



**NGH**

**Beca**

# **Aboriginal Cultural Heritage Assessment**

## **Americold Coolstore Expansion Project**

November 2022

Project Number: 22-076



## Document verification

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## **Acronyms and Abbreviations**

ACEP	Americold Coolstore Expansion Project
ACHA	Aboriginal Cultural Heritage Assessment
ACHCRP	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
AHD	Australian Heritage Database
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
Americold	Americold Logistics Ltd
Beca	Beca Pty Ltd
cm	Centimetres
DECCW	(Former) Department of Environment, Climate Change and Water (NSW) (now DPIE)
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
ha	Hectares
IBRA	Interim Biogeographic Regionalisation for Australia
JMCHM	Jo McDonald Cultural Heritage Management
km	Kilometres
LALC	Local Aboriginal Land Council
LEP	Local Environment Plan
LGA	Local Government Area
m	Metres
MDCA	Mary Dallas Consulting Archaeologists
mm	Millimetres
NGH	NGH Pty Ltd
NPW Act	National Parks and Wildlife Act 1974 (NSW)
NSW	New South Wales
PAD(s)	Potential Archaeological Deposit(s)
Project area	Area being assessed in this methodology
RAP	Registered Aboriginal Party
REF	Review of Environmental Factors
SEARs	Secretary's Environmental Assessment Requirements
SHI	State Heritage Inventory
SSD	State Significant Development

# Executive Summary

## Introduction

NGH Pty Ltd has been contracted by Beca Pty Ltd on behalf of Americold Logistics Ltd (Americold) (554-562 Reservoir Road Prospect NSW 2148) to undertake an Aboriginal Cultural Heritage Assessment to inform an Environmental Impact Statement as part of the Environmental Impact Assessment approval process for the proposed expansion of the coolstore facility located at 554-562 Reservoir Road, Prospect. The proposed Americold Coolstore Expansion Project has been designated a State Significant Development (SSD-9577613) and approval will be assessed under an EIA. The site is located within Lot 101, DP851785 and is within the Cumberland City Local Government Area.

The proposed work includes a number of activities that will require ground disturbance that has the potential to impact on Aboriginal heritage sites and objects which are protected under the *NSW National Parks and Wildlife Act 1974*. The ACHA will investigate and examine the presence, extent, and nature of any Aboriginal heritage sites within the Project area.

## Project Proposal

The proposed Americold Coolstore Expansion Project involves the expansion of the existing facilities through the construction of new buildings and related infrastructure. The expansion will involve the following activities:

- A new 5,140m<sup>2</sup> freezer building extension and annexe to the east of the existing southern warehouse. The extension is intended to provide capacity for approximately 13,450 frozen pallets.
- A new battery storage room to enable the charging, storage and changeover of batteries used for materials handling equipment.
- Alterations to the site access, parking and loading arrangements including:
- Construction of a new staff and visitor site access, to eliminate traffic conflicts between heavy and passenger vehicles
- Construction of 93 new staff/visitor vehicle carparks (including three accessible spaces) to the north and east of the existing northern warehouse
- Construction of two new accessible carparks adjacent to the existing office building
- Upgrade of the existing site access road, including:
- Sealing of the southern and eastern portions of the site access road with heavy duty pavement
- Construction of new Armco barriers protecting the powerpoles to the east of the site
- Repaving of the existing car parking access
- Minor corner modifications to enhance truck turning and manoeuvrability
- New boom gates
- Construction of a new heavy vehicle turnaround and 12 new trailer parking spots to the east of the existing northern warehouse
- A new pump house and two new firewater tanks
- A new timber pallet storage area with three-metre-high enclosure

- A new staff outdoor seating area with awning
- A new security office
- A new weighbridge
- A new satellite plant room.

The purpose of the development is to provide additional cold storage capacity to meet existing and future predicted demand.

## **Aboriginal Community Consultation**

The consultation with Aboriginal stakeholders was undertaken in accordance with Clause 60 of the *National Parks and Wildlife Amendment Regulation 2019* following the consultation steps outlined in the guidelines. The full list of consultation steps, including those groups and individuals who were contacted, and a consultation log is provided in Appendix A. As a result of this process, 19 Aboriginal groups registered their interest in the proposal. No other party registered their interest, including the entities and individuals recommended by statutory bodies and government heritage departments. The fieldwork components of this assessment included the participation of Aboriginal community representatives from the registered Aboriginal parties to this project. A copy of the draft report was provided to all the registered parties for comment. A list of comments received and how these were addressed by NGH and the Proponent are included within the Consultation Log (Appendix A).

## **Survey Results**

The archaeological survey was conducted on Wednesday 15<sup>th</sup> June 2022. No Aboriginal sites or potential archaeological deposits were identified within the project area. Furthermore, it was confirmed that the landforms within the project area have been significantly modified in the past and therefore contain a negligible potential for Aboriginal heritage.

## **Potential Impacts**

No Aboriginal sites or potential archaeological deposits were identified during the assessment and no previously identified AHIMS sites are located within the project area. As a result, the proposed works for the Americold Coolstore Expansion Project will not impact on Aboriginal heritage.

## **Recommendations**

It is recommended that:

1. The proposed works for the Americold Coolstore Expansion Project may proceed with caution within the project area as assessed by this report.
2. All access to the site and laydown areas must be within the project area as assessed by this report, otherwise an addendum to this Aboriginal Cultural Heritage Assessment will be required.
3. No modified trees of Aboriginal origin were identified within the project area. If any mature or large trees outside of the area subject to the visual inspection and assessment are to be impacted as a result of the proposed works, additional investigation may be required. This must be completed by a qualified archaeologist.

4. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and Heritage NSW notified, and the Unexpected Finds Protocol (Appendix C) must be followed. The find will need to be assessed and if found to be an Aboriginal object, an Aboriginal Heritage Impact Permit may be required.
5. In the unlikely event that human remains are discovered during the proposed works, all work must cease in the immediate vicinity. The appropriate heritage team within Heritage NSW and the local police should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal. If the remains are deemed to be Aboriginal in origin the Registered Aboriginal Parties should be advised of the find as directed by the appropriate heritage team within Heritage NSW. Heritage NSW would advise the Proponent on the appropriate actions required.
6. The Aboriginal community have requested that there is an appropriate acknowledgement of Country during the life of the project. This may be able to be achieved through a cultural awareness program and acknowledgement of country signage at the entrance to the facility.

Further archaeological assessment would be required if the proposal activity extends beyond the area assessed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey. Americold Pty Ltd is reminded that it is an offence under the *National Parks and Wildlife Act 1974* to disturb, damage or destroy an Aboriginal object without a valid AHIP.



# 1. Introduction

NGH Pty Ltd (NGH) has been contracted by Beca Pty Ltd (Beca) on behalf of Americold Logistics Ltd (Americold) to undertake an Aboriginal Cultural Heritage Assessment (ACHA) to inform an Environmental Impact Statement (EIS) as part of the Environmental Impact Assessment (EIA) approval process for the proposed expansion of the cold storage facility located at 554-562 Reservoir Road, Prospect (Lot 101 in DP851785).

The proposed Americold Coolstore Expansion Project (ACEP) has been designated a State Significant Development (SSD) (SSD-9577613) and approval will be assessed under an EIA.

The site is within the Cumberland City Local Government Area (LGA). The extent of the Project area is shown in Figure 1-1 and Figure 1-2.

The proposed work includes a number of activities that will require ground disturbance that has the potential to impact on Aboriginal heritage sites and objects which are protected under the *NSW National Parks and Wildlife Act 1974* (NPW Act). The ACHA will investigate and examine the presence, extent and nature of any Aboriginal heritage sites within the Project area.

## 1.1 Statutory Context

This ACHA report is to support the completion of an EIS as part of the EIA approval process under SSD-9577613 under the *Environmental Planning and Assessment Act 1979* (EP&A Act). The EP&A Act is legislation for the management of development in NSW. It sets up a planning structure that requires developers (individuals or companies) to consider the environmental impacts of new proposals. Under this Act, cultural heritage is a part of the environment. This Act requires that Aboriginal cultural heritage and the possible impacts to Aboriginal heritage that development may have are formally considered in land-use planning and development approval processes.

The proposed Americold Coolstore Expansion Project has been classified as an SSD and will be assessed under part 4 of the EP&A Act (SSD-9577613). SSDs are major projects which require approval from the Minister for Planning or their delegate. An ACHA report must be prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) as stated in Section 1.2 below.

Aboriginal heritage is primarily protected under the NPW Act and as subsequently amended in 2010 with the introduction of the *National Parks and Wildlife Amendment (Aboriginal Objects and Places) Regulation 2010*. The aim of the NPW Act includes:

*The conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including but not limited to places, objects and features of significance to Aboriginal people.*

An Aboriginal object is defined as:

*Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons on non-Aboriginal extraction and includes Aboriginal remains.*

Part 6 of the NPW Act concerns Aboriginal objects and places and various sections describe the offences, defences and requirements to harm an Aboriginal object or place. The main offences under section 86 of the NPW Act are:

- A person must not harm or desecrate an object that the person knows is an Aboriginal object.
- A person must not harm an Aboriginal object.
- For the purposes of this section, "circumstances of aggravation" are:
  - that the offence was committed in the course of carrying out a commercial activity, or
  - that the offence was the second or subsequent occasion on which the offender was convicted of an offence under this section.
- A person must not harm or desecrate an Aboriginal place.

Under section 87 of the NPW Act, there are specified defences to prosecution including authorisation to harm in accordance with an Aboriginal Heritage Impact Permit (AHIP) or through exercising due diligence or compliance through the regulation.

Section 89A of the NPW Act also requires that a person who is aware of an Aboriginal object must notify the Director-General in a prescribed manner. In effect this section requires the completion of an AHIMS site card for all sites located during heritage surveys.

Section 90 of the NPW Act deals with the issuing of an AHIP, including that the permit may be subject to certain conditions. However, as the ACEP is a designated State Significant Development, section 90 of the NPW Act does not apply. There is no requirement to obtain an AHIP to impact Aboriginal heritage objects. Instead, the approval pathway is through DPE. The SEARs issued for the project guide the level of assessment and provide the framework for assessing the impact to Aboriginal heritage.

## **1.2 Objectives of Assessment**

As the proposed ACEP works would involve ground disturbance there is potential to impact on Aboriginal heritage sites and objects, which are protected under the NPW Act. The purpose of this report is to assess the Aboriginal cultural values associated with the ACEP and to assess the cultural and scientific significance of any Aboriginal heritage objects and sites identified, in accordance with the SEARs for this SSD project. The requirements for the assessment, as provided in the SEARs issued 23<sup>rd</sup> December 2021, state that:

*"Identification and assessment of potential impacts on Aboriginal cultural heritage values, including a description of any measures to avoid, mitigate and/or manage any impacts. Justification for reliance on any previous Aboriginal Cultural Heritage Assessment Report or other heritage assessment for the site must be provided."*

This ACHA report is to provide DPE and Heritage NSW with information about the nature, extent and significance of any Aboriginal objects and/or Aboriginal places and their values.

The objectives of the assessment were to:

- Conduct Aboriginal consultation as specified in clause 60 of the National Parks and Wildlife Regulation 2019, using the consultation process outlined in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRP);
- Undertake a field survey of the project area to identify and record any Aboriginal objects within the project area;
- Undertake an assessment of the archaeological and cultural values of the project area and any Aboriginal objects therein;

- Assess the cultural and scientific significance of any archaeological material;
- Assess the possible impacts of the development proposal on the archaeological sites, and
- Provide management recommendations for any Aboriginal objects found.

### **1.3 Report Format**

The ACHA report was prepared in accordance with the following guidelines:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011);
- *Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH 2010a); and
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (OEH 2010b).



Figure 1-1 General location of project area.





Figure 1-2 Project area.



## **2. Description of the Area**

### **2.1 Project Location**

The project area is located at 554-562 Reservoir Road, Prospect in the Cumberland City Local Government Area (LGA) and is located within Lot 101, DP851785 (see Figure 2-1 below). It is bordered in the west by Reservoir Road and the Prospect Highway while Girraween Creek forms its eastern border. It is also located within the county of Cumberland, Parish of Prospect. The project area forms part of the industrial zone that is present in this part of Prospect.

### **2.2 Project Area Updates**

During the archaeological survey stage of this assessment, it was revealed that there were minor inconsistencies with the general project area boundary mapping. As a result, the project area boundary was updated with minor adjustments to reflect the area that was assessed during the archaeological survey by the NGH archaeologist and two RAPs. These adjustments were as follows:

- Removed Lot 9 DP374325 from the north west of the project area. This is a residential lot and is not being impacted by the proposed works.
- Removed Lot 10 DP374325 from the north west of the project area. This is a residential lot and is not being impacted by the proposed works.
- Minor extension of the project area to cover the existing main driveway into the Americold facility within Lot 101 DP851785. While this area was assessed during the archaeological survey by all attendees, no works will take place in the extension area.
- Minor extension of the project area along the eastern boundary to match the existing fence for the Americold facility. While this area was assessed during the archaeological survey by all attendees, no works will take place in the extension area.

All of the changes made to the project area are considered minor and within the general area of the SSD project. No changes were made to the boundaries of the proposed works and impact areas, all of which were included in the original project area boundary.

**Aboriginal Cultural Heritage Assessment**  
**Americold Coolstore Expansion Project**



Figure 2-1 Lots and DPs within the project area at Prospect.



## **2.3 Environmental Context**

Understanding the landscape context of the project area may assist us to better understand the archaeological modelling of the area and assist in identifying local resources which may have been used by Aboriginal people in the past. This information can then potentially be used to predict the nature of Aboriginal occupation across the landscapes within the project area.

Factors that are typically used to inform the archaeological potential of landscapes include the presence or absence of resources that would have been used by Aboriginal people including; water, animal and plant foods, stone, and other resources. The landscape context assessment for the project area is based on several classifications that have been made at national, regional and local levels to help us better understand the archaeological modelling of the project area. These site location factors are based on the geology, topography, hydrology, flora and fauna and past land disturbances within and adjacent to the project area.

### **2.3.1 Interim Biogeographic Regionalisation for Australia (IBRA)**

The national IBRA system identifies the project area as being located in the Sydney Basin Bioregion (DE&E 2016). The Sydney Basin Bioregion is in the central eastern portion of NSW. The bioregion is bordered by the North Coast and Brigalow Belt South bioregions to the north, the South East Corner bioregion to the south, and the South Eastern Highlands and South Western Slopes bioregions to the west. The Sydney Basin bioregion includes the entire Sydney metropolitan area as well as the towns of Wollongong, Nowra, Newcastle, Cessnock, Muswellbrook and Blue Mountains towns such as Katoomba and Mt Victoria. It also includes a significant proportion of the catchments of the Hawkesbury-Nepean, Hunter, and Shoalhaven River systems, as well as all of the smaller catchments of Lake Macquarie, Lake Illawarra, Hacking, Georges and Parramatta Rivers, and smaller portions of the headwaters of the Clyde and Macquarie rivers.

The Sydney Basin area is characterised by a temperate climate, warm summers and no dry season. A sub-humid climate occurs across significant areas in the northeast of the bioregion and a small area in the west around the Blue Mountains falls in a montane climate zone (where snow occasionally falls). The mean maximum temperature ranges from 22.4 to 31.9°C while the mean minimum ranges from -1.4 to 8.1°C. The mean annual rainfall ranges from 522 mm to 2395 mm.

The Sydney Basin Bioregion was formed when the earth's crust expanded, subsided, and filled with sediment between the late Carboniferous and Triassic. Early stages of development were as a continental rift that filled with marine volcanic sediments, but deposition shifted to river and swamp environments in a cold climate in the early Permian. Coal deposits accumulated and the upper parts of the basin were covered in quartz sandstone by extremely large, braided rivers whose headwaters lay hundreds or even thousands of kilometres away and flowed in from the south and the northwest to deposit the Hawkesbury Sandstone. Shallow marine sediments and later more river sediments continued to accumulate in the basin during the Jurassic, but all of these younger rocks have been eroded, leaving only a thin cap of shale over the resistant sandstones.

The range of rock types, topography, and climates in the Sydney Basin has resulted in a large variety of soil and vegetation communities. Large dune systems are found along the coast while limited areas of rainforest can be found in the lower Hunter, Illawarra escarpment, and on Robertson basalts.

The Sydney Basin Bioregion contains 14 subregions: Hunter, Cerrabee, Capertee, Wollemi, Yengo, Wyong, Cumberland, Pittwater, Burragorang, Cataract, Moss Vale, Illawarra, Ettrema, and Jervis. The project area is located entirely within the Cumberland subregion. A description of this subregion is provided in Table 2-1 below.

Table 2-1 Cumberland subregion of the Sydney Basin Bioregion (DPIE 2016).

Subregion	Geology	Landforms	Soils
Sydney Basin - Cumberland	Triassic Wianamatta groups shales and sandstone. A down warped block on the coastal side of the Lapstone monocline. Intruded by a small number of volcanic vents and partly covered by Tertiary river gravels and sands. Quaternary alluvium along the main streams.	Low rolling hills and wide valleys in a rain shadow area below the Blue Mountains. At least three terrace levels evident in the gravel splays. Volcanics from low hills in the shale landscapes. Swamps and lagoons on the floodplain of the Nepean River.	Red and yellow texture contrast soils on slopes, becoming harsher and sometimes affected by salt in tributary valley floors. Pedal uniform red to brown clays on volcanics. Poor uniform stony soils, often with texture contrast profiles on older gravels, high quality loams on modern floodplain alluvium.

### 2.3.2 Mitchell Landscapes

Further landscape mapping as part of the Mitchell landscapes system (DECC 2002) notes that the project area is located within the Cumberland Plain. This landscape is described below (Table 2-2):

Table 2-2 Description of the Mitchell Landscape relevant to the Project area (DECC 2002).

Landscape	Description
Cumberland Plain – SB Cumberland	Low rolling hills and valleys in a rain shadow area between the Blue Mountains and the coast on horizontal Triassic shales and lithic sandstones forming a down-warped block on the coastal side of the Lapstone monocline. Intruded by a small number of volcanic vents and partly covered by Tertiary River gravels and sands (Hawkesbury-Nepean Terrace Gravels landscape). Quaternary alluvium along the main streams. General elevation 30 to 120m, local relief 50m. Pedal uniform red to brown clays on volcanic hills. Red and brown texture-contrast soils on crests grading to yellow harsh texture-contrast soils in valleys. Woodlands and open forest of grey box ( <i>Eucalyptus moluccana</i> ), forest red gum ( <i>Eucalyptus tereticornis</i> ), narrow-leaved ironbark ( <i>Eucalyptus crebra</i> ), thin-leaved stringybark ( <i>Eucalyptus eugenioides</i> ), cabbage gum ( <i>Eucalyptus amplifolia</i> ) and broad-leaved apple ( <i>Angophora subvelutina</i> ). Grassy to shrubby understorey often dominated by Australian boxthorn ( <i>Bursaria spinosa</i> ), poorly drained valley floors, often salt affected with swamp oak ( <i>Casuarina glauca</i> ) and paperbark ( <i>Melaleuca</i> sp.).

In general, the soil profiles within the project area are expected to be predominantly made up of the red and brown texture-contrast soils to the yellow harsh texture-contrast soils described above, these may have potential for subsurface archaeological deposits.

### 2.3.3 Geology

A total of three geological formations were identified within the project area as mapped by Colquhoun et al. (2020). Both the Bringelly Shale and Ungrouped Ordovician Sedimentary Units geological formations cover the entire project area, while the Alluvial Valley Deposits formation covers a small portion in the east of the project area associated with Girraween Creek. All three geological formations are described in Table 2-3 below.

Table 2-3 Geological formations within the project area (Colquhoun et al. 2020).

Geological Formation	Description
Bringelly Shale	Shale, carbonaceous claystone, laminite, lithic sandstone, rare coal.
Ungrouped Ordovician Sedimentary Units	Ungrouped Ordovician sedimentary and metasedimentary rocks. Siltstone, phyllite, slate, sandstone.
Alluvial Valley Deposits	Silt, clay, (fluvially deposited) lithic to quartz-lithic sand, gravel.

The descriptions of the local geology highlights that the Bringelly Shale formation has the potential for quartzite deposits within the sandstone (subject to heating events), the Ungrouped Ordovician Sedimentary Units contain siltstone and sandstone, while the Alluvial Valley Deposits has potential for small pebbles/cobbles of quartz. Quartzite, siltstone, and quartz are all known for their potential use in the production of stone tools, while sandstone is known for its use in grinding grooves or engraved art sites. Despite the fact that the geological formations suggest that these site types may be more common within the project area, this is subject to the presence of outcropping stone. It should also be noted that is well documented that raw materials were traded over long distances, allowing for stone tools to be produced from high quality materials that were not sourced locally. Stone artefacts are also – due to their nature – considered as the most durable of archaeological objects, meaning that they are the most likely site type in most regions as they survive well in historically disturbed areas.

### 2.3.4 Topography

The project area is located in a moderately to highly modified landscape and is characterised by moderate to gentle slopes heading east and downhill from a local rise to the west towards Girraween Creek. It is likely that these modifications took place during the initial construction of the Americold Coolstore facility and during the construction of nearby roads. As a result, it can be expected that certain sections of the sloping landforms have been disturbed or otherwise destroyed. The breakdown of landforms identified via desktop assessment is shown in Figure 2-2 below.



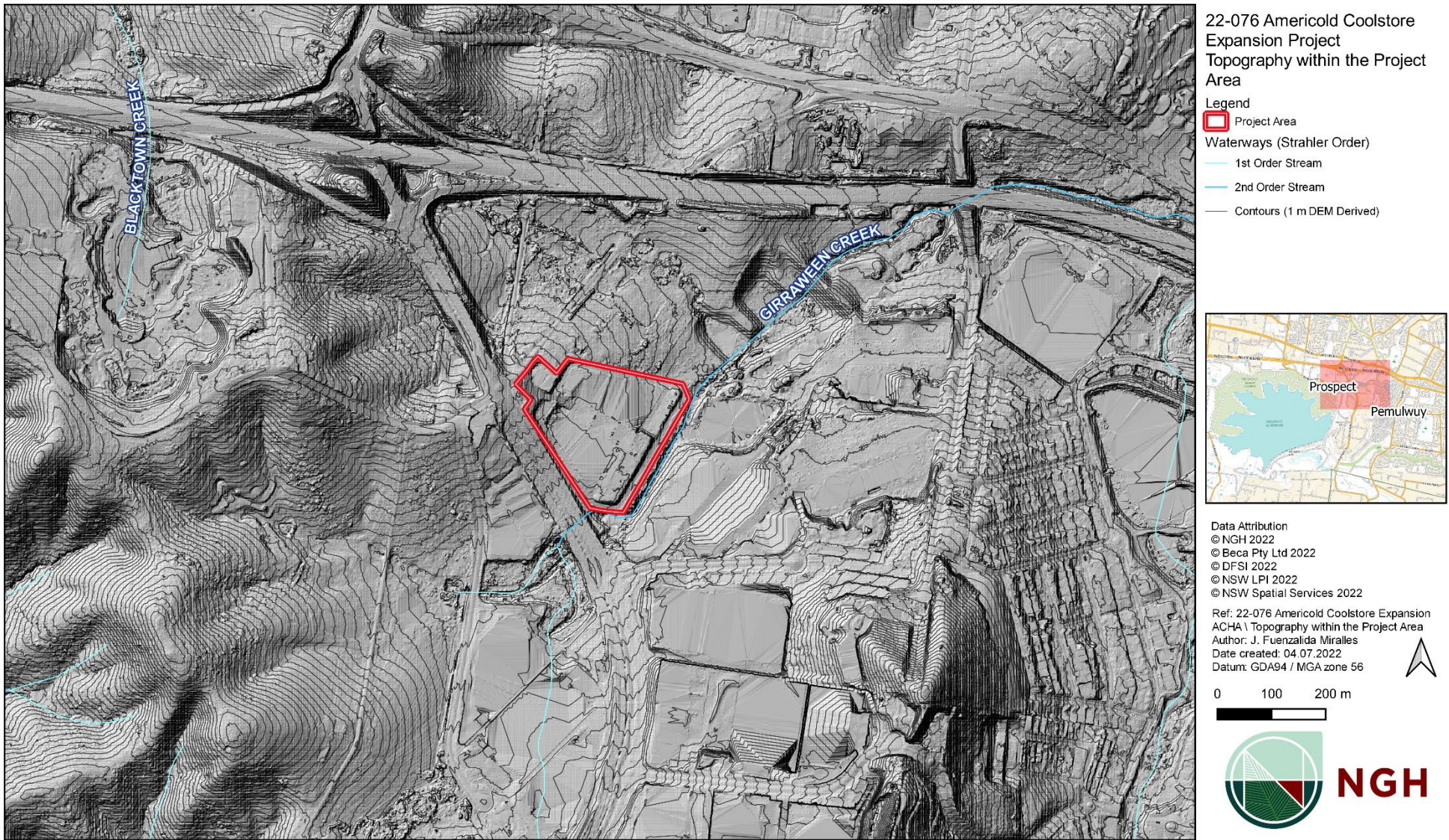


Figure 2-2 Topographical view of the landforms present within the project area.



### 2.3.5 Hydrology

The project area is directly adjacent to a single waterway called Girraween Creek to the east; this creek is mapped as a 2<sup>nd</sup> Strahler order stream and its headwaters are approximately 300 m south-east of the project area. There are several other waterways in the region, including an unnamed creek that flows into Girraween Creek 1 km north-east of the project area. These waterways stick to the few gullies and shallow valleys that characterise the hilly landscape in the region. It should also be noted that the Prospect Reservoir, which is located approximately 1 km south-west of the project area, was established in 1888 after Prospect Creek was dammed. As such, while the landscape within the reservoir area may have been lower lying with some smaller water bodies and waterways, it was not as hydrologically significant as it appears today.

### 2.3.6 Soil Landscapes

The formation and nature of soils within the project area can provide insight into the types of sites which may be present, in addition to the likelihood for intact archaeological deposits to be present. The project area is mainly located within the Blacktown soil landscape, with a small portion in the South Creek soil landscape. Both landscapes are described in Table 2-4. The soil deposits present within these two landscapes suggest that deep archaeological deposits are not likely due to the clays present from the A horizon down. The high acidity soils that are present also suggest that organic archaeological remains (i.e. bone, wood, hide) are unlikely to be present in subsurface deposits. However, it should be noted that stone artefacts – which represent the majority of finds in subsurface archaeological deposits – are still known to be present within acidic and/or clayey deposits.

Table 2-4 Soil landscape descriptions (DPIE 2020).

Soil landscape	Description
Blacktown	<p>The Blacktown soil landscape is composed of four main horizons:</p> <ul style="list-style-type: none"><li>• Bt1 – Friable brownish black loam. A horizon, pH varies from moderately acid (pH 5.5) to neutral (pH 7.0).</li><li>• Bt2 – Hard setting brown clay loam. A2 horizon, pH varies from moderately acid (pH 5.0) to neutral (pH 7.0).</li><li>• Bt3 – Strongly pedal, mottled brown light clay. B horizon, pH varies from strongly acid (pH 4.5) to slightly acid (pH 6.5).</li><li>• Bt4 – Light grey plastic mottled clay. B3 or C horizon, pH varies from strongly acid (pH 4.0) to moderately acid (pH 5.5).</li></ul>
South Creek	<p>The South Creek soil landscape is composed of three main horizons:</p> <ul style="list-style-type: none"><li>• Sc1 – Brown apedal single-grained loam. A horizon, pH varies from strongly acid (pH 4.5) to slightly acid (pH 6.5).</li><li>• Sc2 – Dull brown clay loam. A horizon, pH varies from moderately acid (pH 5.5) to neutral (pH 7.0).</li><li>• Sc3 – Bright brown clay. B horizon, pH varies from extremely acid (pH 3.0) to neutral (pH 7.0).</li></ul>

### **2.3.7 Vegetation**

The project area is located within a landscape that has been largely cleared of all its native vegetation. However, there are pockets of remnant vegetation within proximity that may be indicative of what vegetation was present in the past. There are two vegetation classes, the Coastal Valley Grassy Woodlands and Coastal Floodplain Forests described by (Keith 2004). These zones would have provided valuable resources to Aboriginal people in the form of bark, foods, and medicines. These areas would have also supported a variety of fauna that were vital food resources such as kangaroos, wallabies, and possums. While the modern project area bears little resemblance to its former state, the potential abundance of floral and faunal resources in the area suggests that it may have been an area that was frequented by Aboriginal people. As a result, there is a higher potential for encountering Aboriginal objects or archaeological deposits in the area due to its potential importance as a regional floral and faunal resources area.

### **2.3.8 Historic Land Use**

When assessing the archaeological potential of an area it is important to consider what historical land use has occurred and how this may have disturbed surface or subsurface sites. Within the project area, several disturbances are known to have occurred. The earliest satellite imagery available shows that up to 1930, the project area was not developed and was likely used for pastoral/grazing purposes. It is likely that this was the main historical land use of the project area from European settlement up to that point. Whilst the surrounding region steadily developed more as time went on, the land use of the project area appears to have remained the same until a period between 1978 to 1986. It should be noted that historical imagery from 1956, 1961, and 1978 appear to show that the land had been ploughed, indicating that some form of agriculture had taken place. By 1986 historical imagery clearly shows that a significant level of landscaping had taken place within the project area. In this imagery it is clear that the bend that was previously present in Girraween Creek has been 'straightened'. It appears that this was done so that the land to the west of the creek, which is within the current project area, could be reclaimed and extended further east and levelled for some form of construction. After the landscaping alterations, the land within the project area remained empty until between 1994 and 1998, when the initial Americold Coolstore facility was opened within the project area. By this stage almost all of the facilities that are present today can be seen, these include the perimeter road around the facility and on the north-eastern 'wing' of the coolstore warehouse. By 2002 satellite imagery shows that the facility appears to have completed the south-western 'wing' of the storage facility and was finished with construction activities. Since the construction of the facility, an 88 space carpark to the south east of the northern warehouse was approved in 2010 and constructed soon after. No further major landscape alterations or construction activities are believed to have taken place since 2010. The historical imagery from 1930, 1956, 1961, 1978, 1986, 1998, and 2002 can be seen in Appendix B.

The historical land use of the area shows that the project area has been subjected to a combination of low-intensity (i.e., pastoral or agricultural farming) and high-intensity (landscaping, watercourse redirection, and major construction) activities. It is highly likely that the high-intensity activities within the project area have destroyed any potential Aboriginal or archaeological sites or otherwise moved them away from the project area. This is especially true for the eastern portion of the project area which, although cleared and 'un-developed', is an unnatural landform due to the redirection of Girraween Creek in the late 1970s and early 1980s. As a result, and due to the historical land use of the project area, it is highly unlikely that any Aboriginal objects or archaeological deposits will be present. If any Aboriginal objects or archaeological deposits are

recorded, it is highly likely that they will not be *in situ* and have been removed from the original deposit or depositional location.

### **2.3.9 Landscape Context**

Most archaeological surveys are conducted in a situation where topographic variation can lead to differences in the assessment of archaeological potential and site modelling for the location of Aboriginal objects. While the project area is located within an area which would have characterised by rolling hills, it has been disturbed and altered significantly via historical land use.

The Project Area is located within the Sydney Basin, which is characterised by a temperate climate with warm summers and cool winters. Furthermore, the adjacent landscapes within the Blue Mountains provide a significant source of water that flow through the many rivers and creeks that are present within the Cumberland Plain. As a result, the project area is located within a landscape that can be occupied throughout the year depending on the local climactic, geological, and hydrological conditions.

A single second order waterway, Girraween Creek, runs adjacent along the southern and eastern boundaries of the project area. The headwaters of Girraween Creek are located 300 m and 650 m south-east and south by south-east of the project area, converging approximately 100 m south-east. Girraween Creek eventually feeds into Toongabbie Creek approximately 4650 m north-east of the project area. It should be noted that Toongabbie Creek is one of the major waterways that eventually feeds into the Parramatta River and Sydney Harbour. It is expected that Aboriginal activity would have been focussed on the more permanent drainage lines but as the region is well watered, Aboriginal use of the landscape would not have been restricted to the main water courses.

Besides the waterway, no other major landscape features are present within the project area as the elevated creek flats that were associated with the original course of Girraween Creek are likely to have been destroyed and/or significantly disturbed during the landscaping works prior to the construction of the existing buildings and infrastructure. For the purposes of this assessment, the entire project area will be considered as an 'artificial landform' due to the extensive alterations that took place prior to the construction of the Americold facility.

The topography, itself, determined routes of travel and particular landforms were imbued with spiritual meanings and associations (NPWS 2006). Despite the nature of the terrain suggesting that the project area would have been visited by Aboriginal people infrequently in the past, it is likely that the focus of local occupation would have been closer to the major waterways in the region. It is possible that the project area also formed part of the travel route to and from local hills or resource areas in the region. However, the landscapes within the project area have been destroyed and/or significantly modified during the initial construction of the Americold facilities. As the current project area and proposed works are within the same 'artificial landform' that was disturbed during the initial construction, it is considered that these areas have had their previous potential archaeological sensitivity destroyed. Furthermore, historical imagery shows that all native trees within the project area were cleared in the past, indicating that there is no possibility for remnant mature native trees – and therefore culturally modified trees – to be present. Overall, despite being within a landscape that would have provided resources, shelter, water, and food for Aboriginal people prior to the arrival of European settlers, the previous historical land use of the area has effectively rendered the archaeological sensitivity of the area to a negligible level.

## **2.4 Cultural Context**

### **2.4.1 Ethnographic Setting**

There are several ethnographic recordings of Aboriginal life in the Parramatta region from the onset of European settlement during the late 18<sup>th</sup> and early 19<sup>th</sup> centuries that notably focus on the prevalence of Aboriginal people around waterways in the region and of the frequent conflicts that occurred between Aboriginal people and the settlers (Conybeare Morrison 2005; Heritage NSW 2003). It is often mentioned that Prospect Hill was known as 'Marrong' to the local Aboriginal communities and was often used as an Aboriginal meeting place. It is also important to consider that the Aboriginal community alive at the time of such observations were survivors of serious epidemics of infectious disease – such as smallpox – that had been brought by Europeans and greatly affected the population sizes and distribution of people within the landscape. Consequently, European records may not necessarily reflect pre-contact population distributions and traditional ways of life (Dowling 1997; Littleton and Allen 2007).

After the first settlement in early 1788, the Prospect Hill area was first explored by a European expedition led by Governor Phillip (Heritage NSW 2003). During this expedition it was noted that what became known as the Blue Mountains was sighted by Europeans for the first time. Prospect Hill also became an important landmark and reference point for the early explorers and cartographers in the region and was more permanently settled by Europeans the year after in 1789 (Karskens 1991). As a result of Prospect Hill's importance to the infant colony it was rapidly settled by Europeans, especially time-expired convicts such as William Butler, James Castle, Samuel Griffiths, John Herbert, George Lisk, Joseph Morley, John Nicols, William Parish, and Edward Pugh (Higginbotham 2000; Heritage NSW 2003). Land was also granted to free settlers, such as 160 acres – of which the current project area lies within – to a John Kennedy in 1799 (Sharpe 2014). Based off Parish maps from the late 19<sup>th</sup> century (see Figure 2-3 and Figure 2-4 below), it is clear that many of these families maintained their properties throughout the 19<sup>th</sup> century.

The most significant consequence of the land grants in the region was that early European settlers came into frequent and violent contact with the Aboriginal communities who had lived in the region and had their traditional lifestyles interrupted by the arrival of settlers. The greatest of these conflicts was between Pemulwuy, a Bidjigal man, and the European settlers (Heritage NSW 2003; Karskens 2009; National Museum of Australia 2022). After initial cordial relations between the settlers and the Aboriginal communities of Sydney – as well as the smallpox outbreak of 1789 – resistance began to form against the settlers by various groups (Heritage NSW 2003; Karskens 2009; National Museum of Australia 2022). In May 1792 Pemulwuy would begin to conduct raids at Prospect in an attempt to prevent the establishment of farming settlements that had been established in the year prior. These raids involved the burning of settler's huts, stealing of goods (including crops), and direct attacks on settlers themselves. Ethnographic accounts tell that the scale of these raids continually increased over the subsequent years and culminated in the Battle of Parramatta in 1797, where dozens of British soldiers and Aboriginal people were killed or wounded (including Pemulwuy). Despite his wounds, after recovering in a hospital Pemulwuy would escape. Skirmishes would continue over the next several years and would result in an order by Governor King on 1<sup>st</sup> May 1801 that all Aboriginal people near Parramatta, Georges River, or Prospect could be shot on sight (King 1801; National Museum of Australia 2022); a couple of months later in November a significant reward was also offered on Pemulwuy for his death or capture. Pemulwuy would evade the British for several more months, before being shot and killed



by an unknown assailant on 2<sup>nd</sup> June 1802. His head was reportedly cut off and delivered to Sir Joseph Banks for his collection in England and has been subsequently lost.

After the death of Pemulwuy, Aboriginal resistance to settlers began to dissipate in the region, but skirmishes were still known to occur (Heritage NSW 2003). It wouldn't be until the 3<sup>rd</sup> May 1805 when Reverend Marsden – who was urged by the Prospect Aboriginal community – held a meeting between members of the Aboriginal and European communities in order to facilitate a path to peaceful relations between the two groups. The meeting would be held near Prospect Hill and was mediated by both a group of unknown Aboriginal women and John Kennedy. One of the main points of concern was surrounding the punishment and retribution that was given to the Prospect Aboriginal community in response to violence committed by other Aboriginal clans. It has been noted that the conference held at Prospect Hill was a hallmark in Aboriginal/European relations and provided a blueprint for Macquarie's 'Native Feasts' held in Parramatta from 1814 (Heritage NSW 2003). It has also been noted that the Sydney Gazette's report on the conference was lacking the stereotypical British Imperial tone that was wont for its coverage of earlier Aboriginal events. The result of the conference held by Reverend Marsden was a cessation of the hostilities between the Aboriginal and settler communities around Parramatta and Prospect (Karskens 1991; Heritage NSW 2003).

The story of Pemulwuy and his resistance in the Prospect region, as well as his eventually death, shows how poor the relationship between the Aboriginal communities of the region and the European settlers could become. On the other hand, the conference held by Reverend Marsden also shows that peaceful relations could be achieved between the two communities. However, it should be noted that these conflicts, combined with the spread of diseases and land dispossession, caused great social upheaval and loss of life, meaning that access to traditional resource gathering and hunting areas, religious life, marriage links, and sacred ceremonial sites was disrupted or prevented. Despite this, Aboriginal people continued to maintain their connections to sites and the landscape in a variety of ways, including collective cultural memory. As a result, the Aboriginal communities of the region continue to have a strong connection to their land.

### **Tribal Boundaries and Social Structure**

Cultural areas are difficult to define and “must encompass an area in which the inhabitants have cultural ties, that is, closely related ways of life as reflected in shared meanings, social practices and interactions” (Egloff et al. 2005:8). Depending on the culture defining criteria chosen - i.e., which cultural traits and the temporal context (historical or contemporary) - the definition of the spatial boundary may vary. In Australia, Aboriginal “marriage networks, ceremonial interaction and language have been central to the constitution of regional cultural groupings” with the distribution of language speakers being the main determinant of groupings larger than a foraging band (Egloff et al. 2005:8,16).

The Project area is within an area identified as part of the Darug language group. This is an assemblage of many small clans and bands speaking a number of similar dialects (Horton 1994; Tindale 1974; MacDonald 1983). More specifically, the Prospect Hill area has been primarily identified with the Warmuli (or Wymali) tribe, with several other groups frequenting the area (Flynn 1997). However, it should be noted that the borders were not static, but most likely fluid, expanding and contracting over time to the movements of smaller family or clan groups. Boundaries ebbed and flowed through contact with neighbours, the seasons, and periods of drought and abundance.

## **Material Culture, Food and Resources**

In an archaeological context, few of these items would survive, particularly in an open site context. Any item made from bark, timber and animal skins would decay quickly in an open environment. However, other items, in particular those made of stone would survive where they were made, placed or dropped. Shell material may also survive in an archaeological context. Sources of raw materials, such as the extraction of wood or bark leave scars on the trees that are archaeologically visible, although few trees of sufficient age survive in the modern context. Outcropping stone sources also provide clues to their utilisation through flaking, although pebble beds may also provide sources of stone which leave no archaeological trace.



Figure 2-3 Parish map over the project area from an unknown date in the 19th century.





Figure 2-4 1894 Parish map.



## 2.4.2 AHIMS Search

The Aboriginal Heritage Information Management System (AHIMS) is a database of previously recorded Aboriginal heritage sites in NSW. A search provides basic information about any sites previously identified within a search area. However, a register search is not conclusive evidence of the presence or absence of Aboriginal heritage sites, as it requires that an area has been inspected and details of any sites located have been added to the register. As a starting point, the search will indicate whether any sites are known within or adjacent to the Project area.

A search of the AHIMS database was conducted on 2<sup>nd</sup> May 2022 over the following area:

- Client Service ID: 679008
- From Latitude: -33.8347 – Longitude: 150.8864;
- To Latitude: -33.7991 – Longitude 150.9482.

A total of 55 Aboriginal sites were in the search area results; no declared Aboriginal Places were present in the search area results. The results of the AHIMS search are shown below in Table 2-5 and Figure 2-5. No AHIMS sites are currently recorded within the project area, however a total of three sites are located within 200 m and a further 11 are located within 1 km; these sites are detailed in Table 2-6 and Figure 2-6 below.

Table 2-5 AHIMS Registered Sites.

Site Type	Number
Artefact	42
Modified Tree (Carved or Scarred)	3
Modified Tree (Carved or Scarred), Artefact	1
Potential Archaeological Deposit (PAD)	5
Potential Archaeological Deposit (PAD), Artefact	2
Potential Archaeological Deposit (PAD), Artefact, Modified Tree (Carved or Scarred)	1
Aboriginal Ceremony and Dreaming, Potential Archaeological Deposit (PAD)	1
<b>TOTAL</b>	<b>55</b>

Table 2-6 Registered AHIMS sites within 1 km of the project area.

Site Number	Site Name	Site Type	Site Status on AHIMS	Distance
45-5-2549	Prospect Hill 6	Potential Archaeological Deposit (PAD), Artefact	Valid	Approximately 40 m east of the project area
45-5-2891	Site REL 1	Artefact	Valid	Approximately 200 m south-west of the project area
45-5-2548	Prospect Hill 5	Artefact	Valid	Approximately 210 m south-west of the project area

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45-5-3069	CSIRO 4	Potential Archaeological Deposit (PAD), Artefact	Destroyed	Approximately 600 m east of the project area
45-5-2571	Prospect Hill	Aboriginal Ceremony and Dreaming, Potential Archaeological Deposit (PAD)	Valid	Approximately 600 m south-east of the project area
45-5-2892	site REL 2	Artefact	Valid	Approximately 630 m south-west of the project area
45-5-3972	BCPAD1	Potential Archaeological Deposit (PAD)	Valid	Approximately 680 m north-west by west of the project area
45-5-3970	BC1 (Prospect)	Artefact	Valid	Approximately 730 m north-west of the project area
45-5-3971	BC2 (Prospect)	Artefact	Valid	Approximately 750 m north-west by west of the project area
45-5-2894	site REL 4	Artefact	Valid	Approximately 750 m south-west of the project area
45-5-2893	site REL 3	Artefact	Valid	Approximately 780 m south-west of the project area
45-5-1081	CSIRO/ISF2 ;	Artefact	Valid	Approximately 860 m east of the project area
45-5-3153	CSIRO 2/3 Complex	Artefact	Valid	Approximately 910 m east of the project area
45-5-2361	EC 1(5);	Artefact	Valid	Approximately 970 m north-west of the project area

The AHIMS database shows that the region is largely characterised by artefact scatters/isolated artefacts, with some PADs and modified trees also being identified. The dominance of artefact sites is to be expected in the Cumberland Plains region as many of the soils in the area are known to be highly acidic and therefore do not preserve archaeological material well. Furthermore, stone is a durable material and survives well in highly disturbed/urban areas where other site types (i.e., modified trees, middens) do not. As a direct result, if any archaeological or Aboriginal sites are encountered within the project area it is likely that they will be artefact sites.

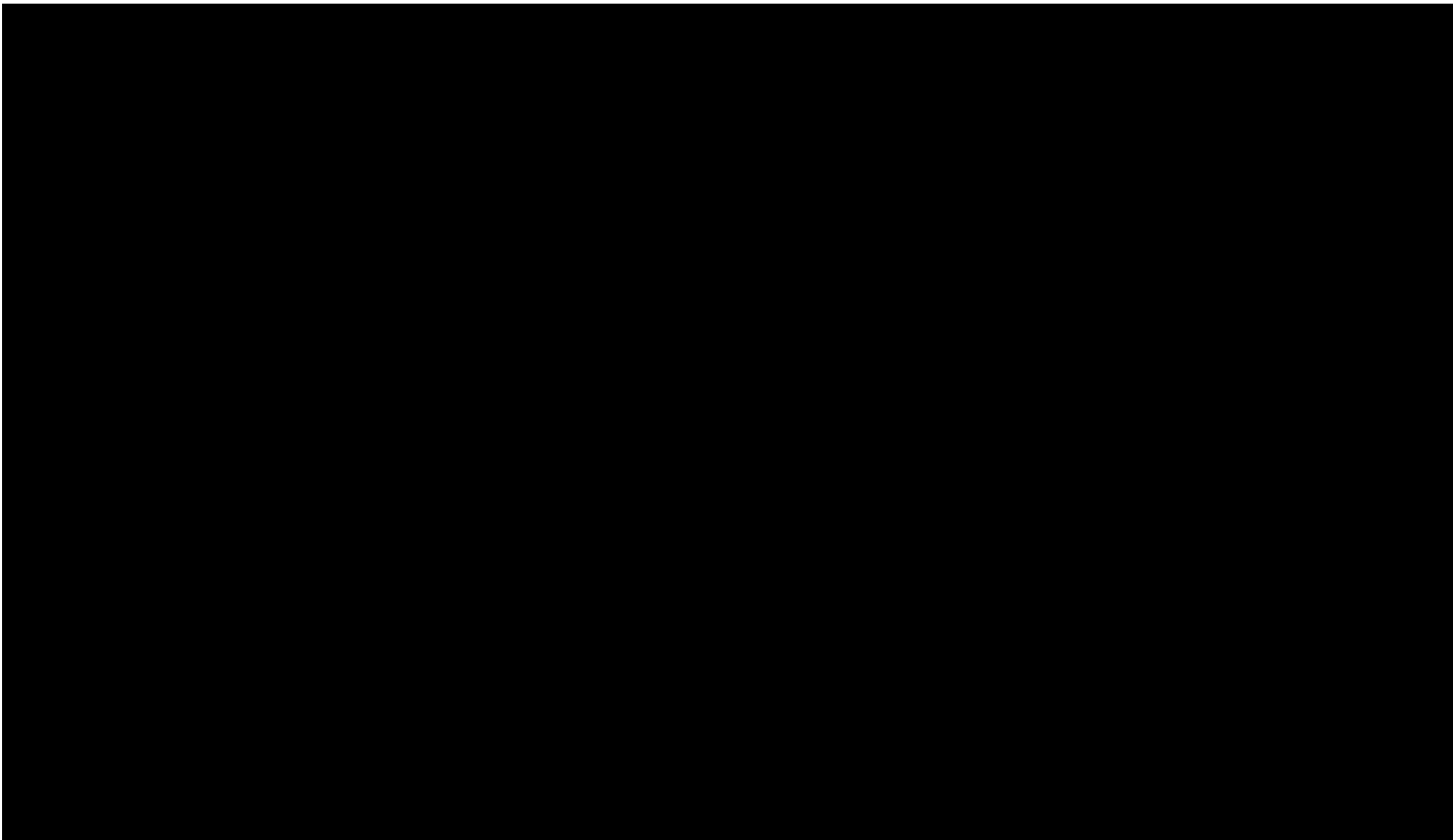


Figure 2-5 Regional AHIMS search results.



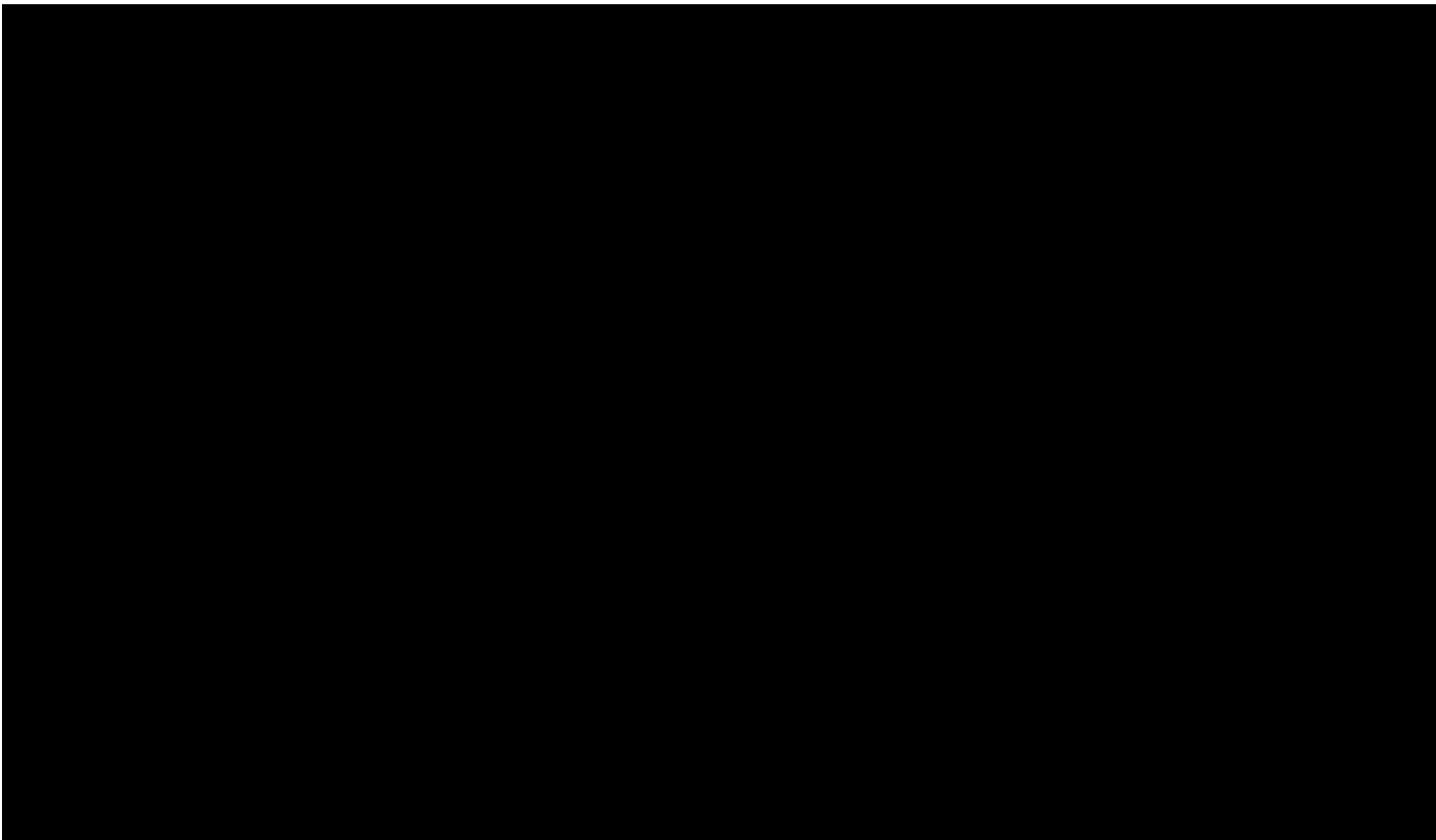


Figure 2-6 AHIMS Sites within proximity to the project area.

### 2.4.3 Additional Searches

Other heritage register searches were also undertaken to identify any items or places in proximity to the Project area, with a focus on the Project area and surrounding landscape. The following resources were used as part of this assessment:

- The *NSW State Heritage Inventory* (SHI), includes items on the State Heritage Register and items listed by state agencies and local Government, to identify any items currently listed within or adjacent to the proposal site.
- The *Australian Heritage Database* (AHD), includes items on the National and Commonwealth Heritage Lists, to identify any items that are currently listed within or adjacent to the proposal site.

A search of the NSW SHI database and AHD show that no Aboriginal Places listed in the vicinity of the project area. However, it should be noted that the SHR and Blacktown Local Environmental Plan (LEP) 2015 curtilages for Prospect Hill (SHR ID: 5051526, LEP ID: I01662) are located approximately 550 m south-east of the project area. These historic listings are significant for a variety of reasons, the most important of these being its association with Pemulwuy and frontier warfare during the early colonial period and later as the location of reconciliation meetings in 1805 between the colonial government and the Aboriginal communities of the area. It is also significant for containing archaeological sensitivity as a 'contact site' where there is potential for Aboriginal and European heritage items to be mixed.

The results of the NSW SHI database search shows that a single locally listed heritage item (Blacktown LEP 2015) is within the project area. The Great Western Highway (former alignment) (ID: I60) is within the north-western section of the project area. The NSW SHI database also shows that the state heritage listed Former Great Western Road, Prospect (ID: 1388) is also located in the same part of the north-west section of the project area. A Statement of Heritage Impact (SOHI) is being prepared separately to the ACHA to assess the potential impacts to historic heritage items.

The results of the AHD search indicated there are no listed items within the project area. It should be noted that five items listed on the AHD are located in the vicinity of the project area, only three of which are within 500 m of the project area. All three are described in Table 2-7 below.

Table 2-7 AHD listed heritage items in proximity to the project area.

Item Name	Status and Listing ID	Location and proximity to the proposal site
St Bartholomews Anglican Church (former), Prospect Hwy, Prospect, NSW, Australia	( <a href="#">Registered</a> ) Register of the National Estate (Non-statutory archive) Place ID: 2987	Approximately 410 m north of the project area
CSIRO Division of Animal Production, Clunies Ross St, Prospect, NSW, Australia	( <a href="#">Ineligible Place</a> ) Commonwealth Heritage List Place ID: 105481	Approximately 100 m east of the project area

CSIRO Division of Animal Production, Clunies Ross St, Prospect, NSW, Australia	(Registered) Register of the National Estate (Non-statutory archive) Place ID: 102272	Approximately 100 m east of the project area
--------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------	----------------------------------------------

No other known previously recorded heritage sites are located within or adjacent to the project area.

#### **2.4.4 Regional Archaeological Record**

The project area is located within the Cumberland Plain, one of the most intensively archaeologically researched regions in the Sydney basin due to the substantial infrastructure projects throughout the last century as well as the extensively historical Aboriginal occupation of the region. Aboriginal people have occupied what we now know as the Australian continent for at least 40,000 years and perhaps as long as 60,000 years and beyond (Attenbrow 2010). The Cumberland Plain has been the subject of intensive archaeological survey. Several thousand Aboriginal sites have been recorded in the Cumberland Plain region, with the archaeological data derived from a number of sources including; impact assessments, archaeological planning and management studies and academic archaeological investigations.

More than 4,500 sites have been recorded and registered with the AHIMS database for the Sydney region, reflecting both the wealth of archaeology in the region and the number of archaeological investigations undertaken. The dominant site types in the Sydney region (in the 15 - 20% frequency range) are rock shelters with midden deposit, rock shelters with art, rock art engravings and open artefact scatters (Attenbrow 2010). The distribution, density and size of sites are largely dependent on environmental context (Haglund 1980; Kohen 1986; Smith 1989; McDonald 1997; White and McDonald 2010).

Several predictive models have been formulated to explain Aboriginal Site location on the Cumberland Plain. Haglund (1980) developed a predictive model of site location based on an early survey in the Blacktown area. A study of the regional archaeology of the Cumberland Plain by Kohen (1986) made a number of findings about site location patterns in the Sydney region. The current project area lies within Prospect on the western edge of the Cumberland Plain.

Kohen's (1986) study demonstrated that proximity to water was an important factor in site patterning. Kohen found that 65% of open artefact scatter sites were located within 100m of permanent fresh water (Kohen 1986). Only 8% of sites were found more than 500 m away from permanent fresh water. In short, Kohen argued that open artefact scatters are larger, more complex and more densely clustered along permanent creek and river lines. Kohen's study also found that silcrete (51%) and chert (34%) are the most common raw materials used to manufacture stone artefacts. Other raw materials include quartz, basalt and quartzite.

Although the patterns described above have been generally supported by subsequent investigations, Kohen's study was limited by a reliance on surface evidence. Extensive excavation across the Cumberland Plain has since shown that areas with no surface evidence often contain



sub-surface archaeological deposits. This is a critical consideration in aggrading soil landscapes, such as those commonly found across the Cumberland Plain.

Haglund (1980) predicted that sites would most likely be located near water courses such as creeks, and on high ground near water. Kohen (1986) also determined that the availability of water was the most important factor influencing the distribution of sites across the landscape.

Other important criteria that also played a role in the site location within the Cumberland Plain are the proximity to a diversity of economic resources such as food and lithic materials, and to an extent elevation. Smith (1989) also supports the predictive model that sites will most commonly be found near water sources.

Smith (1989) suggests that:

- Sites will occur in all areas of the Cumberland Plain, except where destroyed by European land use, erosion processes and flooding;
- Sites will be located in all topographic units;
- Site densities may be expected to be 10% higher in the northern section of the Plain because of the greater concentrations of stone resources in that area;
- Sites will tend to be more frequent around permanent water sources (apart from areas overlying the Londonderry Clay or Ricabys Creek Formation, and the Werrington Downs area); and
- Sites will be expected in relatively high frequencies on or near stone resources.
- Evidence of post-contact camp sites may be located in close proximity to early European houses and farms, or official buildings.

In a 1997 study of the Cumberland Plain, McDonald (1997) found that:

- 17 out of 61 excavated sites had no surface artefacts prior to excavation;
- The ratio of recorded surface to excavated material was 1:25; and
- None of the excavated sites could be properly characterised on the basis of surface evidence.

The results of McDonald's (1997) study clearly highlight the limitations of surface survey in identifying archaeological deposits in this landscape. The study also shows the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain.

More recently, White and McDonald (2010) have created the Stream Order Predictive Model which can be applied to the current project area. Water supply is often thought to be a significant factor influencing peoples' land-use strategies. Large and/or permanent water supplies may have supported large numbers of people and/or long periods of occupation while small and/or ephemeral water supplies may have been able to support only small numbers of people and/or transient occupation. The Stream Order Model is a large-scale landscape model which identifies landforms by standardised descriptions and applies a series of predictive statements about landforms in relation to watercourse category, landform, aspect and distance to water. Stream order identifies the smallest tributary as first order, the first two order streams join and form a second order stream, two second order streams form a third order, and so on.

White and McDonald (2010) suggest that:

- Stream order – higher order streams tend to have higher densities and more continuous distributions of artefacts associated with them than lower order streams;
- Landform – higher artefact densities occur on terraces and lower slopes, with sparse discontinuous lithic artefact scatters on upper slopes;
- Aspect – higher artefact densities occur on landforms facing north and northeast, on lower slopes associated with larger streams; and
- Distance from water – higher artefact densities occur 51-100 metres from fourth order streams, and within 50m of second order streams.

The model also includes considerations of the landform's proximity to the sandstone-shale interface.

In short, archaeological surface evidence (or the absence of surface evidence) does not necessarily indicate the potential, nature or density of sub-surface archaeological materials. The results of McDonald's (1997) study clearly highlighted the limitations of surface survey in identifying archaeological deposits in this landscape. The study also showed the importance of test excavation in establishing the nature and density of archaeological material on the Cumberland Plain.

The results of previous archaeological surveys indicate that the most common site types found on the Cumberland Plain are open artefact scatters/open camp sites, followed by scarred trees and isolated finds. Shelter sites and grinding grooves are also found, although mainly around the periphery of the Plain in sandstone geology.

#### **2.4.5 Local Archaeological Studies**

The following are summaries of those archaeological survey reports that have been completed within or directly adjacent to the project area.

In 2002, Jo McDonald Cultural Heritage Management Pty Ltd (JMCHM) performed an archaeological survey for Aboriginal sites at the former CSIRO animal research laboratory at Prospect; approximately 500 m east of the current project area. During the survey, no new Aboriginal sites were identified; a previously recorded possible scarred tree was relocated. However, three areas of subsurface archaeological potential were identified, PAD 2, PAD 3, and PAD 4. PAD 2 was defined as a subsurface deposit over 150 m x 100 m with some remnants of native trees in the area. It is situated on flat to moderately sloping ground with a northerly ridge crest running down from Prospect Hill and a contour bank along the eastern perimeter of the trees. It is elevated above adjacent landforms and is 350 m west of a tributary creek. PAD 3 was defined as a subsurface deposit measuring 100 m x 150 m on the western flats and bank of a tributary creek with a grove of native vegetation and on the lower hill slopes immediately east of Prospect Hill. JMCHM argued that the presence of native vegetation in the area suggested that there was a higher possibility for intact archaeological deposits and noted that the presence of contact era burials in these deeper alluvial soils should not be overlooked. JMCHM also argued that the PAD showed less disturbance than the adjacent areas. PAD 4 was described as an area measuring 100 m x 60 m on slightly elevated ground sloping down to the nearby tributary creek with regrowth native vegetation. JMCHM argued that parts of the PAD may have intact archaeological deposits within the alluvial soils. PADs 2 and 3 were assessed as containing moderate potential for

subsurface archaeological deposits while PAD 4 was assessed as containing low potential. No subsurface excavations were undertaken during this assessment to test these PADs.

In 2007, Total Earth Care performed archaeological excavations of Site PB1 (AHIMS #45-5-3227) and the surrounding landscape along Reen Road, Eastern Creek; approximately 3 km north-west of the current project area. A total of 118 artefacts were identified during the testing programme within 98m<sup>2</sup> of excavated deposit. Total Earth Care explained that the artefact densities were higher in the vicinity of the local hill crest, with 70% (n=70) of the assemblage being recorded within approximately 40% (39m<sup>2</sup>) of the excavation area that was performed within 20 m of the hill crest. The assemblage was represented by three raw material types, silcrete (n=75, 63.5%), quartz (n=40, 33.9%), and indurated mudstone (n=3, 2.6%). Typologically, the assemblage was comprised of angular fragments (n=73, 61.9%), flakes (n=26, 21.1%), flaked pieces (n=15, 13.6%), cores (n=3, 2.6%), and a retouched artefact (n=1, 0.8%). Total Earth Care argued that the raw material for these artefacts is likely to have been sourced from one of three major geological formations in the region, the Cranebrook Formation, Rickabys Creek Gravels, or the St Marys Formation. The results of the Total Earth Care investigation show that the site is characteristic of a low-density subsurface artefact scatter, ranging from 0.21 artefacts/m<sup>2</sup> to 2.6 artefacts/ m<sup>2</sup> (an average of 1.2 artefacts/m<sup>2</sup>) and increasing towards the hill crest. Total Earth Care concluded that the site was opportunistically used by Aboriginal communities in the past and is not comparable to the larger occupation sites found along Eastern Creek.

In 2018, Mary Dallas Consulting Archaeologists (MDCA) conducted an ACHA assessment for the Prospect South Planning Proposal; adjacent to the north of the current project area. This assessment was a continuation of a due diligence assessment that had been performed by MDCA in 2007 which did not identify any Aboriginal or archaeological sites within the area. During the archaeological survey, similar observations were made to the previous due diligence assessment. MDCA state that the area was characterised by low surface exposure that were caused by the disturbances within the area or by shallow eroded topsoils and exposed subsoils. MDCA observed several areas containing significant ground disturbances due to previous and current land use associated with logistics, heavy vehicle use, and market gardens amongst others. It was also argued that a negligible level of topsoils were present across the area as clays were frequently observed in the small exposures across the area. The areas closest to the M4 motorway also displayed some of the highest levels of disturbance through the installation of high voltage powerlines, a gas pipeline, and the construction of the embankments for the M4 motorway. MDCA stated that, due to the historical impacts on the area, no areas of Aboriginal or archaeological potential were present. No Aboriginal or archaeological sites were identified during the assessment.

In 2019, Apex Archaeology Pty Ltd conducted an ACHA assessment to support a Development Application (DA) for the expansion of the Fairfield Sustainable Resource Centre in Weatherhill Park, approximately 2.8 km south by south-west of the current project area. Apex Archaeology that that area had been subjected to a significant the level of modification and historical disturbances. This was due to the fact that it had been used as a landfill during the 1970s and 1980s and was subsequently capped with a layer of clay approximately 1 m in depth. As a result, Apex Archaeological considered that there was a negligible potential for subsurface archaeological deposits due to the amount of imported fill material. The results of the survey were that no new Aboriginal sites or areas of subsurface archaeological potential were identified.

In 2019, Artefact Pty Ltd performed an ACHA assessment for the proposed development of a warehouse and logistics facility across five consolidated lots across Prospect and Pemulwuy;



approximately 450 m east of the current project area. While ground surface visibility was very low (~5%), the results of the archaeological survey showed that the area had been subjected to significant disturbances during the construction and use of the existing facilities present. Artefact noted that the low visibility was due to the coverage of concrete, brick, paving, and asphalt on ground surface across the area. As a result it was determined that it was unlikely that archaeological material would be present. No Aboriginal sites or areas of archaeological potential were identified during the assessment. Artefact further noted that the AHIMS registered Ceremony and Dreaming site Prospect Hill (#45-5-2571) is partially within the assessment area and is significantly less disturbed and developed in comparison to the rest of the area. However, it was argued that due to its significance being identified with Aboriginal spiritual and ceremonial connection to the site as a men's place – and due to the focus of this connection being on the previously quarried hill crest – as well as due to the steep nature of the section of the hill within the area, that it was unlikely for *in situ* archaeological deposits to be present within the area. Instead it was argued that the Aboriginal objects within that portion of the area had been subjected to colluvial and fluvial geomorphic processes and therefore a low-moderate Aboriginal archaeological potential was justified.

#### **2.4.6 Summary of Archaeological Context and Site Location Model**

Within the Prospect area there have been several archaeological investigations and studies. These studies have provided a strong understanding of site patterns and geomorphic context for the region. The robustness of the AHIMS survey results is therefore considered to be high for the present investigation. However, it should be noted that the AHIMS results are accurate to the ground conditions seen at present across the region and do not represent the archaeological record prior to the suite of ground disturbing and landscape alteration activities that have taken place in the area. Despite this, it is unlikely large or archaeologically significant sites will be present within the project area. Instead, any unidentified Aboriginal or archaeological sites are likely to be represented by isolated artefacts and low-density artefact scatters. It is determined that there is a negligible potential for *in situ* or 'disturbed' subsurface archaeological deposits within the project area due to the previous disturbances that have taken place in the area. That being said, the field survey component of this assessment may provide a different perspective to the conditions of the landforms present within the project area. The current study in combination with the previous studies of the project area provides the most comprehensive assessment of this locality and therefore the results outlined in this report are the most thorough and up to date available.

The AHIMS database is a record of those places that have been identified and had site cards submitted within NSW. It is not a comprehensive list of all places in NSW as site identification relies on an area being surveyed and on the submission of site forms to AHIMS. There are likely to be many areas within NSW that have yet to be surveyed and therefore have no sites recorded. However, this does not mean that sites are not present. Conversely the presence of AHIMS sites within an area does not mean that all Aboriginal sites in that area have been identified and recorded.

Despite the fact that no registered Aboriginal sites have been recorded within the project area, a total of three sites have been recorded within 200 m and a further 11 within 1 km. While several AHIMS registered sites are located within close proximity, these have only been through a handful of archaeological investigations.

The registered AHIMS sites and previous archaeological investigations in the Prospect region suggest that the most likely site type would be artefact scatters or isolated finds with some possibility for modified trees or PADs.

Based upon the data and assessments above, it appears that there is a low potential for sites of Aboriginal cultural heritage to occur within the project area given the level of historical disturbance and landscaping that is known to have taken place in within the project area. It is considered that there is a very low potential for scarred trees to be identified due to previous extensive tree clearance across the area; however, any isolated old growth native trees that were not subjected to clearance have the potential to contain evidence of Aboriginal cultural modification. Any undisturbed portions of archaeologically sensitive landforms also have potential to contain intact subsurface deposits. However, most of the site has been disturbed and is therefore unlikely to contain *in situ* subsurface deposits. Based on the assessment of information from the environmental context and results of previous archaeological studies in and around the area, several predictive modelling statements can be made. These are included in Table 2-8 below.

Table 2-8 Aboriginal Site Prediction Statements.

Site Type	Site Description	Potential
<b>Isolated Finds</b>	These sites consist of a single artefact and usually represents accidental discard or disposal. Can occur anywhere.	Low potential to occur within the project area.
<b>Artefact scatters</b>	Artefact scatter sites can range from high-density concentrations through to sites containing two artefacts. The size of these sites usually correlates with proximity to sources of fresh water.	Low potential to occur within the project area.
<b>Stone Resource Areas</b>	Areas where people used natural stone resources as a source material for flaking. This requires geologically suitable material outcropping to be accessible.	Potential to occur within the project area where suitable underlying geological formations are exposed.
<b>Modified trees</b>	Trees that have undergone cultural modification.	Potential to occur within areas where there are remnant mature native trees, isolated paddock trees, and dead or fallen mature trees. Due to the clearances of the project area, it is determined that it is unlikely that any modified trees will be identified.
<b>Potential Archaeological Deposits (PADs)</b>	Potential subsurface deposits of archaeological material	PADs have potential to occur in areas that are likely to have reasonable subsurface deposits in archeologically sensitivity landforms. There is a very low potential for this feature to occur within the project area due to the historical ground disturbances that are known to have taken place.

In summary, the project area forms part of the overall landscape in which Aboriginal People lived and given that sites have previously been recorded within landscapes that are present within the project area, there is potential – albeit very low – for Aboriginal objects to be present, despite the existing level of disturbance.

#### **2.4.7 Limits on Information**

It should be noted that there are limits on the existing information that is available from sources such as AHIMS, other register searches, and general background information. No information about archaeological work (surveys, testing, etc) was available for the project area as assessed in this report. As a result, the information from nearby assessments has been used in this report for the purposes of understanding the landscape context as well as the regional and local archaeological record in order to assist in the development of a predictive model for Aboriginal and archaeological sites for project area as assessed in this report. The results of this assessment will also be used to add to the archaeological knowledge of the region.



### 3. Aboriginal Community Consultation

The consultation with Aboriginal stakeholders for this project was undertaken in accordance with Section 60 of the *National Parks and Wildlife Amendment (Aboriginal Objects and Aboriginal Places) Regulation 2019* and following the process outlined in the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (ACHCRP). The guide outlines a four-stage process of consultation as follows:

- Stage 1 – Notification of project proposal and registration of interest.
- Stage 2 – Presentation of information about the proposed project.
- Stage 3 – Gathering information about cultural significance.
- Stage 4 – Review of draft cultural heritage assessment report.

The full list of consultation steps, including those groups and individuals who were contacted, and a consultation log is provided in Appendix A. A summary of actions carried out in following these stages are as follows.

**Stage 1.** Letters outlining the development proposal and the need to carry out an ACHA were sent statutory authorities including Heritage NSW, as identified under the ACHCRP on the 28<sup>th</sup> March 2022. An advertisement was placed in the local newspaper, *The Daily Telegraph*, on the 29<sup>th</sup> March 2022 seeking registrations of interest from Aboriginal people and organisations. A further series of letters was sent to other organisations identified by Heritage NSW in correspondence with NGH on the 27<sup>th</sup> April 2022. In each instance, the closing date for submission was 14 days from receipt of the letter.

As a result of this process, 17 Aboriginal groups registered their interest in the proposal. Notification of Registered Aboriginal Parties was provided to Heritage NSW on the 17<sup>th</sup> May 2022.

These were:

- Didge Ngunawal Clan
- Freeman & Marx Pty Ltd
- Darug Custodian Aboriginal Corporation
- Julia Narayan
- Gunya Aboriginal Cultural Heritage Services PTY LTD
- Mundawari Heritage Consultants
- Waawaar Awaa Aboriginal Corporation
- Kamilaroi Yankuntjatjara Working Group
- Wori Woilywa
- Gilay Consultants
- Widescope Indigenous Group
- Muragadi Heritage Indigenous Corporation
- Butucarbin Aboriginal Corporation
- Dharug Ngurra Aboriginal Corporation
- Chris Tobin
- Dharug Strategis Management Group
- Deerubbin Local Aboriginal Land Council

An additional two groups registered an interest in the project but have requested that their details are not released. The consultation log in Appendix A will be redacted in all public versions of this report.

**Stage 2.** On the 13<sup>th</sup> May 2022, an *Assessment Methodology* document for the proposed ACEP was sent to all 19 Registered Aboriginal Parties (RAPs) listed above (all 19 by email) (see Appendix C). This document provided details of the background to the proposal, a summary of previous archaeological surveys, and the proposed heritage assessment methodology for the proposal. The document invited comments regarding the proposed methodology and sought any information regarding known Aboriginal cultural significance values associated with the Project area and/or any Aboriginal objects contained therein. A minimum of 28 days was allowed for a response to the document.

None of the registered parties raised any objections to the methodology and many expressed an interest in participating in the fieldwork. It should be noted that one registered party recommended the establishment of a cultural interpretation plan for the project as an opportunity to record the community's connection to country through art, native gardens, landscaping, or similar installations. This recommendation was passed onto the client after the methodology review period lapsed.

**Stage 3.** The *Assessment Methodology* outlined in Stage 2 included a written request to provide any information that may be relevant to the cultural heritage assessment of the Project area. It was noted that sensitive information would be treated as confidential. Some responses were given by RAPs to explain the cultural significance of the project area due to its connection with how Aboriginal communities lived in the wider region. Of particular note was the proximity of Girraween Creek and Blacktown Creek to the project area. These waterways were an essential resource for fresh water, bathing, gathering of food, and for everyday activities and would have proved vital to Aboriginal communities in the past. Mention was also made for the possibility of an Aboriginal cultural interpretation plan for the project, which would help provide a connection between the project and the local Aboriginal community through design, art, digital displays, native gardens, or landscaping.

No further responses regarding cultural information were received in response to the methodology however comments were made regarding the treatment of any cultural materials located during the assessment.

The survey fieldwork was organised, and two of the nineteen registered groups were selected for fieldwork participation by the Proponent. The survey fieldwork was carried out on the 15<sup>th</sup> June 2022 by one archaeologist from NGH and two Aboriginal RAP's. The Aboriginal community representatives who participated in the fieldwork were:

- Kamilaroi Yankuntjatjara Working Group
- Mundawari Heritage Consultants

**Stage 4** A draft version of this *Aboriginal Cultural Heritage Assessment Report* for the proposed works was forwarded to the RAPs inviting comment on the results, the significance assessment and the recommendations post completion of the testing program. The minimum 28-day consultation period ended on the 5<sup>th</sup> of August 2022.

### **3.1 Aboriginal Community Feedback**

In consultation with the Aboriginal knowledge holders throughout this project, no objections were made to this assessment and to the proposed works. A total of two RAPs, Waawar Awaa

Aboriginal Corporation and Darug Custodian Aboriginal Corporation supported the recommendations for the project. A third, Chris Tobin, responded with a comment on the historical importance of the area and lamented over the level of industrial development that has taken place. Furthermore, Darug Custodian Aboriginal Corporation noted that while the project area is located within a disturbed landscapes it still forms a part of the highly significant Prospect area to the Darug people.

*“Aboriginal peoples are the oldest continued culture... the land may have been taken from us for many tens of years and disturbed. However, they still have cultural values, as a culture we have had to adapt to a forever changing landscape, allowance for culture, way of practicing these cultures and even our language is forever changing and adapting.”*

Darug Custodian Aboriginal Corporation further requested that the project use sustainable materials, plant native plants that are from the area, use correct terminology, and use present tense when referring to all aspects of Aboriginal culture to ensure that it is clear that the land is still highly significant to the Darug people. An additional recommendation was added to this assessment in order to address the feedback received from Darug Custodian Aboriginal Corporation (see recommendation 6).

No other written or verbal comments were received from RAPs as part of the consultation review process on the draft ACHA report. As a result, the report was finalised.



## **4. Archaeological Investigation Results**

### **4.1 Survey Strategy and Methodology**

The survey strategy objective during the current assessment was to cover as much of the ground surface as possible within the project area. As only certain sections of the project area (see Figure 1-2 above) will be subject to development as part of the three-stage construction approach, only these areas were targeted by the survey. The survey was undertaken to identify whether Aboriginal sites or PADs were present within the project area.

Where possible, transects were walked with the survey team spread apart at approximately 5 m intervals. The survey team consisted of three people (two representatives from the Aboriginal community and one archaeologist) which allowed for a 15 m wide tract of the project area to be surveyed with each transect. At the end of the transect, the team repositioned along a new transect line at the same spacing and walked back along the same bearing. The nature of the project area made this an ideal survey strategy allowing for maximum survey coverage and opportunity to identify any heritage objects. The survey was impeded by a variety of factors, namely the thick grass cover or developed nature of the project area.

NGH believes that the survey strategy was comprehensive and the most effective way to identify the presence of Aboriginal heritage objects within the Proposal Area. Discussions were held in the field during and after the survey between the archaeologists and Aboriginal community representatives to ensure all were satisfied and agreed with the spacing and methodology.

The landforms within the Proposal Area have been determined based on topographic identification through the inspection of contour data and Digital Elevation Modelling of the project area. The result of this was that the entire project area was deemed to be comprised of an 'artificial landform' due to the level of modification that has taken place due to historical land use.

The survey fieldwork, as assessed in this report, was undertaken by the team over a single day on 15 June 2022. The team consisted of NGH Archaeologist Bronwyn Partell, with of Dean Delponte of Mundawari Heritage Consultants and Marbuca Khan of Kamilaroi Yankuntjatjara Working Group. During the survey, notes were made about visibility, photographs were taken, and any possible Aboriginal objects or features identified were inspected, assessed, and recorded if deemed to be Aboriginal in origin.

### **4.2 Survey Coverage**

On Wednesday the 15<sup>th</sup> June 2022 an archaeological survey of the project area was carried out by NGH Senior Heritage Consultant Bronwyn Partell and two RAPs representing Mundawari Heritage Consultants and Kamilaroi Yankuntjatjara Working Group.

The survey was impeded by poor visibility due to a low dense grass cover and the pre-existing built up nature of the project area. As a result, both ground surface visibility (GSV) and exposure visibility was effectively 0% across the entire area that was surveyed.

The approximate areas surveyed are shown in Figure 4-1 below while Plate 4-1 to Plate 4-16 show the conditions present within the project area during the survey. Furthermore, Table 4-1 below shows the calculations of the effective survey coverage for the survey.

Over the course of the survey, approximately 1 km of transects were walked across the project area by each of the three participants. Allowing for an effective view width of 5 m for each person, this equates to a total surface area examined of 1.6 ha of the project area. However, due to the

poor GSV present it is considered that 0% of the project area was effectively surveyed. Despite this, NGH considers that the effective survey coverage of the project area was sufficient for the purposes of this assessment as the factors that impeded more 'effective' survey coverage have clearly removed the overwhelming majority of the Aboriginal archaeological record within the project area. The results identified during the survey are a true reflection of the nature of the Aboriginal archaeological record present – or rather the lack thereof – within the project area.

### **4.3 Survey Results**

Despite the low GSV and effective survey coverage, the landforms present within the project area were assessed during the survey in order to determine whether any PADs were present. While low GSV may prevent the identification of Aboriginal sites in this instance it serves to reinforce the level of development that has occurred within the project area as the majority of the low GSV has been caused by the installation of infrastructure (i.e., internal sealed roads, gutters, kerbs).

The survey also reaffirmed the suggestions made during the desktop assessment (see Section 2.2.8) in that the landforms within the project area were artificially created or levelled during the construction of the existing Americold facilities.

It was clearly visible that the existing Americold facility was cut into the former landforms along the western side, especially when viewed from the intersection of Reservoir Road and the Prospect Highway. These cuts are likely to have resulted in the complete removal of the artefact bearing deposits from this area as well as the removal of any potential surface sites. In the eastern portions of the project area it was also clear that fill and been used to create artificially level landforms (including a bank) after the redirection of Girraween Creek was completed. The purpose of the landform alterations in the western and eastern sections of the project area was to create a level and stable ground for the existing Americold facility. As a result, the only landform within the project area should be considered as an 'artificial landform' due to the extent of artificial modifications that have clearly been made to the original landforms.

A significant amount of infrastructure or services were also observed during the survey, including kerbs, gutters, drains, fencing, transmission lines, paved internal roads, fire safety infrastructure, retaining walls, and other items associated with the main buildings of the facility. The installation and continued maintenance of these items is likely to have significantly disturbed or destroyed Aboriginal heritage within the project area.

No Aboriginal sites or areas of PAD were identified by the participants during the survey.





Figure 4-1 Survey results.





Plate 4-1 View north east along the eastern boundary of the project area. Note the artificially level service and gutter present.



Plate 4-2 View south west over along the eastern boundary of the project area.



Plate 4-3 View west from the eastern boundary of the project area towards an artificial bank.



Plate 4-4 View north over one of the car parks within the eastern portion of the project area.



Plate 4-5 View south west along the eastern boundary of the project area. Note the elevation difference between the two artificially level landforms



Plate 4-6 View east over one of the car parks and truck resting areas within the eastern portion of the project area.





Plate 4-7 View north east over the north eastern corner of the project area. Note the gutter/drainage infrastructure.



Plate 4-8 View south east over one of the carparks and material stockpile locations within the eastern portion of the project area.



Plate 4-9 View west over one of the car parks within the project area.



Plate 4-10 View east over one of the car parks within the project area.



Plate 4-11 View west over one of the internal roads within the project area.



Plate 4-12 View west over one of the internal roads within the project area towards a retaining wall. Note how deep the road surface is from the original surface level.





Plate 4-13 View north east over a cleared and grassed section of western portion of the project area.



Plate 4-14 View south east over the western section of the project area towards the existing office building.



Plate 4-15 View west over the western section of the project area towards Reservoir Road. Note the cut created to provide an artificially level ground.



Plate 4-16 View east over an intact landform outside the project area at the intersection of Reservoir Road and the Prospect Highway. Note the difference in elevation from the road level to the current facilities.



Table 4-1 Transect information.

Survey Unit	Number of Survey Transects	Exposure Type	Project Area (ha)	Surveyed Area (length m x width m)	Survey Area (m <sup>2</sup> )	Visibility	Effective Coverage m <sup>2</sup> (area x visibility)	Project Area Surveyed (ha)	Percentage of Project Area effectively surveyed	Archaeological Result
<b>Artificial Landform</b>	12	No exposures present.	5.52	92 m x 15 m 54 m x 15 m 31 m x 15 m 37 m x 15 m 32 m x 15 m 233 m x 15 m 29 m x 15 m 246 m x 15 m 204 m x 15 m 48 m x 15 m 65 m x 15 m 45 m x 15 m	16,740	0%	0	0	0	No Aboriginal sites or PADs identified.

## **5. Analysis and Discussion**

The predictions based on the modelling for the Proposal Area were that Aboriginal sites and PADs were unlikely to occur within the project area due to the level of historical disturbance that was described in the area. Furthermore, while the results of previous archaeological surveys within the Prospect area show that there are Aboriginal sites and PADs present across the landscape, they are typically recorded in highly disturbed contexts. Despite this no Aboriginal sites or PADs were recorded during the survey. It is likely that the primary reason for this is due to the historical land use and disturbances that have taken place within the project area and have already been described in this report. The majority of these works (including landform alterations and creek redirection) took place during the construction of the existing Americold facility in the late 1990s to early 2000s. These disturbances, which were well documented and verified during the survey, are highly likely to have destroyed or significantly disturbed any Aboriginal sites or PADs that may have been present within the project area in the past. The potential for *in situ* archaeological material is also negligible for the same reasons. As such, the lack of sites identified within the project area is not unusual given the previous major ground disturbing works undertaken. Due to the disturbances observed during the survey and the lack identifiable Aboriginal sites, NGH consider that a subsurface testing programme is not warranted to assess the potential Aboriginal and archaeological heritage impacts of the proposed works as assessed in this report.

Based on the results of this investigation and the land use history of the project area, there is negligible potential for the presence of Aboriginal heritage or intact PADs within the ACEP project area.

## 6. Cultural Heritage Values and Statement of Significance

### 6.1 Assessment Criteria

The assessment of the significance of Aboriginal archaeological sites is currently undertaken largely with reference to criteria outlined in the ICOMOS Burra Charter (Marquis-Kyle and Walker 1994). Criteria used for assessment are:

- **Social or Cultural Value:** In the context of an Aboriginal heritage assessment, this value refers to the significance placed on a site or place by the local Aboriginal community –either in a contemporary or traditional setting.
- **Scientific Value:** Scientific value is the term employed to describe the potential of a site or place to answer research questions. In making an assessment of scientific value issues such as representativeness, rarity and integrity are addressed. All archaeological places possess a degree of scientific value in that they contribute to understanding the distribution of evidence of past activities of people in the landscape. For example, flaked stone artefact scatters, larger sites or those with more complex assemblages are more likely to be able to address questions about past economy and technology, giving them greater significance than smaller, less complex sites. Sites with stratified and potentially in situ sub-surface deposits, such as those found within rock shelters or depositional open environments, could address questions about the sequence and timing of past Aboriginal activity, and will be more significant than disturbed or deflated sites. Groups or complexes of sites that can be related to each other spatially or through time are generally of higher value than single sites.
- **Aesthetic Value:** Aesthetic values include those related to sensory perception and are not commonly identified as a principal value contributing to management priorities for Aboriginal archaeological sites, except for art sites.
- **Historic Value:** Historic value refers to a site or places ability to contribute information on an important historic event, phase or person.
- **Other Values:** The Burra Charter makes allowance for the incorporation of other values into an assessment where such values are not covered by those listed above. Such values might include Educational Value.

All sites or places have some degree of value, but of course, some have more than others. In addition, where a site is deemed to be significant, it may be so on different levels or contexts ranging from local to regional to national, or in very rare cases, international. Further, sites may either be assessed individually, or where they occur in association with other sites the value of the complex should be considered.



## 6.2 Significance Assessment

### Social or Cultural Value

While the true cultural and social value of Aboriginal sites can only be determined by local Aboriginal people, as a general concept, all sites hold cultural value to the local Aboriginal community. An opportunity to identify cultural and social value was provided to all the registered Aboriginal stakeholders for this proposal through the draft reporting process.

During the consultation process, it was noted that the project area holds cultural significance due to its location in the landscape and presence of Girraween Creek and the nearby Blacktown Creek:

*“The waterway that runs across the land utilised by many for many reasons such as fresh water, bathing, gathering of food and for everyday life activities. Water is a giver of life without water we would not be here so we should respect, conserve and manage water ways as naturally as possible and keep them maintained. Aboriginal people have been following waterways for tens of thousands of years a sense of way finding and a deep connection we hold.” (Kadibulla Khan, pers. Comms 2022)*

No further social or cultural connections to the project area were raised by the Aboriginal parties who attended the survey.

### Scientific (Archaeological) Value

As described in this report, no Aboriginal sites or PADs were identified within the project area during the archaeological survey. Furthermore, no previously recorded AHIMS sites are located within the project area. As a result, the project area as assessed by this report, is considered to contain a negligible scientific value as it is highly unlikely that there is any information regarding past Aboriginal land use within the project area. This is largely due to the ground disturbing works that were associated with the construction of the original Americold Coolstore Storage Facility during the mid to late 1990s and early 2000s. These works included the removal of upper deposits and the introduction of fill (especially in association with the redirection of Girraween Creek) to create a flat and level ground. As a result, it is determined that these works have destroyed any scientific value that may have been present within the project area.

However, it should be noted that even in these conditions it is possible to encounter unexpected finds (such as isolated artefacts). Any unexpected finds that are encountered are likely to be located within highly disturbed contexts or may have been introduced with the fill material and therefore may not provide any further information about Aboriginal occupation of the area other than their existence within the landscape.

### Aesthetic Value

There are no aesthetic values associated with the project area. However, despite the development and mining that has occurred in the Prospect area, it should be noted that it is still culturally significant to the Aboriginal community. Therefore, any aesthetic settings that exist at present should be maintained after the works have been completed.

### Historic Value

While the region in which the project area is located is associated with the conflicts that occurred between the Aboriginal communities and early European settlers of the area, no specific site within

the project area has been identified as being associated with these values. It should also be noted that the State Heritage Listed Prospect Hill, which is located approximately 500 m south east of the project area, also contains significant Aboriginal historic values as the meeting place of a peace conference held by Reverend Marsden in 1805 between the Prospect Aboriginal community and the local European community. As a result, it can be considered that there are no Aboriginal historic values associated with a specific site within the project area.

### **Other Values**

There are no other known heritage values associated with the project area.

## **7. Proposed Activity**

### **7.1 History and Land Use**

It has been noted above (Section 2.2.8) that historically the ACEP project area has been impacted through land use practices, removal of topsoil, landscaping, ploughing, the redirection of Girraween Creek, and the construction of the existing Americold facilities.

The implications for this activity are that the archaeological record has been comprised in terms of the potential for scarred trees to remain within the project area due to the previous vegetation clearances that have taken place. The scale of the earthworks associated with the landscaping and creek redirection that was undertaken prior to the construction of the existing Americold facilities also strongly suggest that any surface stone artefacts or PADs have been removed or significantly disturbed.

Despite these localised impacts, Aboriginal sites and cultural material are present within the broader area, with 55 AHIMS registered sites in the immediate region, 11 of which are located within 1 km. The presence of these sites show that the region was used by Aboriginal people in the past and provide examples to how they used the landscape.

### **7.2 Proposed Development Activity**

Americold proposes to extend to its existing temperature-controlled warehouse facility at 554-562 Reservoir Road, Prospect NSW. The purpose of the development is to provide additional cold storage capacity to meet existing and future predicted demand. The proposed development comprises the following (Figure 7-1):

- A new 5,140m<sup>2</sup> freezer building extension and annex to the east of the existing southern warehouse. The extension is intended to provide capacity for approximately 13,450 frozen pallets.
- A new battery storage room to enable the charging, storage and changeover of batteries used for material handling equipment.
- Alterations to the site access, parking, and loading arrangements including:
  - Construction of a new staff and visitor site access, to eliminate traffic conflicts between heavy and passenger vehicles.
  - Construction of 93 new staff/visitor vehicle carparks (including three accessible spaces) to the north and east of the existing northern warehouse.
  - Construction of two new accessible carparks adjacent to the existing office building.
  - Upgrade of the existing site access road, including:
    - Sealing of the southern and eastern portions of the site access road with heavy duty pavement;
    - Construction of new Armco barriers protecting the power poles to the east of the site;
    - Repaving of the existing car parking access;
    - Minor corner modifications to enhance truck turning and manoeuvrability; and
    - New boom gates.
  - Construction of a new heavy vehicle turnaround and 12 new trailer parking spots to the east of the existing northern warehouse.
- A new pump house and two new firewater tanks.



- A new timber pallet storage area with 3 m high enclosure.
- A new staff outdoor seating area with awning.
- A new security office.
- A new weighbridge
- A new satellite plant room.

The proposed works will therefore involve significant ground disturbing works during the construction of the new coolstore facilities. However, due to the well-established disturbances that have occurred within the project area during the initial construction of the Americold facilities and previous land use, no impacts on Aboriginal heritage will occur as a result of the proposed ACEP.

While the final details and timing of the proposed construction activity have yet to be finalised, the existing temperature-controlled storage facility is proposed to remain fully operational throughout the duration of construction. As a result, the works are proposed to be conducted in three stages:

**Stage 1:**

- Stage 1 is proposed to include all changes to the site access, parking and loading requirements, together with construction of the battery storage room. During Stage 1 of construction, heavy vehicles will continue to access the site through the centre of the two existing temperature-controlled warehouses.

**Stage 2:**

- Stage 2 is intended to encompass the new freezer building extension and annexe, pallet storage area, staff outdoor seating area, weighbridge and ancillary plant and equipment (including the firewater pump and storage tanks).

**Stage 3:**

- Stage 3 is proposed to be limited to the internal fit out of the new buildings.

The proposed demolition works are shown in Figure 7-2 below while the proposed works for each of the three stages are shown from Figure 7-3 to Figure 7-5.

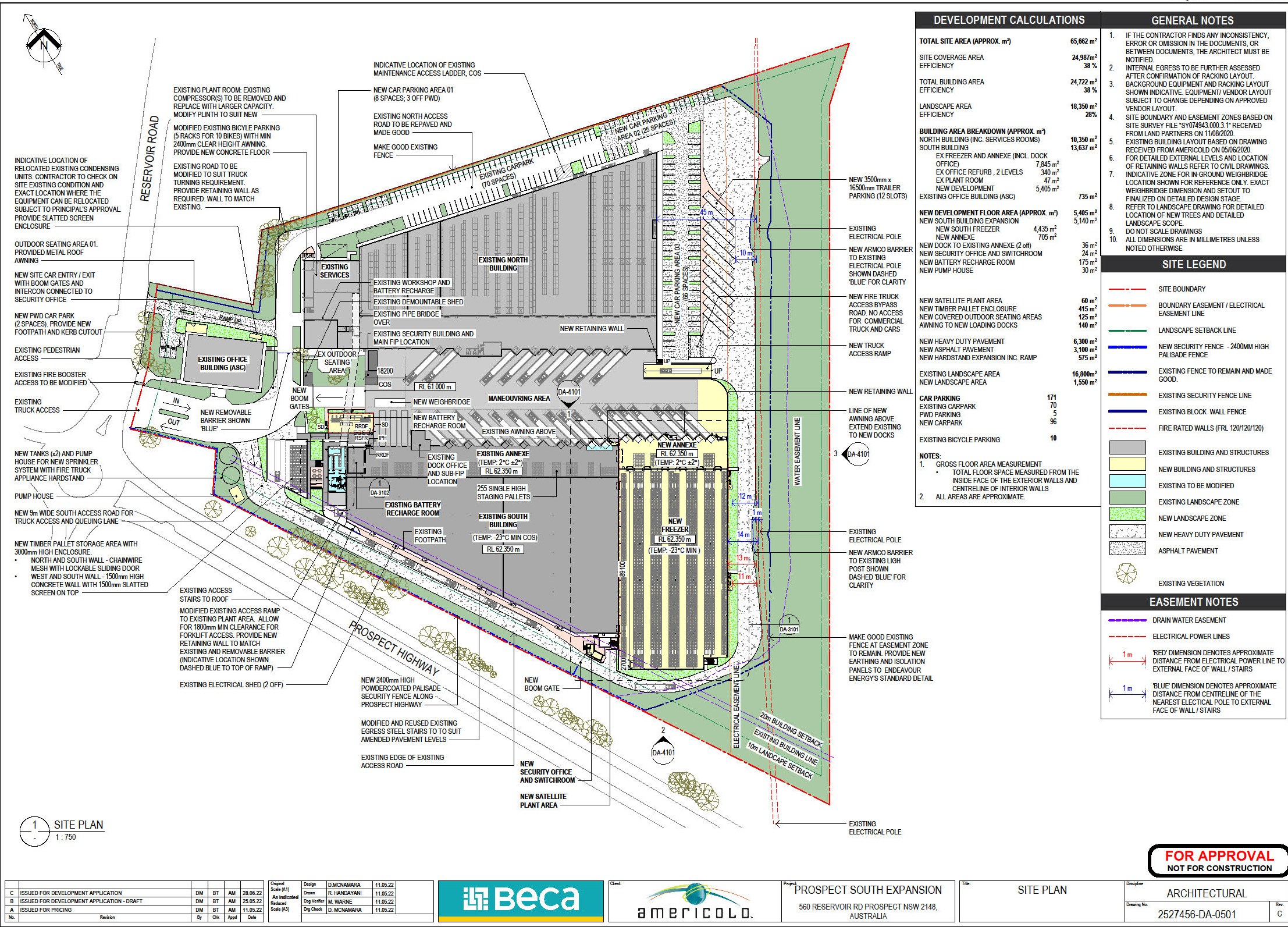


Figure 7-1 Development Plan of proposed works. Source: Beca 2022.



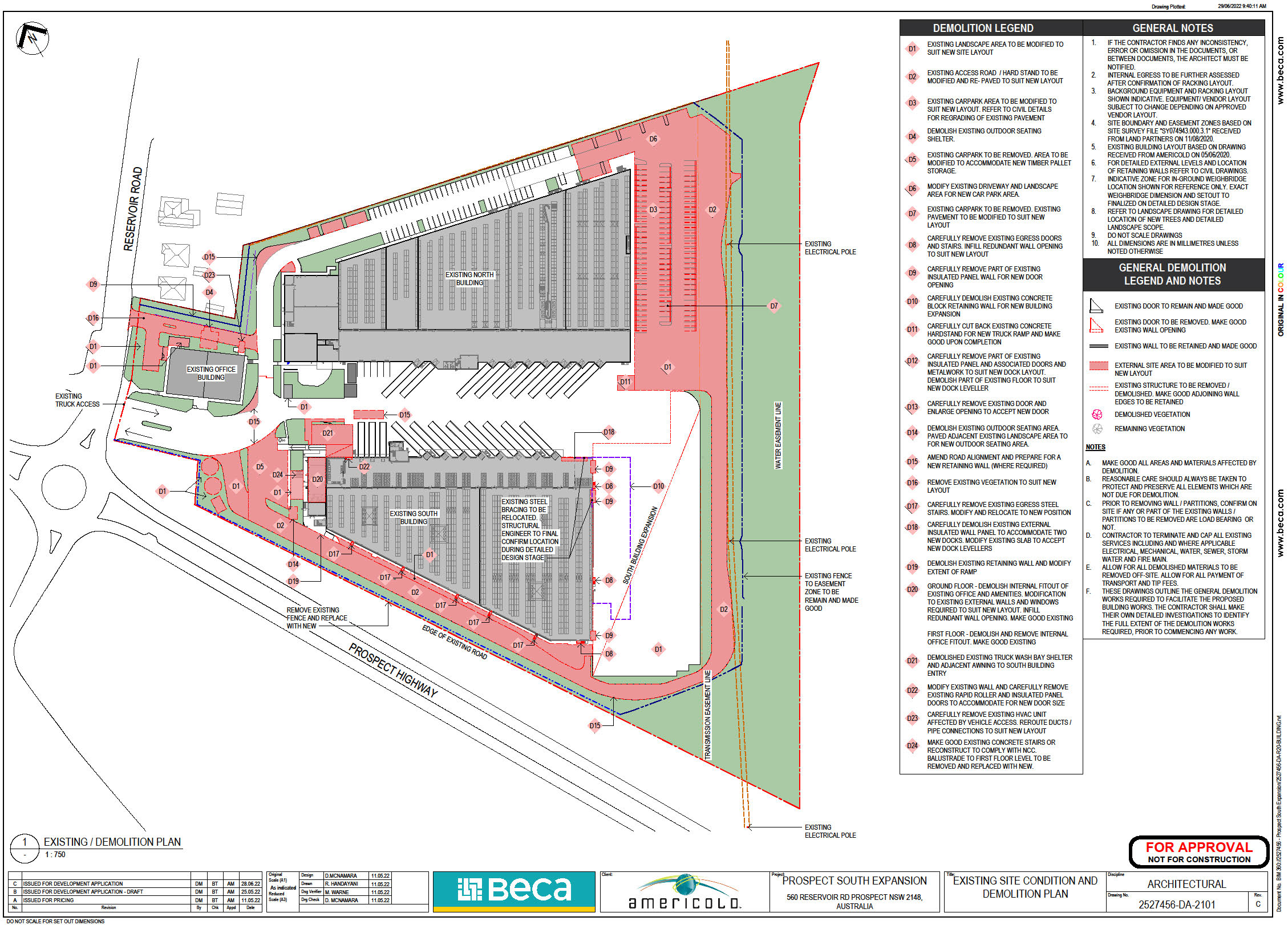


Figure 7-2 Proposed demolition plan for the ACEP. Source: Beca 2022.



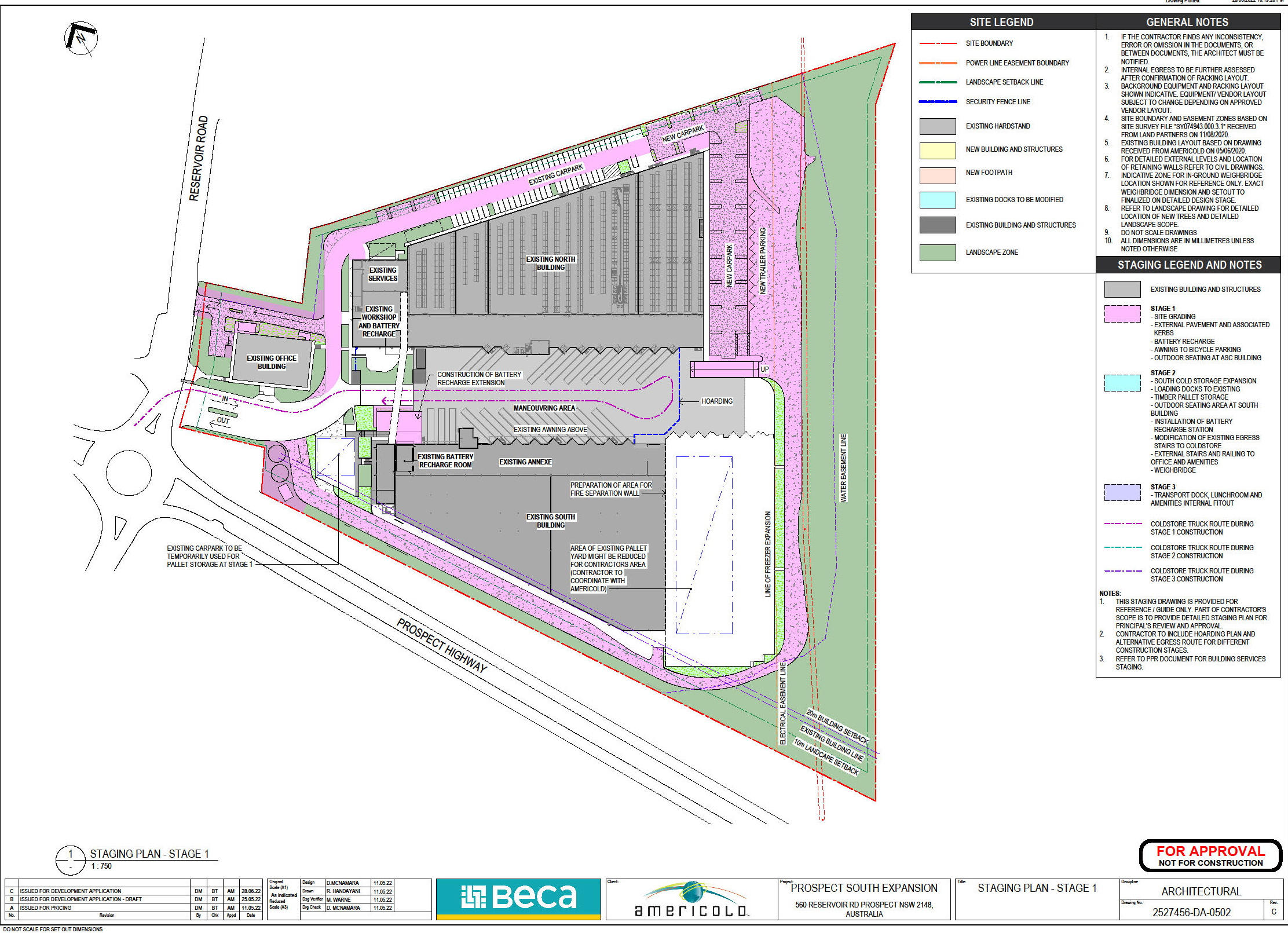


Figure 7-3 Stage 1 proposed works. Source: Beca 2022.



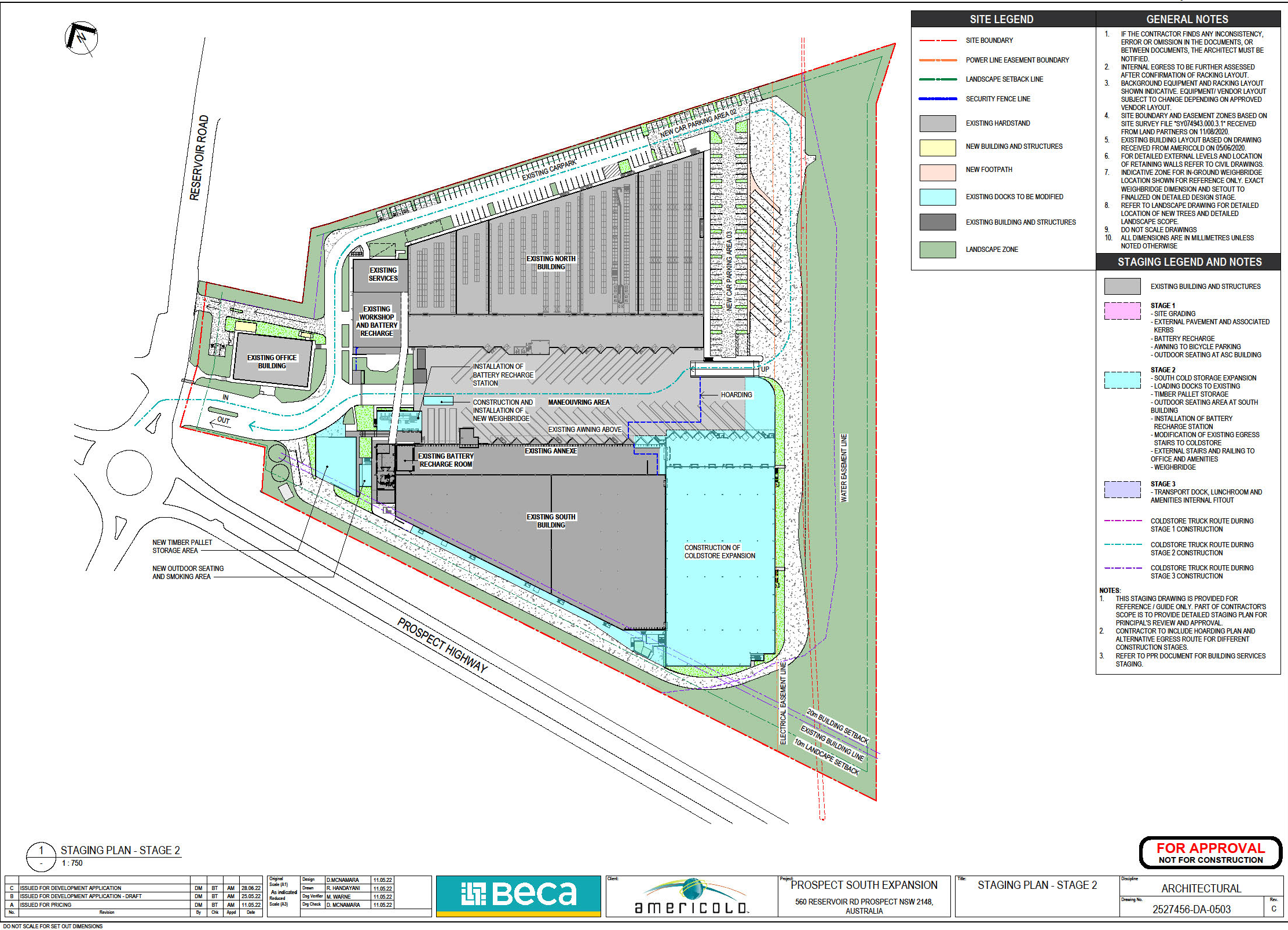


Figure 7-4 Stage 2 proposed works. Source: Beca 2022.



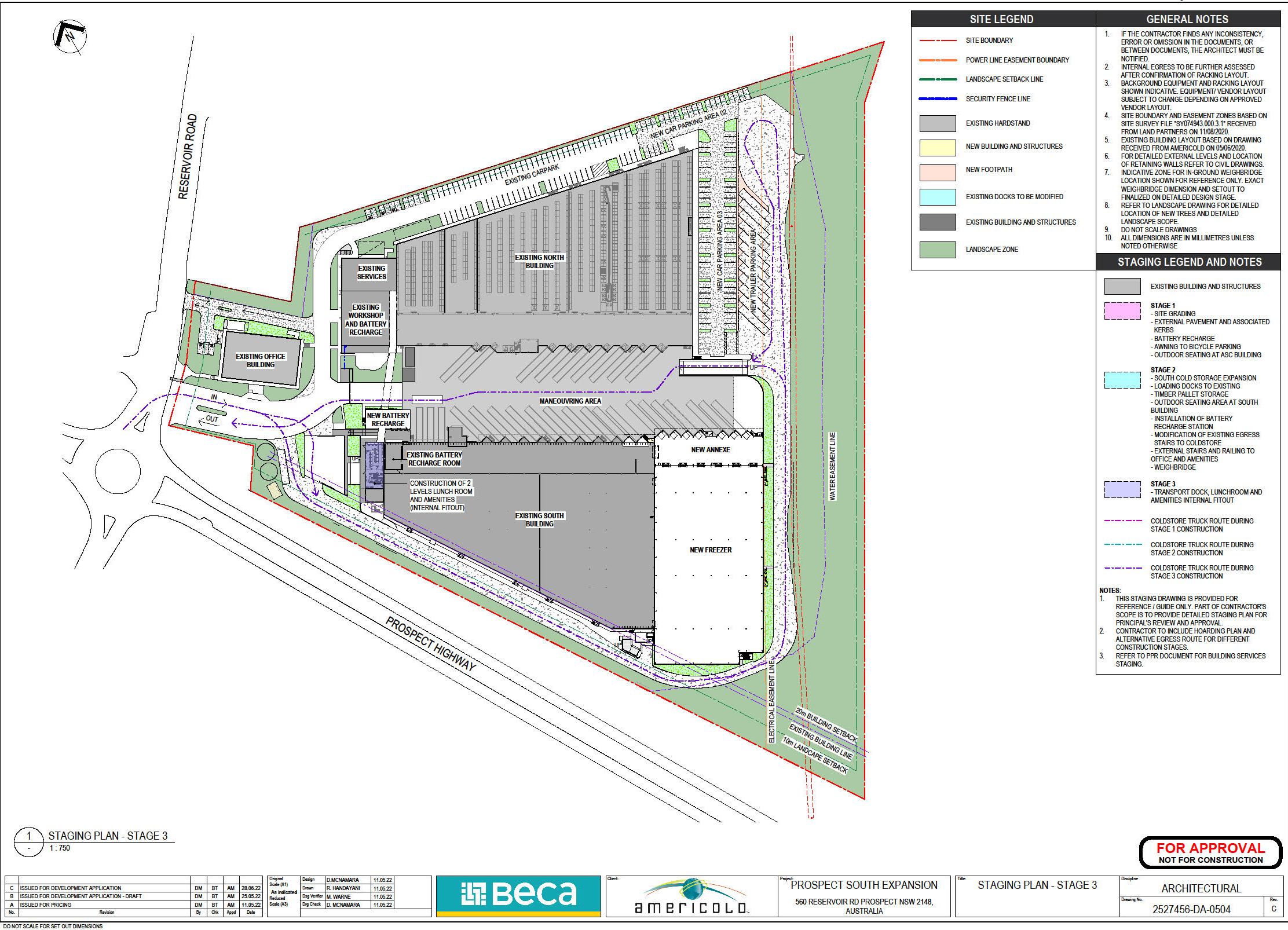


Figure 7-5 Stage 3 proposed works. Source: Beca 2022.

### **7.3 Assessment of Harm**

As described in this report, no Aboriginal sites or PADs were identified during the assessment. Furthermore, no previously recorded AHIMS sites are located within the project area. As a result, the assessment of harm for the project is nil.

### **7.4 Consideration of ESD Principles**

The consideration of the principles of Ecologically Sustainable Development (ESD) and the use of the precautionary principle was not required to be undertaken when assessing the harm on Aboriginal heritage within the proposed ACEP project area given that no previously identified AHIMS sites are present and no new Aboriginal sites or PADs were identified during this assessment. As a result, the ESD principles do not apply to this assessment.

We therefore argue that the overall cumulative impact on the archaeological record for the region is nil given that no Aboriginal sites or PADs will be impacted by the proposed ACEP.

## **8. Avoiding or Mitigating Harm**

### **8.1 Measures to Avoid Harm**

No previously identified AHIMS sites are located within the project area and no new Aboriginal sites or PADs were identified during this assessment. As a result, no measures are required to avoid the harm of Aboriginal heritage.

### **8.2 Mitigation of Harm**

Mitigation of harm to cultural heritage sites generally involves some level of detailed recording to preserve the information contained within the site (or within the portion of the site to be impacted) or setting aside areas as representative samples of the landform to preserve a portion of the site. Mitigation can be in the form of minimising harm, through slight changes in the development plan or through direct management measures for the Aboriginal objects. To mitigate the general impacts on the landscape that the proposed works will cause, the RAPs who attended the survey suggested that native vegetation of the area be replanted after the works have been completed in order to encourage the rehabilitation of the natural environment. Further recommendations from RAPs include a cultural interpretation plan for the project, which would provide an opportunity for the local Aboriginal community to interact with the proposed ACEP through design, art, digital displays, native gardens, or landscaping, allowing for a visible representation of local Aboriginal heritage associated with the project. However, these mitigations/recommendations are not tied to the current assessment and require further consultation with members of the Aboriginal community outside of the ACHA consultation process.

As no physical Aboriginal heritage is present within the project area, the proposed works – as assessed in this report – will avoid any impacts to physical Aboriginal heritage. Therefore, no further mitigation measures are required for the proposed ACEP.



## **9. Recommendations**

The recommendations are based on the following information and considerations:

- Results of the current archaeological survey of the area;
- Consideration of results from other local archaeological studies;
- Results of consultation with the registered Aboriginal parties;
- The assessed significance of the sites;
- Appraisal of the proposed development, and
- Legislative context for the development proposal.

It is recommended that:

1. The proposed works for the Americold Coolstore Expansion Project may proceed with caution within the project area as assessed by this report.
2. All access to the site and laydown areas must be within the project area as assessed by this report, otherwise an addendum to this Aboriginal Cultural Heritage Assessment will be required.
3. No modified trees of Aboriginal origin were identified within the project area. If any mature or large trees outside of the area subject to the visual inspection and assessment are to be impacted as a result of the proposed works, additional investigation may be required. This must be completed by a qualified archaeologist.
4. If any items suspected of being Aboriginal in origin are discovered during the work, all work in the immediate vicinity must stop and Heritage NSW notified, and the Unexpected Finds Protocol (Appendix C) must be followed. The find will need to be assessed and if found to be an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) may be required.
5. In the unlikely event that human remains are discovered during the proposed works, all work must cease in the immediate vicinity. The appropriate heritage team within Heritage NSW and the local police should be notified. Further assessment would be undertaken to determine if the remains were Aboriginal or non-Aboriginal. If the remains are deemed to be Aboriginal in origin the Registered Aboriginal Parties should be advised of the find as directed by the appropriate heritage team within Heritage NSW. Heritage NSW would advise the Proponent on the appropriate actions required.
6. The Aboriginal community have requested that there is an appropriate acknowledgement of Country during the life of the project. This may be able to be achieved through a cultural awareness program and acknowledgement of country signage at the entrance to the facility.

Further archaeological assessment would be required if the proposal activity extends beyond the area assessed in this report. This would include consultation with the registered Aboriginal parties and may include further field survey. Americold Pty Ltd is reminded that it is an offence under the *National Parks and Wildlife Act 1974* to disturb, damage or destroy an Aboriginal object without a valid AHIP.

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## **Appendix A Consultation Log and Documentation**

REDACTED – Not for public display. Available to Heritage NSW on request.

**Appendix B   Historical Imagery**



Figure 10-1 1930 Historical Imagery.



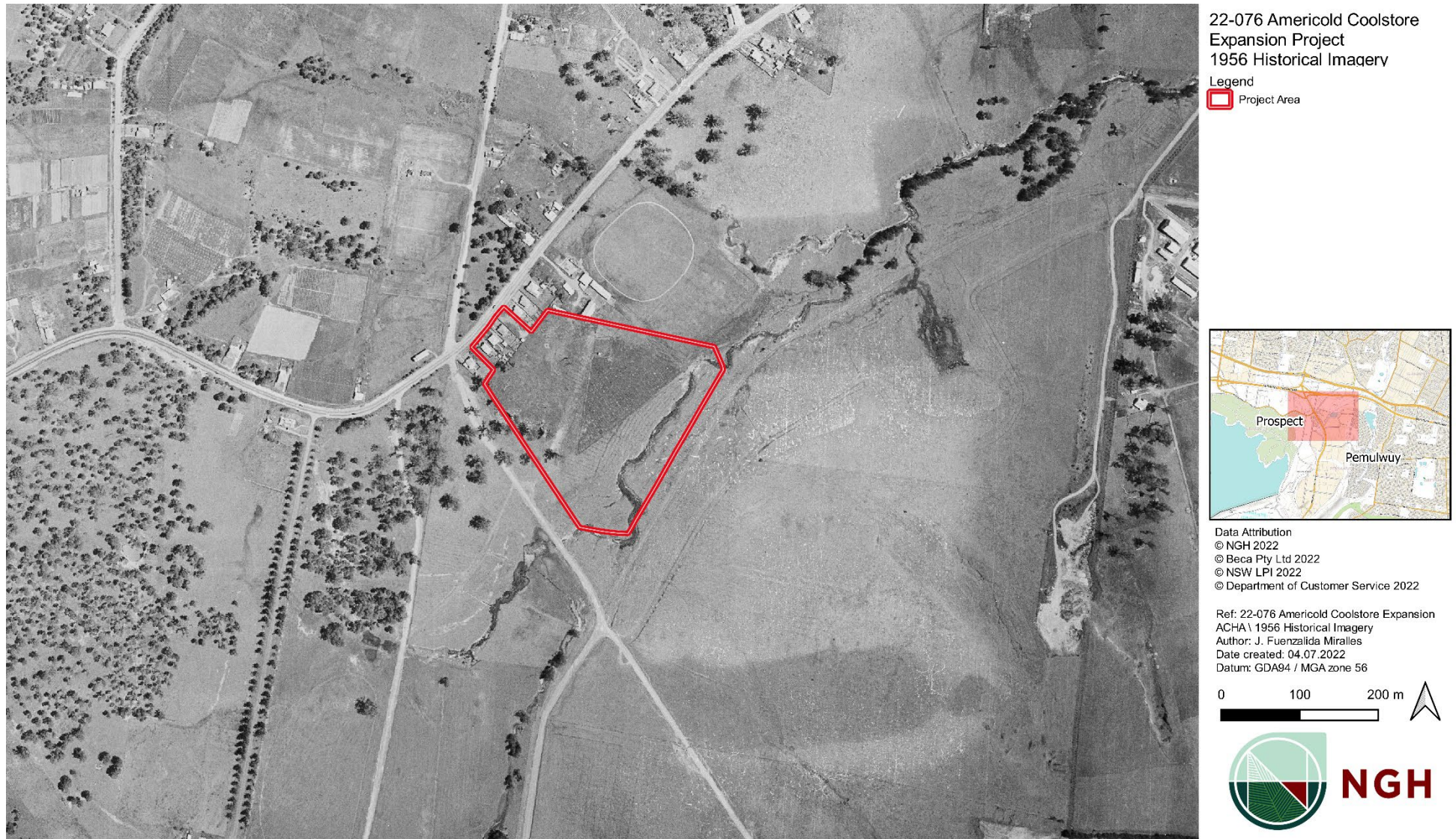


Figure 10-2 1956 Historical Imagery.





Figure 10-3 1961 Historical Imagery.





Figure 10-4 1978 Historical Imagery.



**Aboriginal Cultural Heritage Assessment**  
**Americold Coolstore Expansion Project**



Figure 10-5 1986 Historical Imagery.





Figure 10-6 1998 Historical Imagery.





Figure 10-7 2002 Historical Imagery.

## **Appendix C NGH (2022) ACHA Methodology**

Available to Heritage NSW on request



## Appendix D Unexpected Finds Protocol

This unexpected find protocol has been developed to provide a method for managing unexpected Aboriginal heritage items identified within the region. The unexpected find protocol has been developed to ensure adherence to the NSW *National Parks and Wildlife Act 1974* (NPW Act).

All Aboriginal heritage objects are protected under Part 6 of the NPW Act. There are some circumstances where, despite undertaking appropriate heritage assessment prior to the commencement of works, Aboriginal cultural heritage items or places are encountered that were not anticipated which may be of scientific and/or cultural significance.

Therefore, it is possible that unexpected heritage items may be identified during construction, operation and maintenance works. If this happens the following unexpected find protocol should be implemented to avoid breaching obligations under the NPW Act. This unexpected find protocol provides guidance as to the circumstances under which finds may occur and the actions subsequently required.

### What is an Aboriginal Heritage Unexpected Find?

An unexpected heritage find is defined as any possible Aboriginal heritage object or place, that was not identified or predicted by the Project's heritage assessment and may not be covered by appropriate permits or development consent conditions. Such finds have potential to be culturally significant and may need to be assessed prior to development impact.

Unexpected heritage finds may include:

- Aboriginal stone artefacts, shell middens, modified trees, mounds, hearths, stone resources and rock art;
- Human skeletal remains; and
- Remains of historic infrastructure and relics.

### Aboriginal Heritage Places or Objects

All Aboriginal objects are protected under the NSW *National Parks and Wildlife Act 1974* (NPW Act).

An Aboriginal object is defined as:

*Any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with the occupation of that area by persons on non-Aboriginal extraction and includes Aboriginal remains.*

**All Aboriginal objects are protected, and it is an offence to harm or desecrate an Aboriginal object or place.**

### Unexpected Find Management Procedure

In the event that any unexpected Aboriginal heritage places or are unexpectedly discovered during the Project, the following management protocols should be implemented.

**Note: this process does not apply to human or suspected human remains. Follow the Section referring to *Human Skeletal Remains* below if human remains or suspected human remains are encountered.**

1. Works within the immediate area of the identified Aboriginal object will cease and no further harm to the object will occur.
2. A 10m 'no-go' buffer zone is to be established.
3. Establish whether the unexpected find is located within an area covered by an approved Aboriginal Heritage Impact Permit or not.
4. If the find it is determined to be covered under an approved permit, then undertake the following steps;
  - a. Maintain an appropriate buffer zone of at least 10 metres to allow for the assessment and management of the find. All site personnel will be informed about the buffer zone with no further works to occur within the buffer zone. The area will be secured to avoid any further harm to the Aboriginal object.
  - b. A heritage specialist or the project archaeologist will be engaged to assess the Aboriginal place or object encountered and undertake appropriate salvage of the site in line with the mitigation methods and approval requirements of the AHIP. An AHIMS site card will be completed on the discovery of the newly identified Aboriginal objects. Data concerning the AHIMS site should be entered into the Archaeological Sensitivity data, following the '*Procedure for adding new AHIMS sites to archaeological sensitivity data*'.
5. If the unexpected find is not covered under an existing approved AHIP, then undertake the following steps;
  - a. All works at this location must cease and no further harm to the object will occur.
  - b. An appropriate buffer zone of at least 10 metres to allow for the assessment and management of the find must be established. All site personnel will be informed about the buffer zone with no further works to occur. The area will be secured to avoid any further harm to the Aboriginal object.
  - c. A heritage specialist or the project archaeologist will be engaged to assess the Aboriginal place or object encountered. Further assessment may be required to assess the cultural significance of the place or object.
  - d. The discovery of an Aboriginal object will be reported to Heritage NSW and as soon as practical on 131 555 and works will not recommence at the heritage place or object until advised to do so in writing by Heritage NSW and/or DPIE. A site card will be completed and submitted to AHIMS for registration and the details of the site and its location will be provided to Heritage NSW and DPIE. Data concerning the AHIMS site should be entered into the Archaeological Sensitivity data, following the '*Procedure for adding new AHIMS sites to archaeological sensitivity data*'.
  - e. If the unexpected find can be managed *in situ*, works at the location will not recommence until appropriate heritage management controls have been implemented, such as protective fencing.
  - f. If the unexpected find cannot be managed *in situ*, works at the heritage location will not recommence until further assessment is undertaken and appropriate approvals to impact Aboriginal cultural heritage are confirmed and authorised in writing by Heritage NSW and/or DPIE.
6. Depending on the nature of the discovery, additional assessment may be required prior to the commencement of work in the area. At a minimum, any find should be recorded by an archaeologist, and data concerning the AHIMS site should be entered into the

Archaeological Sensitivity data, following the 'Procedure for adding new AHIMS sites to archaeological sensitivity data'.

### **Human Skeletal Remains**

If any human remains or suspected human remains are discovered during any works, all activity in the immediate area must cease immediately. The following plan describes the actions that must be taken in instances where human remains, or suspected human remains are discovered. Any such discovery at the activity area must follow these steps.

#### Discovery:

- If any human remains or suspected human remains are found during any activity, works in the **immediate vicinity must** cease and the Project Manager must be contacted immediately.
- The remains must be left in place and protected from harm or damage.
- All personnel should then leave the immediate vicinity of the area.

#### Notification:

- The NSW Police must be notified immediately. Details of the location and nature of the human remains must be provided to the relevant authorities.
- If there are reasonable grounds to believe that the remains are Aboriginal, the following must also occur;
  - a. Heritage NSW must be contacted as soon as practicable and provide any available details of the remains and their location. The Environment Line can be contacted on 131 555;
  - b. The relevant project archaeologist may be contacted to facilitate communication between the police, Heritage NSW and Aboriginal community groups. Aboriginal community groups must be notified throughout the process once the remains are confirmed to be Aboriginal in origin.

#### Process:

- If the remains are considered to be Aboriginal by the Police and Heritage NSW no work can recommence at the particular location of the find unless authorised in writing by Heritage NSW.
- Recording of Aboriginal ancestral remains must be undertaken by, or be conducted under the direct supervision of, a specialist physical anthropologist or other suitably qualified person.
- Archaeological reporting of Aboriginal ancestral remains must be undertaken by, or reviewed by, a specialist physical anthropologist or other suitably qualified person, with the intent of using respectful and appropriate language and treating the ancestral remains as the remains of Aboriginal people rather than as scientific specimens.

If the remains are considered to be Aboriginal by the Police and Heritage NSW, an appropriate management and mitigation, or salvage strategy will be implemented following further consultation with the Aboriginal community and Heritage NSW.