Aboriginal Archaeological Sites in Sydney, Australia. University of Sydney.

Department of Environment, Climate Change and Water NSW [former], 2010. Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales.

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(NSW Department of Environment & Conservation, 2006. Manual for the Identification of Aboriginal Remains.

NSW Heritage Office, 2008. Skeletal Remains - Guidelines for the management of human skeletal remains under the Heritage Act 1977.

NSW National Parks and Wildlife Service, 1997. Aboriginal Cultural Heritage Standards and Guidelines Kit. NSW National Parks and Wildlife Service, Sydney.

## Appendix A AHIMS Search Results



### AHIMS Web Services (AWS) Extensive search - Site list report

Your Ref/PO Number : 23067\_Hornsby

Client Service ID : 736262

SiteID	SiteName	Datum	Zone	Easting	Northing	Context	Site Status **	SiteFeatures	SiteTypes	Reports
45-6-2452	HR5;	AGD	56	321830	6270450	Open site	Valid	Grinding Groove : -	Axe Grinding Groove	3484
	<u>Contact</u>	<u>Recorders</u>	Margrit Koettig					<u>Permits</u>		
45-6-1879	Blackfellows Head Spur 2;	AGD	56	321700	6269050	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	R Clegg					<u>Permits</u>		
45-6-1880	Blackfellows Head Spur 3;	AGD	56	321700	6269050	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	R Clegg					<u>Permits</u>		
45-6-1881	Blackfellows Head Spur 4;	AGD	56	321700	6269050	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	R Clegg					<u>Permits</u>		
45-6-1703	Blackfellows Head Spur 4;	AGD	56	321740	6269010	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	Doctor.Jo McDonald					<u>Permits</u>		
45-6-1704	Black Fellows Head Spur 1 (Westleigh) ENG	GDA	56	321989	6269555	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	Doctor.Jo McDonald,Mr.Oliver Descoeudres					<u>Permits</u>		
45-6-1705	Black Fellows Head Spur 2 (Westleigh) ENG	GDA	56	321736	6269484	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	Margrit Koettig,Doctor.Jo McDonald,Mr.Oliver Descoeudres					<u>Permits</u>		
45-6-0228	Black Fellows Head Spur (Westleigh) ENG	GDA	56	321989	6269555	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	209
	<u>Contact</u>	<u>Recorders</u>	Doctor.Jo McDonald,M Donald,Mr.Oliver Descoeudres					<u>Permits</u>		
45-6-0243	Hornsby;	AGD	56	321579	6269990	Open site	Valid	Art (Pigment or Engraved) : -	Rock Engraving	
	<u>Contact</u>	<u>Recorders</u>	ASRSYS					<u>Permits</u>		
45-6-2821	ARRJONGA GG1	AGD	56	322700	6270080	Open site	Valid	Grinding Groove : 1		
	<u>Contact</u>	<u>Recorders</u>	Mr.John Appleton					<u>Permits</u>		

#### \*\* Site Status

**Valid** - The site has been recorded and accepted onto the system as valid

**Destroyed** - The site has been completely impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There is nothing left of the site on the ground but proponents should proceed with caution.

**Partially Destroyed** - The site has been only partially impacted or harmed usually as consequence of permit activity but sometimes also after natural events. There might be parts or sections of the original site still present on the ground

**Not a site** - The site has been originally entered and accepted onto AHIMS as a valid site but after further investigations it was decided it is NOT an aboriginal site. Impact of this type of site does not require permit but Heritage NSW should be notified

Report generated by AHIMS Web Service on 28/11/2022 for Luke Wolfe for the following area at Lat, Long From : -33.7068, 151.0759 - Lat, Long To : -33.6889, 151.1068. Number of Aboriginal sites and Aboriginal objects found is 10

This information is not guaranteed to be free from error omission. Heritage NSW and its employees disclaim liability for any act done or omission made on the information and consequences of such acts or omission.

Page 1 of 1

## **Appendix B Management of Unexpected Finds and Potential Human Remains**

### **Procedure on the Discovery of Aboriginal Sites/Objects**

Should a suspected Aboriginal site be identified at any point throughout the life of the Project, the following standard procedure should be adopted:

1. All works must cease immediately in the area to prevent any further impacts to the site;
2. Engage a suitably qualified heritage consultant to determine the nature, extent and significance of the find and provide appropriate management advice. Management action(s) will vary according to the type of evidence identified, its significance (both scientific and cultural) and the nature of potential impacts; and
3. Prepare and submit an AHIMS site card for the site.

### **Management of Skeletal Remains**

This section outlines the procedure that should be followed in the case that potential human remains are discovered during the life of the Project. The procedure takes into account the following documents:

- Manual for the Identification of Aboriginal Remains (NSW Department of Environment & Conservation, 2006)
- Skeletal Remains - Guidelines for the management of human skeletal remains under the Heritage Act 1977 (NSW Heritage Office, 2008); and
- The Aboriginal Cultural Heritage Standards and Guidelines Kit (NSW National Parks and Wildlife Service, 1997).

In the event that potential human skeletal remains are identified at any point during the life of the drilling program, the following standard procedure should be followed.

1. All work in the vicinity of the remains should cease immediately;
2. The location should be cordoned off and the NSW Police notified.
3. If the Police suspect the remains are Aboriginal, they will contact Heritage NSW and arrange for a forensic anthropologist or archaeological expert to examine the site.

Subsequent management actions will be dependent on the findings of the inspection undertaken under Point 3.

- If the remains are identified as modern and human, the area will become a crime scene under the jurisdiction of the NSW Police;
- If the remains are identified as pre-contact or historic Aboriginal, Heritage NSW and any Aboriginal stakeholders (including Metropolitan Local Aboriginal Land Council) are to be formally notified in writing. Where impacts to exposed Aboriginal skeletal remains cannot be avoided an appropriate management mitigation strategy will be developed in consultation with Heritage NSW and Aboriginal stakeholders;

- If the remains are identified as historic non-Aboriginal, the site is to be secured and the Heritage NSW contacted; and
- If the remains are identified as non-human, work can recommence immediately.