



View east across the study area.

## **HISTORIC HERITAGE ASSESSMENT REPORT**

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### **WOY WOY WASTE MANAGEMENT FACILITY, SOUTH CELL**

CENTRAL COAST LOCAL GOVERNMENT AREA, NSW

NOVEMBER 2023

Report prepared by  
OzArk Environment & Heritage  
on behalf of Central Coast Council



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## DOCUMENT CONTROLS

Proponent	Central Coast Council	
Client	GHD Pty Ltd	
Document Description	Historic Heritage Assessment Report: Woy Woy Waste Management Facility, South Cell.	
File Location	OzArk Job No.	
Clients\GHD Sydney\Woy Woy Waste Management Facility 2022\HHAR	3667	
Document Status: V3.0 FINAL		Date: 3 November 2023
OzArk internal edits		V1.0 JH author 7/6/23 V1.1 SR review 18/6/23
OzArk and client edits		V2.0 OzArk to client 19/6/23 V2.1 OzArk updates 28/8/23
Final document		V3.0 OzArk finalises 3/11/23
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### **Acknowledgement**

OzArk acknowledge the traditional custodians of the area on which this assessment took place and pay respect to their beliefs, cultural heritage, and continuing connection with the land. We also acknowledge and pay respect to the post-contact experiences of Aboriginal people with attachment to the area and to the Elders, past and present, as the next generation of role models and vessels for memories, traditions, culture and hopes of local Aboriginal people.

## ABBREVIATIONS AND GLOSSARY

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DPE	NSW Department of Planning and Environment
Heritage Act	<i>Heritage Act 1977</i> . Provides for the protection and conservation of historical places and objects of cultural heritage significance and the registration of such places and objects.
Heritage Council	The Heritage Council makes decisions about the care and protection of heritage places and items that have been identified as being significant to the people of NSW.
Heritage NSW	Government department tasked with ensuring compliance with the NPW Act.
SEARs	Secretary's Environmental Assessment Requirements.

## EXECUTIVE SUMMARY

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OzArk Environment & Heritage (OzArk) has been engaged by GHD (Sydney) on behalf of Central Coast Council (the proponent) to prepare a Historic Heritage Assessment Report (HHAR) for the proposed 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility (WMF) (the project). The project is in the Central Coast Council Local Government Area.

The project is deemed regionally significant development (RSD) in accordance with Clause 7(1)(c) and Clause 3 in Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP) and is subject to approval by the Hunter and Central Coast Regional Planning Panel under the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

The study area encompasses 5.5 hectares (ha) of land within Lot 110 DP755251 at Woy Woy, located approximately 10 kilometres (km) south of Gosford. The study area is highly disturbed as it forms part of the Woy Woy WMF and a former quarry.

This HHAR has been prepared in accordance with the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006).

Desktop database searches completed prior to the survey showed that one item listed on the State Heritage Register (SHR) and one item listed on the Central Coast Local Environmental Plan 2022 is located near the study area. The Woy Woy Railway Tunnel and Basalt Quarries Ltd Railway are located approximately 1.7 and 1.2 km northwest of the study area, respectively.

The field survey was undertaken by OzArk Senior Archaeologist Stephanie Rusden on 18 May 2023. No historic heritage items or areas of potential with historic archaeological deposits were identified during the fieldwork survey. As such, the project will not impact historic heritage.

Recommendations concerning the historic values within the study area are as follows.

1. Following development consent of the project, the proposed work may proceed with caution. If items of historic heritage significance and/ or suspected skeletal material are uncovered during the project, then the protocols in provided in **Appendix 1** should also be followed.
2. All land and ground disturbance activities must be confined to within the study area. Should the parameters of the project extend beyond the assessed areas, then further assessment may be required.
3. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all historic items.

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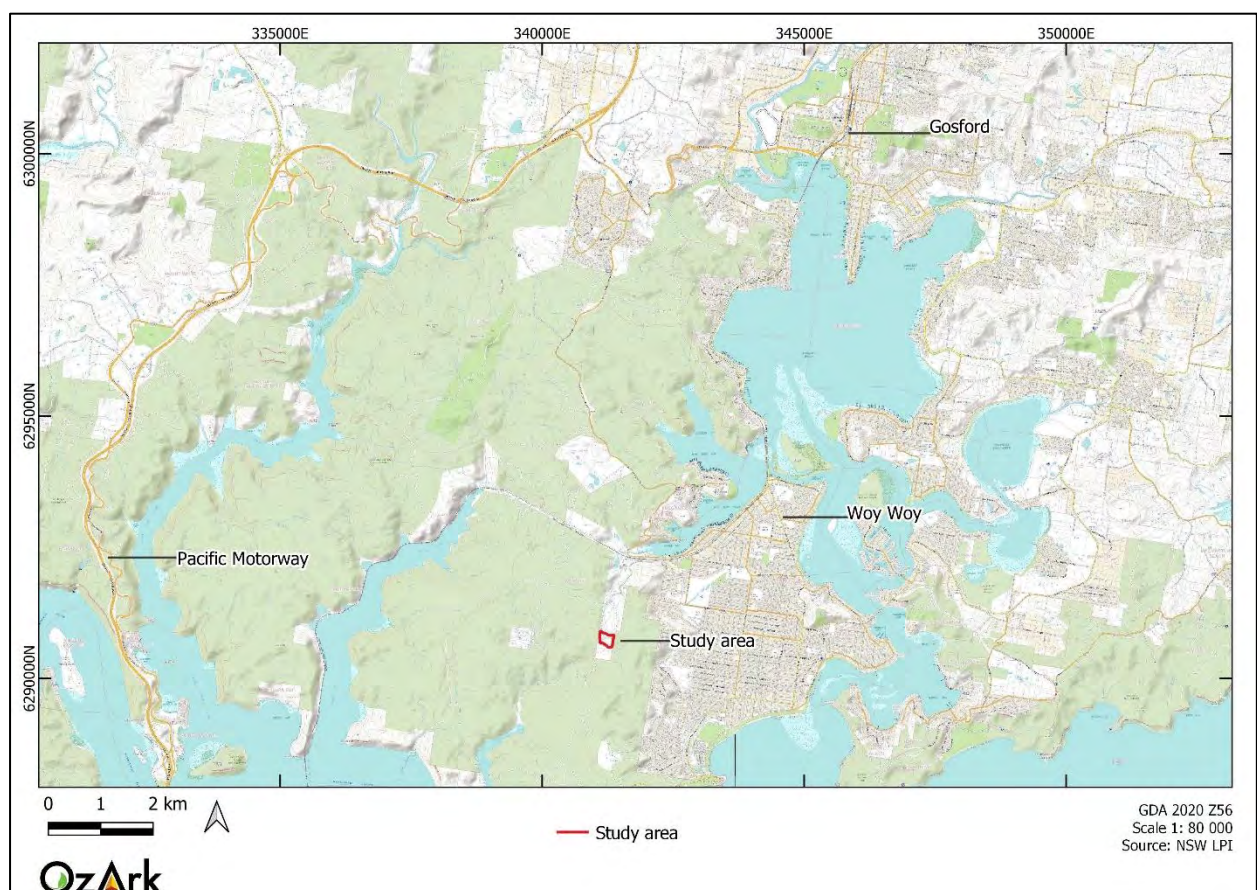
# 1 INTRODUCTION

## 1.1 DESCRIPTION OF THE PROJECT

OzArk Environment & Heritage (OzArk) has been engaged by GHD Pty Ltd on behalf of Central Coast Council (the proponent) to prepare a Historic Heritage Assessment Report (HHAR) for the proposed 'South Cell' and associated infrastructure at the Woy Woy Waste Management Facility (WMF) (the project). The project is in the Central Coast Local Government Area (**Figure 1-1**).

The project is deemed to be regionally significant development (RSD) and is subject to approval by the Hunter and Central Coast Regional Planning Panel, under Division 4.3 of the *Environmental Planning & Assessment Act 1979* (EP&A Act). This HHAR forms part of the Environmental Impact Statement (EIS).

**Figure 1-1: Map showing the location of the study area for the project.**



## 1.2 STUDY AREA

The study area encompasses approximately 5.5 hectares (ha) of land within Lot 110 DP755251 at Woy Woy, located 10 kilometres (km) south of Gosford. The study area is highly disturbed as it forms part of the Woy Woy WMF and a former quarry (**Figure 1-2**).

**Figure 1-2: Aerial showing the study area.**

## 1.3 PROJECT OVERVIEW

### 1.3.1 Key features

Key features of the project include:

- Cell construction including excavation and earthworks to form the base of the cell and lining installation
- Development of associated access, stormwater and leachate management infrastructure
- Continuation of current landfilling operations in the new cell location
- Capping, closure and rehabilitation

The project is expected to provide up to approximately an additional 920,000 cubic metres of airspace or 7.7 years of filling capacity (based on current filling rates). It is also expected to generate additional cell construction and cover materials for the ongoing landfilling operations.

No change is proposed to the existing approved annual disposal capacity or waste types as per EPL 6053.

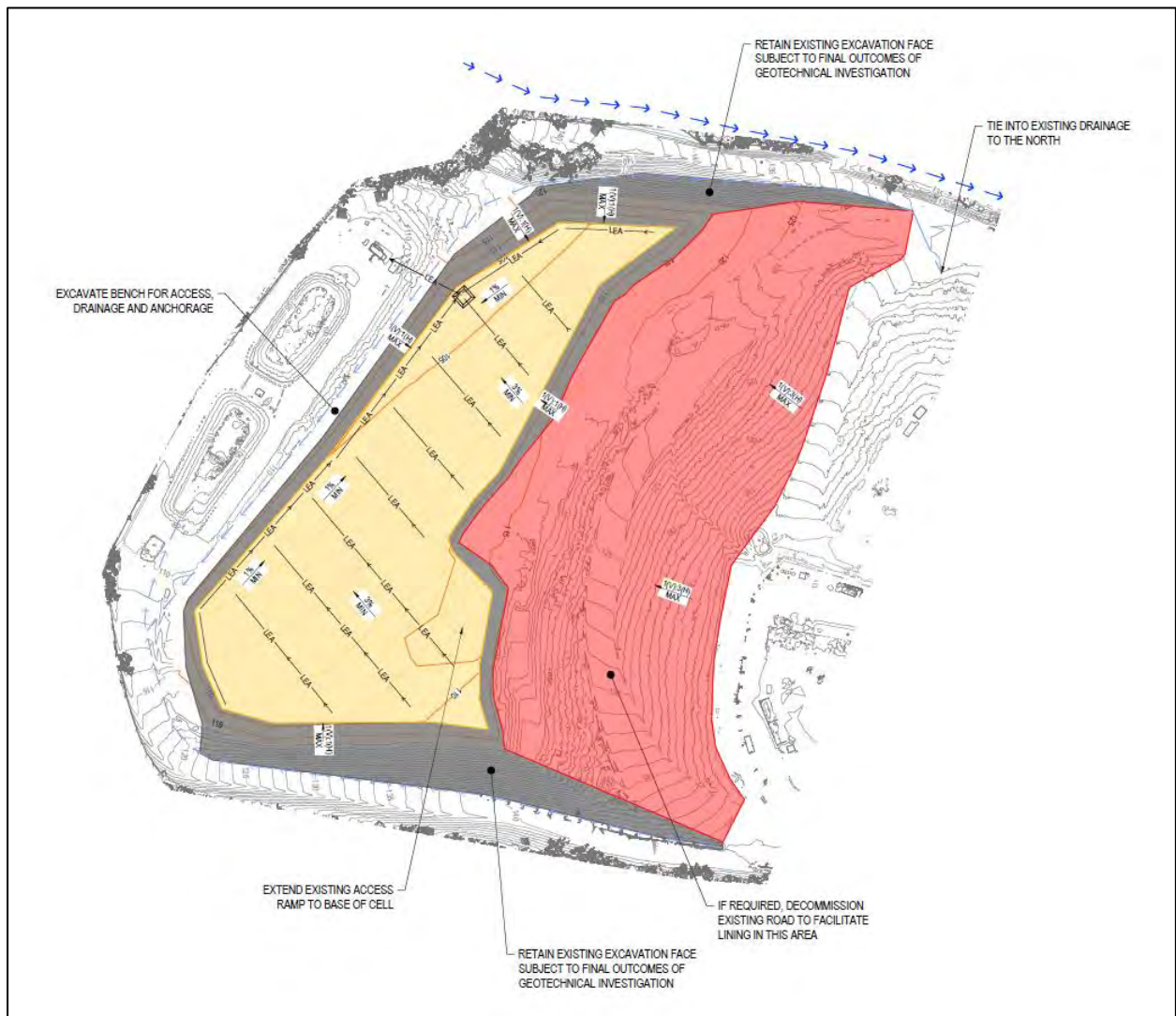
The other existing operations (weighbridge and office/education centre, transfer station, Garden organics (GO) facility etc) at the WMF would continue to be operated in conjunction with the project.



Further information on the project is provided in the EIS.

The project site layout is presented in **Figure 1-3**.

**Figure 1-3: Conceptual project layout.**



### 1.3.2 Construction overview

Construction of the project would be subject to the methods proposed by the construction contractor, but is expected to involve the following:

- Site establishment: establishment of site environmental controls including sediment and erosion controls
- Earthworks: excavation and grading along the base of the landfill cell in accordance with the requirements of the Environmental Guidelines: Solid waste landfills (NSW EPA, 2016)
- Lining and gravel placement: installation of basal, batter and sidewall liners systems
- Development of ancillary infrastructure including access roads, leachate and water management infrastructure.

Construction is expected to take about three months to complete.

The construction activities would be carried out during the following hours, consistent with the recommended standard hours of the Draft Construction Noise Guideline (NSW EPA, 2020):

- 7 am to 6 pm Monday to Friday
- 8 am to 1 pm Saturdays
- No work on Sundays or Public Holidays.

The construction workforce is expected to range between five and ten workers per day.

Further information on the construction of the project is provided in the EIS.

## **1.4 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS**

The Planning Secretary's Environmental Assessment Requirements (SEARs) for the project were issued on 24 August 2023.

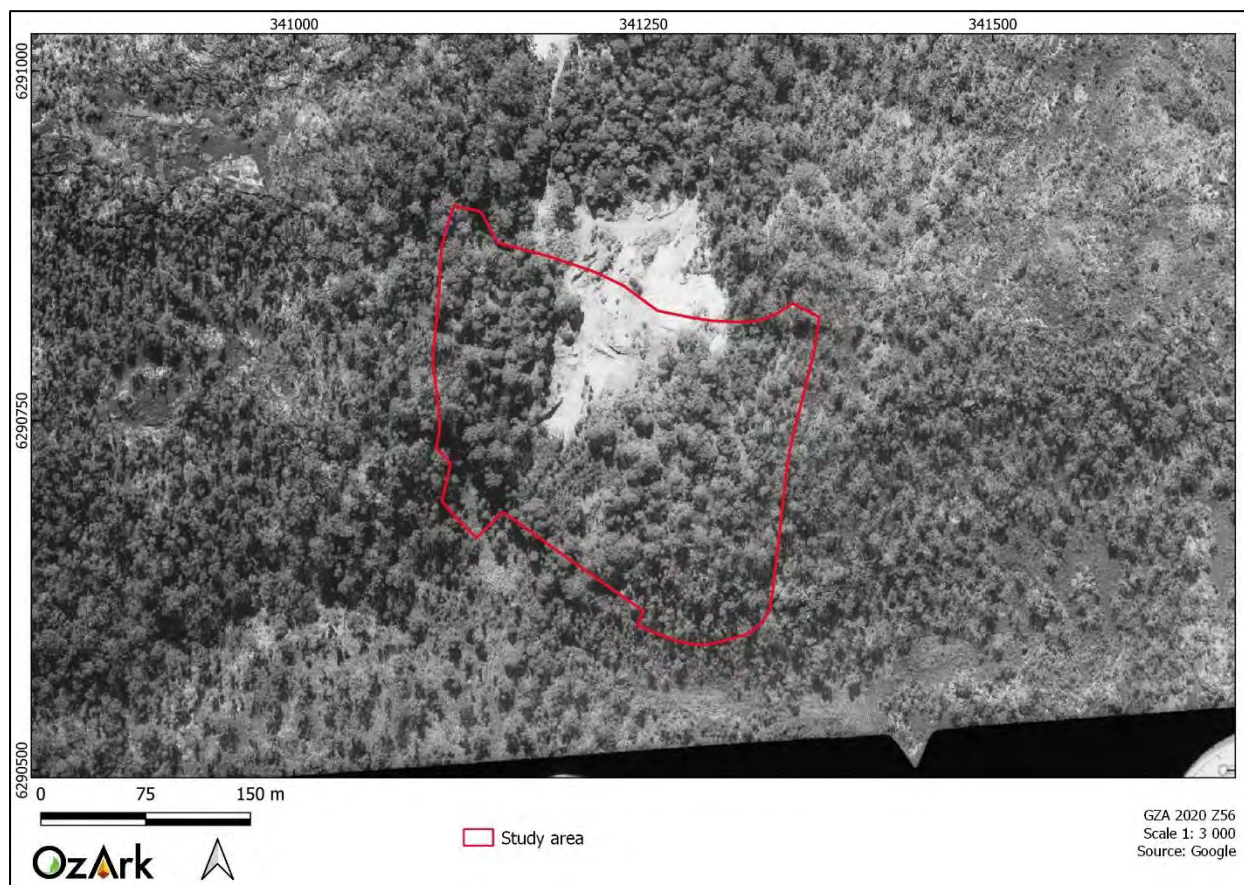
The SEARs recognise non-Aboriginal cultural heritage as a key component to be assessed for the project however no specific requirements from Heritage NSW relating to non-Aboriginal cultural heritage have been provided.

## **1.5 ENVIRONMENTAL OVERVIEW**

The study area is located at the eastern edge of the Sydney Basin bioregion, specifically, the Pittwater sub-bioregion. The Pittwater sub-bioregion landforms are characterised by small beach, dune, and lagoon barrier systems; steep coastal cliffs and rock platforms (NPWS 2003: 193). Prior to the establishment of a basalt quarry at the study area in 1927, the area would have contained species of smooth-barked apple, red bloodwood, brown stringybark, Sydney peppermint, spotted gum, and grey gum. These open woodlands were partially removed from the study area to allow for a basalt quarry to begin operation in 1927 (**Figure 1-4**). The study area remained in this state until all remaining vegetation was cleared after it was chosen as the location of the Woy Woy WMF in the 1990's.

The study area is situated north of Patonga Creek which runs east to west approximately 60 m from the southern boundary of the study area. The Hawksbury River is located 4.1 km to the southeast, while Brisbane Water is situated 1.7 km to the north.

**Figure 1-4: 1960 aerial showing the partially cleared study area and the basalt quarry.**



## **2 HISTORIC HERITAGE ASSESSMENT INTRODUCTION**

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### **2.1 RELEVANT LEGISLATION**

#### **2.1.1 Commonwealth legislation**

##### ***2.1.1.1 Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)***

The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), administered by the Commonwealth Department of Climate Change, Energy, the Environment and Water, provides a framework to protect nationally significant flora, fauna, ecological communities, and heritage places. The EPBC Act establishes both a National Heritage List and Commonwealth Heritage List of protected places. These lists may include Aboriginal cultural sites or sites in which Aboriginal people have interests. The assessment and permitting processes of the EPBC Act are triggered when a proposed activity or development could potentially have an impact on one of the matters of national environment significance listed by the Act. Ministerial approval is required under the EPBC Act for projects involving significant impacts to national/commonwealth heritage places.

##### Applicability to the project

It is noted there are no Commonwealth or National heritage listed places within study area, and as such, the heritage provisions of the EPBC Act do not apply.

#### **2.1.2 State legislation**

##### ***2.1.2.1 Environmental Planning and Assessment Act 1979 (EP&A Act)***

This Act established requirements relating to land use and planning. The main parts of the EP&A Act that relate to development assessment and approval are Part 4 (development assessment) and Part 5 (environmental assessment). The Minister responsible for the Act is the Minister for Planning.

The EP&A Act currently provides the primary legislative basis for planning and environmental assessment in NSW. The objects of the EP&A Act include encouragement of:

- The proper management, development, and conservation of natural resources
- The provision and coordination of the orderly and economic use and development of land
- Protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats
- Ecologically sustainable development.



The objects also provide for increased opportunity for public involvement and participation in environmental planning and assessment.

The EP&A Act includes provisions to ensure that the potential environmental impacts of a development or activity are rigorously assessed and considered in the decision-making process.

The framework governing environmental and heritage assessment in NSW is contained within the following parts of the EP&A Act:

- Part 4: Local government development assessments, including heritage. May include schedules of heritage items
  - Division 4.3: Approvals process for regionally significant development

#### Applicability to the project

The project will be assessed under Division 4.3 of Part 4 of the EP&A Act.

The project is deemed to be RSD in accordance with Clause 7(1)(c) and Clause 3 in Schedule 6 of *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP).

#### **2.1.2.2     *Heritage Act 1977 (Heritage Act)***

The *Heritage Act 1977* (Heritage Act) is applicable to the current assessment. This Act established the Heritage Council of NSW. The Heritage Council's role is to advise the government on the protection of heritage assets, make listing recommendations to the Minister in relation to the State Heritage Register (SHR), and assess/approve/decline projects involving modification to heritage items or places listed on the SHR. Most projects involving modification are assessed under Section 60 of the Heritage Act.

Automatic protection is afforded to 'relics', defined as 'any deposit or material evidence relating to the settlement of the area that comprised New South Wales, not being Aboriginal settlement, and which holds state or local significance' (note: formerly the Act protected any 'relic' that was more than 50 years old. Now the age determination has been dropped from the Act and 'relics' are protected according to their heritage significance assessment rather than purely on their age). Excavation of land on which it is known or where there is reasonable cause to suspect that 'relics' will be exposed, moved, destroyed, discovered, or damaged is prohibited unless ordered under an excavation permit.

#### Applicability to the project

There are no SHR listed items within the study area however Woy Woy Railway Tunnel (SHR #01835) is located 1.7 km northwest of the study area (see **Section 3.1.1**).

Items of local heritage significance that are normally listed in Local Environmental Plans (LEPs) are also protected under the Heritage Act.

### 2.1.3 Local legislation

The study area is within areas administered by the Central Coast LEP 2022.

The LEP includes a schedule of heritage conservation areas and items that require either development consent or exemptions for projects that may impact conservation outcomes (Section 5.10). The objectives set out in Section 5.10 of the LEP states:

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

Section 5.10(3)(a) (i) and (ii) set out the circumstances when a Development Application is not required when there is an impact to heritage items. Exemptions to consent are related to works that are of a minor nature or works that will not adversely impact the heritage values of a place.

#### Applicability to the project

There are no items listed on the Central Coast LEP 2022 within the study area, however the Basalt Quarries Ltd Railway (A36) is located 1.2 km northwest of the study area (see **Section 3.1.1**).

## 2.2 HISTORIC HERITAGE ASSESSMENT OBJECTIVES

The current assessment will apply the Heritage Council's *Historical Archaeology Code of Practice* (Heritage Council 2006) in the completion of a historical heritage assessment, including field investigations, to meet the following objectives:

- Objective One:** To identify whether historical heritage items or areas are, or are likely to be, present within the study area
- Objective Two:** To assess the significance of any recorded historical heritage items or areas
- Objective Three:** Determine whether the project is likely to cause harm to recorded historical heritage items or areas
- Objective Four:** Provide management recommendations and options for mitigating impacts.



## **2.3 DATE OF HISTORIC HERITAGE ASSESSMENT**

### **2.3.1 Field survey**

The field survey was undertaken by Stephanie Rusden (OzArk Senior Archaeologist, BSc, University of Wollongong, BA, University of New England) on Thursday 18 May 2023.

### **2.3.2 Reporting**

The reporting component of the historic heritage assessment was undertaken by:

- Report author: Jordan Henshaw (B. Ancient History, Macquarie University, Sydney).
- Reviewer: Stephanie Rusden (OzArk Senior Archaeologist, BSc, University of Wollongong, BA, University of New England).

### 3 HISTORIC HERITAGE ASSESSMENT

#### 3.1 LOCAL CONTEXT

##### 3.1.1 Desktop database searches conducted

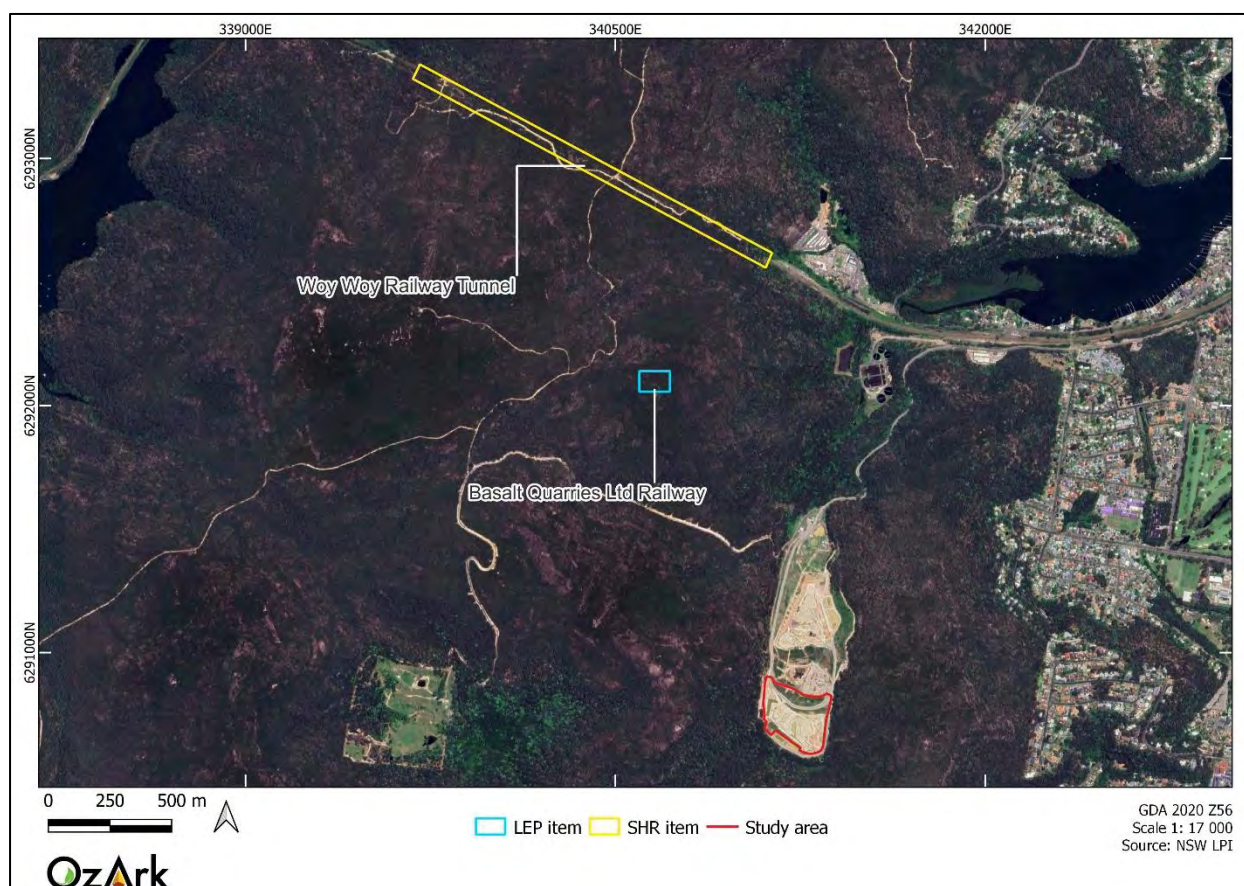
A desktop search was conducted on the following databases to identify any potential previously recorded heritage within the study area. The results of this search are summarised in **Table 3-1**.

**Table 3-1: Desktop-database search results.**

Name of database searched	Date of search	Type of search	Comment
National and Commonwealth Heritage Listings	1/5/23	NSW	No items within 5 km of the study area.
State Heritage Listings	1/5/23	Central Coast LGA	No items within the study area, however Woy Woy Railway Tunnel (01835) is located 1.7 km northwest of the study area.
Local Environmental Plan (LEP)	1/5/23	Central Coast LEP 2022	No items within the study area, however the Basalt Quarries Ltd Railway (A36) is located 1.2 km northwest of the study area.

A search of the Heritage Council of NSW administered heritage databases and the Central Coast LEP 2022 returned two records for historical heritage sites near the study area (**Figure 3-1**). Further details on these items are detailed in **Section 3.2**.

**Figure 3-1: Listed historic heritage items in relation to the study area.**



## **3.2 BRIEF HISTORY OF THE HISTORIC ITEMS NEAR THE STUDY AREA**

### **3.2.1 Woy Woy Railway Tunnel**

The Woy Woy Railway Tunnel (SHR #01835) is a 1.6 km tunnel which connects Sydney to Newcastle and is the main route between the cities, used by thousands of daily rail commuters. Contractor George Blunt commenced work on the tunnel on 1 March 1884 and it was officially opened almost four years later, on 16 January 1888 to a crowd of over 700 people. It was the longest tunnel in Australia at the time and is also the site of the first continuous welding of rail (CWR) in NSW (SMH 1889).

Ten tons of dynamite and over 100 tons of gunpowder were needed to complete initial blasting operations which were accomplished by 17 July 1886 (SMH 1886). Over ten million bricks were required during the construction of the interior of the tunnel as well as 'no less than' ten thousand casks of cement (SMH 1886). Each cask held approximately 180 kilograms of imported cement as local cement production had not begun in Australia until 1889 (James and Chanson 2000).

Unfortunately, multiple rail accidents occurred during the first half of the 20<sup>th</sup> century leading to the deaths of several rail workers. This was due to a fatal lack of communication and warning systems used to notify drivers when track maintenance was being completed. One particularly tragic accident occurred on 22 August 1940 when William Brown, the driver of a goods train crashed into a group of seven rail workers, killing four and injuring the remaining three. Brown described to the coroner that he 'drove blindly through the tunnel' and was unaware of all 57 men working in the tunnel at the time (SMH 1940).

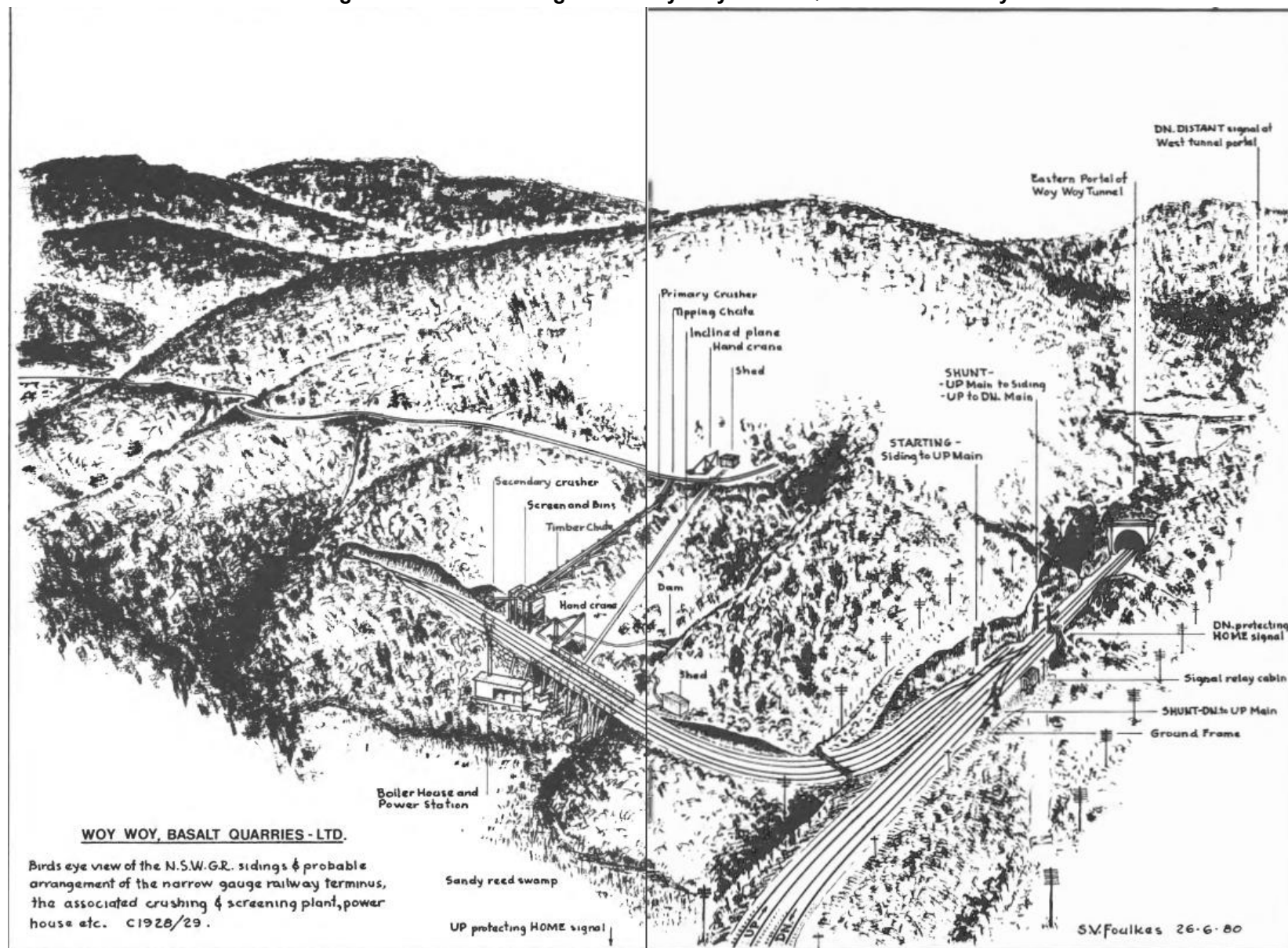
Improvements in communication and warning systems have ensured that no further lives have been lost in the tunnel since the 1940 accident. The Woy Woy Railway Tunnel is now the oldest railway tunnel still in use in NSW and was added to the SHR in 2013 for its unique historic, aesthetic, and cultural features.

### **3.2.2 Basalt Quarries Ltd Railway**

The Basalt Quarries Ltd Railway (LEP #A36) was a narrow-gauge (3 ft 6 in) siding which connected the basalt quarry to the main northern railway line shortly before the Woy Woy railway tunnel eastern portal (**Figure 3-2**). Construction began on the railway in 1927 and serviced the basalt quarry for its relatively short nine-month lifespan (**Figure 3-3**). It was able to transport raw materials extracted from the quarry, located at the current Woy Woy WMF, down to a chute where it was crushed to create 'blue metal gravel' used in road making (Wilson 1981: 4).



Figure 3-2: 1980 drawing of the Woy Woy Basalt Quarries Ltd Railway

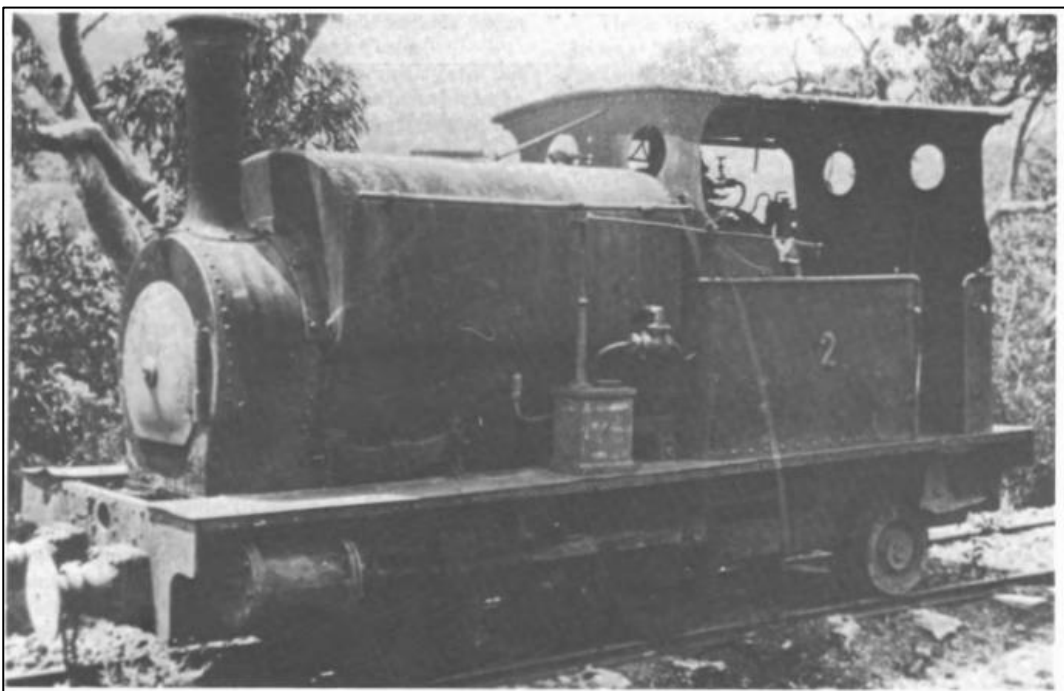


**Figure 3-3: View north over the largest of the two bridges along the railway, January 1934.**



Basalt Quarries was incorporated, becoming Basalt Quarries Ltd, on 23 August 1927 with a nominal capital of 100,000 British pounds (Wilson 1981: 3) and only operated for a total of nine months before the company encountered financial difficulties associated with falling basalt prices due to greater material volumes produced by rival companies (SMH 1927). Soon after the quarry was abandoned, workers moved in and sold off the most valuable equipment including the three locomotives which operated on the railway (**Figure 3-4**) with an auction being held on 18 January 1934 (Wilson 1981: 11).

**Figure 3-4: Image showing 'No. 2' locomotive near the top of the chute on 4 January 1934.**



The last of the company assets, including the land on which the quarry once operated, were finally sold off in March 1937 and the company was officially ended on 17 August 1951 (Wilson 1981: 14). Severe bushfires have since destroyed large sections of the timber remains of the railway, bridges and culverts leaving concrete foundations and scrap metal as the only reminders of the company's short and relatively unsuccessful tenure.



## 4 RESULTS OF HISTORIC HERITAGE ASSESSMENT

### 4.1 SURVEY METHODOLOGY

Standard archaeological field survey and recording methods were employed in this study (Burke & Smith 2004). **Figure 4-1** shows the location of the historic items in relation to the study area.

**Figure 4-1: Aerial showing survey coverage of the study area.**



### 4.2 RESULTS

No historic heritage sites or historic archaeological deposits were recorded in the study area. As such, there will be no impact to historic heritage from the project.

The absence of historic heritage items within the study area is unsurprising given the small size of the study area and previous disturbances which have occurred since the Woy Woy WMF was established at the study area.

## MANAGEMENT AND MITIGATION

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### 4.3 GENERAL PRINCIPLES FOR THE MANAGEMENT OF HISTORIC SITES

Appropriate management of heritage items is primarily determined based on their assessed significance as well as the likely impacts of the proposed development.

In terms of best practice and desired outcomes, avoiding impact to any historical item is a preferred outcome, however, where a historical site has been assessed as having no heritage value, impacts to these items does not require any legislated mitigation.

### 4.4 MANAGEMENT AND MITIGATION OF HISTORIC ITEMS

As no items or sites of historic heritage were recorded, no management or mitigation is required, provided that the proponent restricts works to the assessed study area.

In the unlikely event that items of historic heritage significance are noted during construction or operation of the project, the unanticipated finds procedure in **Appendix 1** will be an appropriate management protocol. The procedure in **Appendix 1** should also be followed if suspected human skeletal remains are encountered.



## 5 RECOMMENDATIONS

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The following recommendations are made based on the impacts associated with the project and with regard to:

- Legal requirements under the terms of the Heritage Act
- Guidelines presented in the *Burra Charter*
- The findings of the current assessment
- The interests of the local community.

Recommendations concerning the historic values within the study area are as follows.

1. Following development consent of the project, the proposed work may proceed with caution. If items of historic heritage significance and/ or suspected skeletal material are uncovered during the project, then the protocols in provided in **Appendix 1** should also be followed.
2. All land and ground disturbance activities must be confined to within the study area. Should the parameters of the project extend beyond the assessed areas, then further assessment may be required.
3. All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all historic items.

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- |                          |  |
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| Wilson 1981              | Wilson, C. 1981. Basalt Quarries Limited, Woy Woy New South Wales. <i>Light Railways</i> , April 1981 (72) 3-15.   |

## APPENDIX 1: EXAMPLE OF UNANTICIPATED FINDS PROTOCOL

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A historic artefact is anything which is the result of past activity not related to the Aboriginal occupation of the area. This includes pottery, wood, glass, and metal objects, as well as the built remains of structures, sometimes heavily ruined.

Heritage significance of historic items is assessed by suitably qualified specialists who place the item or site in context and determine its role in aiding the community's understanding of the local area, or their wider role in being an exemplar of state or even national historic themes.

The following protocol should be followed if previously unrecorded or unanticipated historic objects are encountered:

1. All ground surface disturbance in the area of the finds should cease immediately, then:
  - a) The discoverer of the find(s) will notify machinery operators in the immediate vicinity of the find(s) so that work can be halted
  - b) The site supervisor will be informed of the find(s).
2. If finds are suspected to be human skeletal remains, then NSW Police must be contacted as a matter of priority.
3. If there is substantial doubt regarding the historic significance for the finds, then gain a qualified opinion from an archaeologist as soon as possible. This can circumvent proceeding further along the protocol for items which turn out not to be significant. If a quick opinion cannot be gained, or the identification is that the item is likely to be significant, then proceed to the next step.
4. Notify Heritage NSW as soon as practical on (02) 9873 8500 providing any details of the historic find and its location.
5. If in the view of the heritage specialist or Heritage NSW that the finds appear not to be significant, work may recommence without further investigation. Keep a copy of all correspondence for future reference.
6. If in the view of the heritage specialist or Heritage NSW that the finds appear to be significant, facilitate the recording and assessment of the finds by a suitably qualified heritage specialist. Such a study should include the development of appropriate management strategies.
7. If the find(s) are determined to be significant historic items (i.e. of local or state significance), any re-commencement of ground surface disturbance may only resume following compliance with any legal requirements and gaining written approval from Heritage NSW.