Department of Planning, Housing and Infrastructure

Our ref: SSD-61618229-PA-2

Baily Trigg
Project Manager
The APP Group
Via Major Projects Only

Attn: Mr Kevin McCarthy, Infrastructure Facility Services, University of Newcastle

18/08/2025

UON City Campus Student Accommodation
Contaminated Land Management Plan and Unidentified Finds Protocol Rev 2

Dear Mr Trigg

Thank you for submitting the Contaminated Land Management Plan and Unidentified Finds Protocol, rev 2, dated 31/07/25 (the document) on 06/08/25. We note that you have submitted the document for information under condition B51 of SSD-61618229.

We have received and filed the documents.

You are reminded that if there are any inconsistencies between the documents and the conditions of approval, the conditions will prevail.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you have any further enquiries, please contact Jake Simpson at jake.simpson@dpie.nsw.gov.au

Yours sincerely

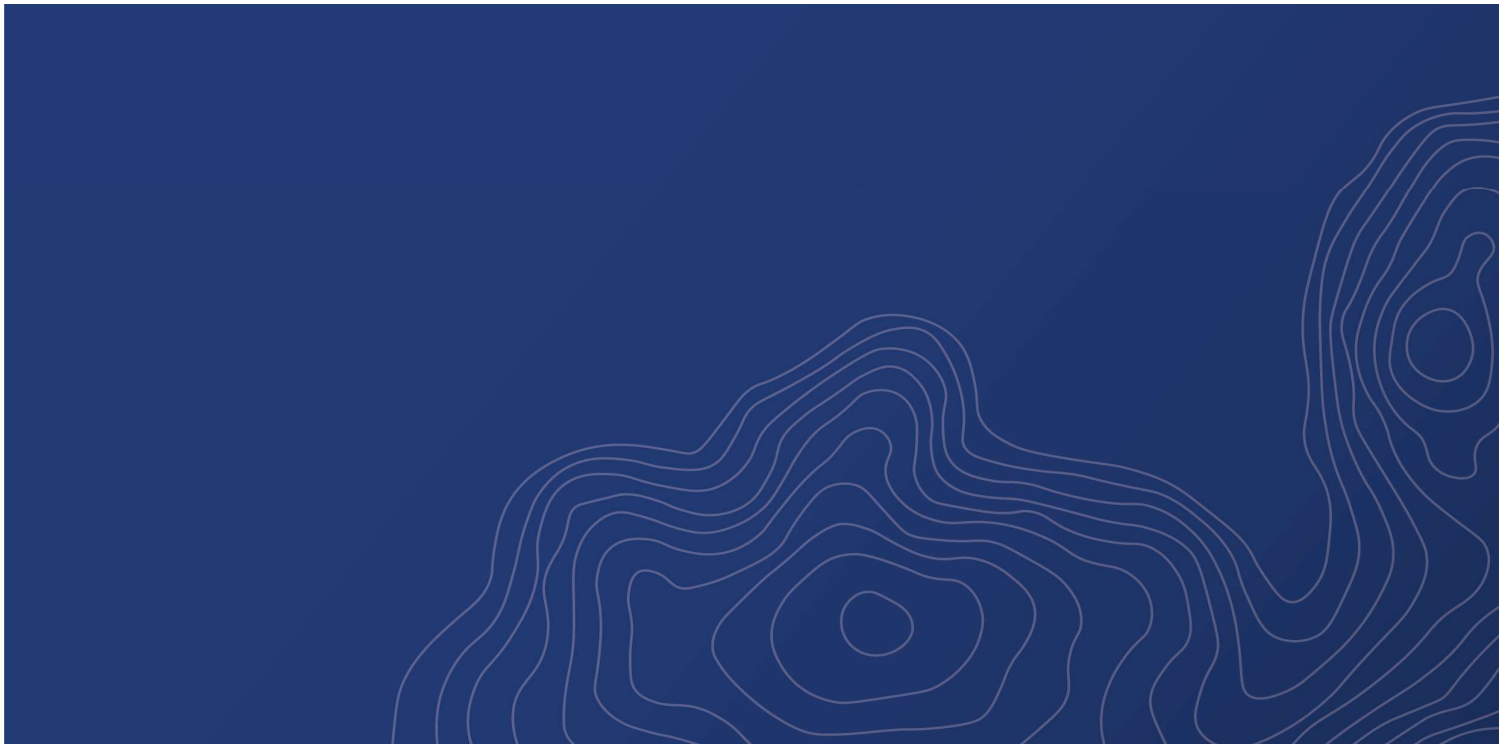
Jake Simpson
Planning Officer
Infrastructure Management

As nominee of the Planning Secretary

University of Newcastle City Campus Student Accommodation (SSD-61618229)

Contaminated Land Management Plan and Unexpected Finds Protocol, Stage 1B Development

University of Newcastle



Reference: 754-NTLEN274023-R08 Rev 2

31 July 2025

UNIVERSITY OF NEWCASTLE CITY CAMPUS STUDENT ACCOMMODATION (SSD-61618229)

Contaminated Land Management Plan and Unexpected Finds Protocol, Stage 1B Development

Report reference number: 754-NTLEN274023-R08 Rev 2
31 July 2025

PREPARED FOR

University of Newcastle
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QUALITY INFORMATION

Revision history

Revision	Description	Date	Author	Reviewer	Approver
V1 Draft	Draft for Discussion	8/9/2021	Paul Wright	Laurie Fox	Paul Wright
V2 Draft	Draft	18/07/2023	Craig Schrader	Laurie Fox	Paul Wright
Final	Final Report	8/08/2023	Craig Schrader	Paul Wright	Paul Wright
Revision 1	SSD Revision	8/03/2024	Peter Sanderson	Laurie Fox	Paul Wright
Revision 2	Post-SSD Consent addressing SSD Condition B51. (UFP is provided as Section 7 of this report without change from previous versions)	31/07/2025	Shaun McKay	Laurie Fox	Shaun McKay

Distribution

Report Status	No. of copies	Format	Distributed to	Date
V1 Draft	1	DocX	APP	8/9/2021
Draft	1	PDF	University of Newcastle	18/07/2023
Final	1	PDF	University of Newcastle	8/08/2023
Revision 1	1	PDF	University of Newcastle	8/03/2024
Revision 2	1	PDF	University of Newcastle	31/07/2025

CONSULTANT DECLARATION

PROJECT DETAILS	
PROJECT NAME	
Application number	SSD-61618229
Address of subject land	20 Civic Lane, Newcastle, NSW, 2300
Lot / DP	Lot 2 DP 1247375 & Lot 5 DP 1247375
APPLICANT DETAILS	
Applicant name	University of Newcastle
Applicant address	University Drive, Callaghan, NSW 2308
REPORT DETAILS	
Name of report this declaration relates	University of Newcastle City Campus Student Accommodation (SSD-61618229) Contaminated Land Management Plan and Unexpected Finds Protocol (CLMP-UFP)
Report reference no.	754-NTLEN274023-R08 Rev 2
Report date	31 July 2025
Company name (inc. ABN / ACN)	Tetra Tech Coffey Pty Ltd. (ABN 55 139 460 521)
Author name	Shaun McKay
Author qualifications	Senior Associate Environmental Scientist
Author address	Unit 4, 60 Griffiths Road, Lambton NSW 2299
DECLARATION BY CONSULTANT	
Name	Laurence Fox
Registration no.	CPSS CSAM 2024
Organisation registered with	Soil Science Australia
Declaration	The undersigned declares that the University of Newcastle City Campus Student Accommodation (SSD-61618229) Contaminated Land Management Plan and Unexpected Finds Protocol: • has been prepared in accordance with the following policy, guidelines, or legislative requirements: – **Contaminated Land Management Act (1997).** – **Protection of the Environment Operations Act (1997) and Waste Regulation (2014, 2016).** – The Work Health and Safety Act (2011). – **National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), Volume 2, Schedule B1 (ASC NEPM 1999 (2013).** – **NSW EPA Waste Classification Guidelines 2014.** – **NSW EPA Resource Recovery Orders and Resource Recovery Exemptions under Part 9, Clause 93 of the POEO Waste Regulations (2014).** – **NSW EPA (2020) Consultants Reporting on Contaminated Land – Contaminated Land Guidelines.**

PROJECT DETAILS	
	– **NSW EPA Guidelines for NSW Site Auditor Scheme 3rd Edition (2017).** • contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the CLMP-UFP relates; • does not contain information that is false or misleading; • identifies and addresses the relevant Planning Secretary's environmental assessment requirements (SEARs) for the project; • identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments to which the CLMP-UFP relates; • contains a consolidated summary of the proposed or necessary mitigation measures
Signature	
Date	**20/06/2024**

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ACRONYMS/ABBREVIATIONS

Acronyms/Abbreviations	Definition
ACM	Asbestos Containing Material
AEC	Areas of Environmental Concern
AHD	Australian Height Datum
AHIP	Aboriginal Heritage Impact Permit
ASRIS	Australian Soil Resource Information System
ASS	Acid Sulfate Soils
BGS	Below Ground Surface
BTEX	Benzene Toluene Ethylbenzene and Xylene
CLMP	Contaminated Land Management Plan
CN	City of Newcastle
COPC	Chemicals/Contaminants of Potential Concern
CSM	Conceptual Site Model
DECC	Department of Environment and Climate Change
DNAPL	Dense Non-Aqueous Phase Liquid
DP	Deposited Plan
DQI	Data Quality Indicator
DQO	Data Quality Objective
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
ESL	Ecological Screening Level
HIL	Health Investigation Level
HDPE	High-Density Polyethylene
HSE	Health, Safety and Environmental
HSSE	Health, Safety, Security and Environmental
HSL	Health Screening Level
LNAPL	Light Non-Aqueous Phase Liquid
LTEMP	Long-Term Environmental Management Plan
NEPC	National Environment Planning Council
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
NSW	New South Wales
NSW EPA	New South Wales Environmental Protection Authority

Acronyms/Abbreviations	Definition
NSW Health	NSW Health Administration Corporation
PAH	Polycyclic Aromatic Hydrocarbon
PSI	Preliminary Site Investigation
QA	Quality Assurance
QC	Quality Control
RAP	Remediation Action Plan
SAC	Site Assessment Criteria
SEPP	State Environmental Protection Policy
SWMS	Safe Work Method Statement
TCLP	Toxicity Characteristic Leaching Procedure
TRH	Total Recoverable Hydrocarbon
UCL	Upper Confidence Limit
UFP	Unexpected Finds Protocol
VENM	Virgin Excavated Natural Material

1. INTRODUCTION

This Contaminated Land Management Plan and Unexpected Finds Protocol has been prepared by Tetra Tech Coffey (Tetra Tech) on behalf of University of Newcastle (University) to accompany a State Significant Development Application (SSD-61618229) that seeks approval for Stage 1B of the University's City Campus, including a nine-storey building for the purpose of campus student accommodation and ground floor retail.

Stage 1B will be undertaken at Lot 2 DP 1247375 and Lot 5 DP 1247375 (Site B), located at 20 Civic Lane, Newcastle NSW and 20A Wright Lane, Newcastle NSW respectively collectively defined as "the Site". A locality and site plan are presented in Figure 1 and Figure 2 of the Attachments respectively. An overview of the site context and description and the proposed development is included in Section 2.

1.1 BACKGROUND – APPROVED CONCEPT PLAN

A Concept Plan (SSD-9262) granted approval by the Minister for Planning and Public Spaces on 21 May 2020, applies to the Site. The Concept SSD established the maximum building envelope, gross floor area and preferred land use to facilitate the future redevelopment of the site. Additionally, the Concept Proposal provides a design excellence framework to guide future development within the building envelopes and achieve design excellence. The detailed Building B SSD will be consistent with the Concept Proposal and design excellence strategy.

The approved Concept Plan is shown in Figure 1-1.

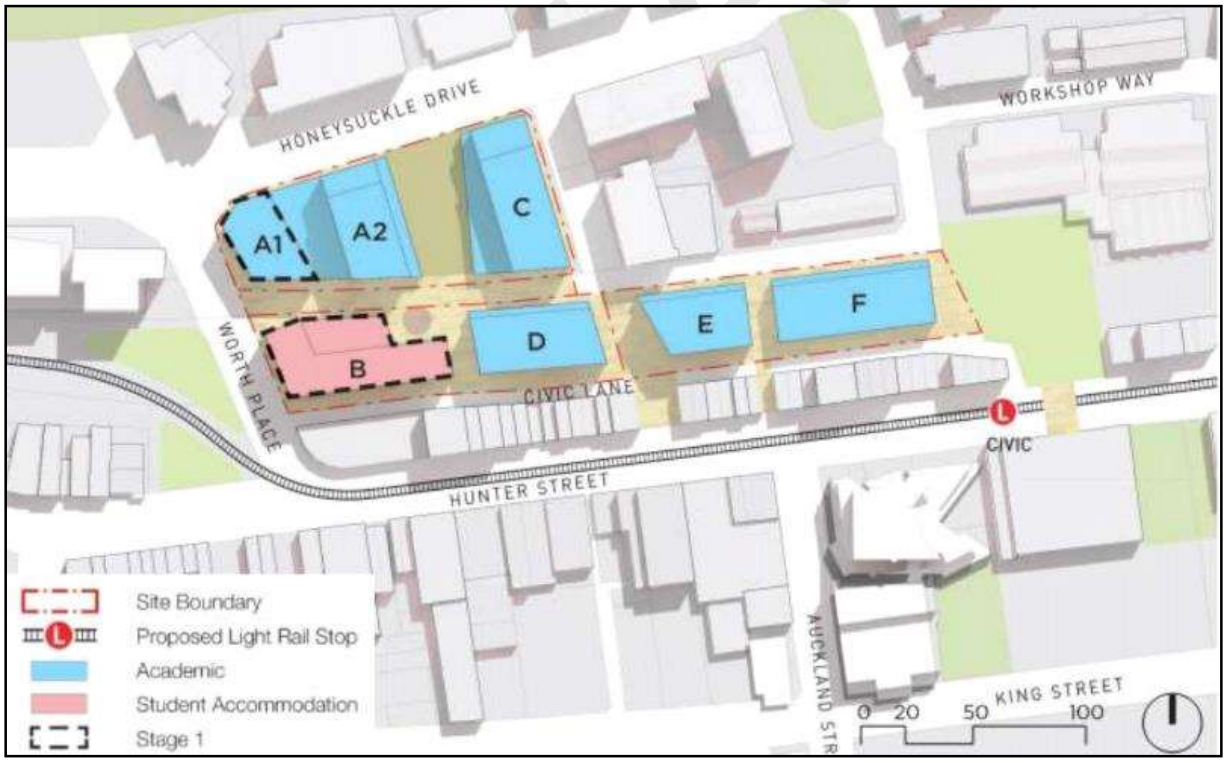


Figure 1-1: Approved Concept Plan for the University of Newcastle City Campus

1.2 SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

A request for the issue of Industry Secretary's Environmental Assessment Requirements (SEARs) was sought on the 18 August 2023. Accordingly, the SEARs were issued on 31 August 2023 for SSD-.61618229. The

purpose of this report is to provide a contaminated land management plan and unexpected finds protocol to manage potentially contaminated soils during construction. This was a recommendation following the completion of the contamination assessment completed to accompany the SSDA as required by the SEARs which is reproduced below:

SEAR	Expected Deliverable

13. Ground and Water Condition
• **Assess potential impacts on soil resources and related infrastructure and riparian lands on and near the site, including soil erosion, salinity and acid sulfate soils.**
  ○ **Provide a Surface and Groundwater Impact Assessment that assesses potential impacts on:**
  ○ **surface water resources (quality and quantity) including related infrastructure, hydrology, dependent ecosystems, drainage lines, downstream assets and watercourses.**
• **groundwater resources in accordance with the Groundwater Guidelines."**
	• Geotechnical Assessment
	• Surface and Groundwater Impact Assessment
	• Salinity Management Plan and/or Acid Sulfate Soils Management Plan

This report should be read in conjunction with the attached '*Important Information about your Tetra Tech Coffey Environmental Report*'.

1.3 STAGE 1B (SITE B) DESCRIPTION

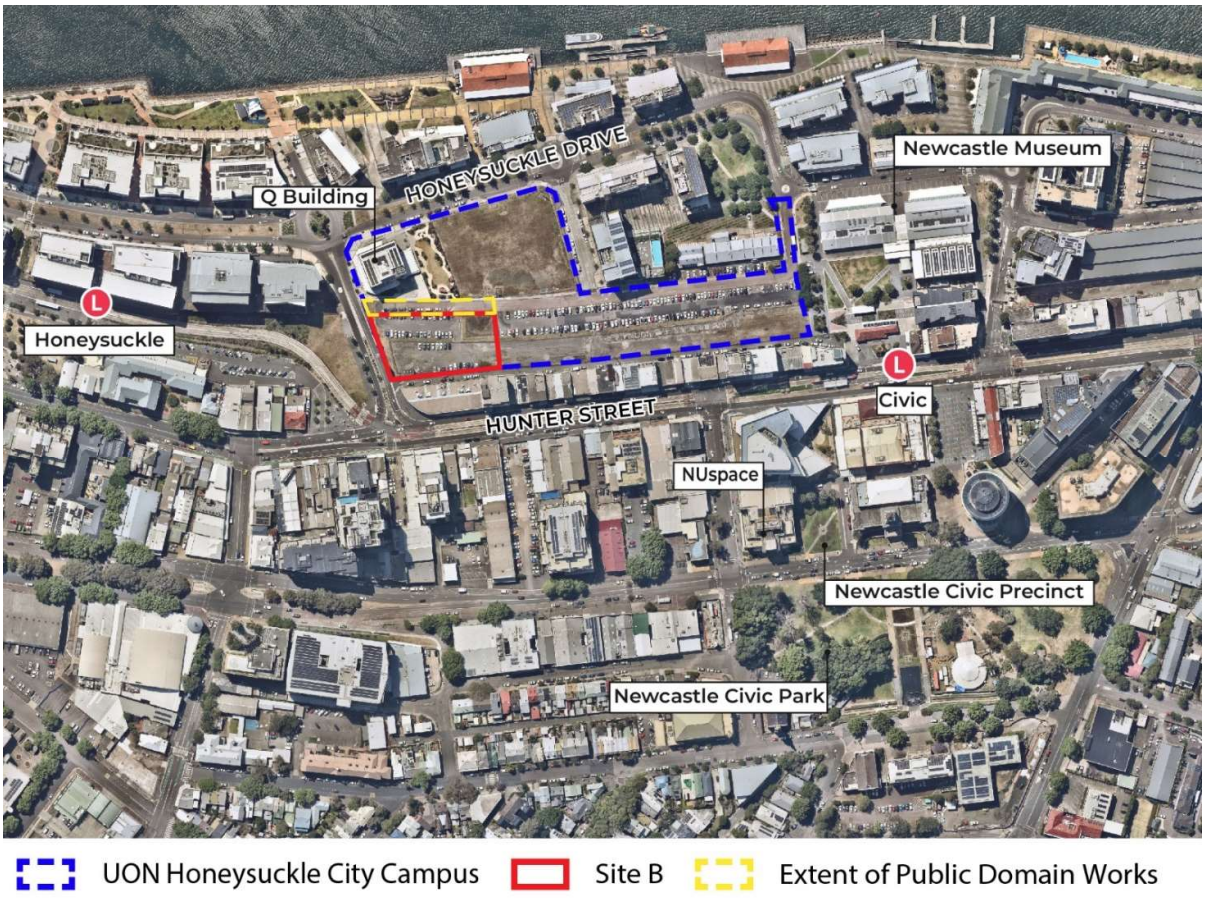
The University of Newcastle City Campus is located within the City of Newcastle Local Government Area (LGA) at 16 Honeysuckle Drive, Newcastle. It is located on the lands of the Awabakal and Worimi peoples.

Specifically, Site B (Stage 1B in the approved concept masterplan) is located at the southwestern corner of the University's City Campus. Site B has an overall area of 3,341m^2 and is legally described as Lot 2 in DP 1247375. Landscaping and public domain works will be undertaken in a portion of Wright Lane and is legally described as Lot 5 in DP 1247375. Both Lot 2 and 5 in DP 1247375 are owned by the University of Newcastle.

Located within the wider Newcastle City Campus, the site is strategically positioned in the geographical heart of the Newcastle CBD. This area is undergoing a process of significant transformation, with a number of major commercial and residential developments having been recently completed.

The campus is also located in proximity to the Newcastle Light Rail, with stops at Honeysuckle and Civic, which has improved transport connectivity to the site and broader area. The University's Q Building is located north of the site, beyond the Hunter River. On the southern end of the site, is the Civic Precinct of Newcastle, and adjacent University NU Space building. The location of Stage 1B is shown in Figure 1-2.

Figure 1-2: University of Newcastle City Campus Context



1.4 OVERVIEW OF PROPOSED DEVELOPMENT

The State Significant Development Application (SSDA) seeks approval for Stage 1B of the University's City Campus, including a nine-storey building for the purpose of campus student accommodation and ground floor retail. The key objective of the proposed development is to establish a contemporary and sustainable building to provide student accommodation that offers a high level of residential amenity, cultural safety and provide a convenient location within the University's City Campus.

Stage 1B is the next step in delivering the vision for the University's City Campus established under the Concept Plan (SSD-9262), which was approved by the Minister for Planning and Public Spaces on 21 May 2020. The Concept Plan establishes seven (7) building envelopes across the campus, to be used for academic and ancillary uses, and student accommodation. The approved maximum building height for Building B under SSD-9262 is RL 33.85. (nine storeys excluding plant)

This SSDA specifically seeks detailed approval for the following works:

- Site grading;
- Construction of a nine (9) storey building (known as Building B), to be used for campus student accommodation and retail;
- Maximum gross floor area (GFA) of 10,765m^2, comprising of:
- Approximately 130m^2 of retail floor space at ground level,

- Approximately 683m^2 of communal residential amenity facilities at ground level, and
- Approximately 9,520m^2 of student accommodation including a total of 453 beds
- Maximum building height of Reduced Level 33.85 (nine storeys excluding plant and services);
- Maximum height of RL 40.9 (building including plant and services)
- End of trip facilities, including 82 bicycle spaces and back of house amenities; and
- Associated landscaping and public domain works.

For a detailed project description refer to the Environmental Impact Statement prepared by Ethos Urban.

1.5 PREVIOUS ASSESSMENTS

The Site has previously been subject to two Site Audit Reports.

- *Environ (2013) Site Audit Report - GN484, prepared for Hunter Development Corporation - Wright Lane Car Park, Newcastle (Reference No: AS121614, dated 11 June 2013).*
- *Ramboll Environ Australia Pty Ltd (2016) Site Audit Report – GN 508A, prepared for Urban Growth NSW – Newcastle Rail Corridor, NSW (Reference No: AS121809, dated 29 June 2016).*

The Site is currently managed under the following management plans:

- *Environmental Resources Management Australia (2007) Environmental Management Plan - Newcastle Track Renewal from Broadmeadow to Newcastle Stations, NSW (Reference No: 0067294RP01 Final, dated 27 October 2007).*
- *CH2MHill Australia Pty Ltd (2013) Environmental Management Plan, Wright Lane, Newcastle NSW (Reference No: 427985, dated 16 May 2013). The Environmental Management Plan (EMP's) were developed to address contaminated soils within the car park and former railway corridor areas.*

The existing car parks and railway corridor within Sites 2 and 3, fall under the management of the two EMP's and SAR, at this time. Excavations and management of soils must be undertaken in accordance with the existing Environmental Resources Management Australia (2007) and CH2MHILL (2013) EMPs.

A Remediation Action Plan (Stage 1B RAP) *(Tetra Tech Reference: 754-NTLEN274023-R07 Rev1, dated 04 April 2024)* has been prepared for the Stage 1B works. The Stage 1B RAP contains specific requirements for remediation and management of the proposed development areas, including buildings, pavements and landscaped areas.

The Stage 1B RAP describes the capping requirements as follows:

> *"Based on consideration of potential remedial options, the preferred remedial strategy for the Site is a combination of Option 3 - Excavation and onsite consolidation below hardstand areas and building footprints and Option 4 - Onsite capping of material below a suitable barrier layer. The use of barrier layer as the primary control for the elimination of exposure pathways to sensitive receptors will sufficiently manage the risks associated with the variability of the horizontal and vertical distribution of contaminants across the Site."*
>
> *"The Site will be considered to be adequately managed once final barrier layer(s) are constructed (i.e. building footprints, hardstand surfaces or landscaping)."*

The Stage 1B RAP also specifies the following for final development capping:

> *"Final remediation capping will be completed during the future development of the Site to include the placement of a barrier layer which will include the footprint of building, hardstand surfaces and landscaping planted in clean imported growth media to provide a*

> *final barrier over the contaminated soils. Landscaping will be required to meet the 300mm minimum depth specification for the placement of topsoil and turf. Deeper rooted plants and trees requiring establishment below this depth must be placed following removal of existing soil and replacement by suitable growth media comprising clean imported growth media, VENM or ENM as appropriate. Further details of this are provided in Section 6.2 Trenches for utilities services excavated for installation within existing soils must be backfilled with clean VENM or ENM materials."*

Following development (including individual development stages), Stage 1B will be managed in perpetuity under a specific Long-Term Environmental Management Plan (LTEMP), progressively revised as the Site is further developed. The LTEMP will supersede previously prepared EMPs.

To guide the excavation programs related to the works, the preparation of a Contaminated Land Management Plan (CLMP) with an associated Unexpected Finds Protocol (UFP) was recommended. The CLMP-UFP will allow contractor compliance with soil assessment requirements to the guidelines and legislative requirements currently in force under the *Protection of the Environment Operation Act 1997* (POEO Act), *National Environment Protection (Assessment of Site Contamination) Amendment Measure 1999 (2013)* (ASC NEPM) and *NSW EPA Waste Classification Guidelines 2014* (Waste Classification Guidelines).

This document contains a CLMP-UFP as prepared by Tetra Tech Coffey Pty Ltd. (Tetra Tech) for the Site. For works to be undertaken within the Site and CN services corridors or on Council lands, the *Newcastle City Council, Newcastle Technical Manual Contaminated Land Management, 2012* has been included as Appendix B: for guidance.

This CLMP-UFP must be read in conjunction with the enclosed sheet entitled '*Important Information about your Tetra Tech Environmental Report*', which can be found attached to this report.

1.6 OBJECTIVES

The objectives of the CLMP-UFP are to:

- Provide information to alert future contractors of the presence and location of known (and suspected) contamination and provide strategies to prevent exposure to the identified contamination during the enabling works.
- Provide guidance to undertake excavations and site reinstatement in accordance with the Stage 1B RAP.
- Provide procedures to manage potentially contaminated materials and unexpected finds during excavation into the site soils undertaken during site works.

It is noted that this CLMP-UFP is not a Construction Environmental Management Plan (CEMP) and only addresses the management of potentially contaminated site soils during excavation for compliance with the existing site EMP and Stage 1B RAP.

2. ROLES AND RESPONSIBILITIES

Table 2-1 below outlines the roles and responsibilities for implementing this plan.

Table 2-1: Roles and Responsibilities

Role	Contact Information	Responsibilities
Site Owner/Representative	Mathew Watson (APP)	• Project management and execution, University of Newcastle authorised representative.
Site Superintendent/ Principal Contractor	To be confirmed	• Arrange for themselves (including contractors/subcontractors) and relevant representatives to be inducted into this CLMP/UFP, both now and in the future as required, by a competent environmental professional or appropriately trained alternative representative. • Ensure that this CLMP/UFP is implemented and adhered to. • Provide relevant information regarding site environmental management to contractors and subcontractors working at the site. • Ensure that contractors and subcontractors undertaking works at the site are fulfilling the environmental protection/management responsibilities for the work, including holding relevant licences and permits. • Maintain records and documents produced as a result of this CLMP/UFP, especially for movement of soil materials from and onto the site.
Contractors / subcontractors	To be confirmed	• Liaise with the Site Superintendent / Principal Contractor, other contractors and parties, and relevant authorities. • Ensure overall compliance with the CLMP/UFP, applicable legislation and regulations for their contribution to site works.
Environmental Consultant	To be confirmed	• Induct the Civil Contractor into the requirements of the CLMP/UFP, as required. • Provide advice to the Site Superintendent / Principal Contractor and relevant parties regarding management requirements as detailed in this CLMP/UFP. • Address the management of unexpected contamination and unexpected finds, as required. • Required to validate areas remediated as a result of identified unexpected contamination and make a conclusion on the suitability of the Site for the proposed end use (s).
Site Auditor	Fiona Robinson	• Review of project documentation and provision of third-party review of works compliance

2.1 RELEVANT LEGISLATION AND GUIDELINES

Legislation in NSW relevant to contaminated land management includes:

- *Contaminated Land Management Act (1997).*
- *Protection of the Environment Operations Act (1997) and Waste Regulation (2014, 2016).*
- *The Work Health and Safety Act (2011).*

2.2 GUIDELINES

Relevant guidelines endorsed by the NSW EPA include:

- *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), Volume 2, Schedule B1 (ASC NEPM 1999 (2013).*
- *NSW EPA Waste Classification Guidelines 2014.*
- *NSW EPA Resource Recovery Orders and Resource Recovery Exemptions under Part 9, Clause 93 of the POEO Waste Regulations (2014).*
- *NSW EPA (2020) Consultants Reporting on Contaminated Land – Contaminated Land Guidelines.*
- *NSW EPA Guidelines for NSW Site Auditor Scheme 3rd Edition (2017).*

3. SITE INFORMATION

3.1 SITE LOCATION AND IDENTIFICATION

The general site location and layout is shown in Figure 1 and Figure 2 of Appendix A respectively, with the relevant site information provided in **Table 3-1**.

Table 3-1: Summary of site details

Site Address	20 Civic Lane, Newcastle NSW
Site Identification	Part Lot 2 DP 1247375 and Part Lot 5 DP 1247375 (the Site)
Site Area	Proposed student accommodation development – 3,441m^2
Zoning	MU1 Mixed Use
Site Ownership	University of Newcastle
Local Government Area	City of Newcastle
Current Land Use	At the time of the preparation of this report, the Site was being used as a car park, operational road (i.e. Wright Lane) and included a former rail corridor (tracks removed).
Previous Land Use	The Site has had many previous uses, but the predominant use was for railway activities including rail corridor, railway yard, workshops (including blacksmiths, carpenters, and plumbers), boiler makers and rail turn table.
Future Land Use	• Wright Lane – Hardstand walkway • Building B Footprint – Student accommodation, with non-residential use at ground level of the buildings. • Hardstand recreational areas immediately surrounding Building B footprint.
Adjoining Site Uses	• **North** – University of Newcastle Q-Building. Further north is residential and commercial developments and the Hunter River • **East** – Reconfigured Wright Lane public carpark in Lot 3 DP1247375, information centre, car park and public open space • **South** – Mixture of commercial and residential buildings • **West** – Worth Place (public road), Commercial buildings, and Light Rail line
Site Co-ordinates	The north-eastern corner of the Site is located approximately at - 32°55’35.47” S, 151. °46’11.89E

3.2 DESKTOP REVIEW

Information for the desktop review was obtained from the following sources:

- Geological, topographic, soil landscapes and hydrology.
- A search of the NSW Office of Water register for groundwater bores.
- Selected historical aerial images and photographs dating back to 1916.
- A search of the NSW EPA contaminated land register of declared or notified contaminated sites for listings of the Site and nearby sites.

- Site Audit Reports relevant to Lot 2 DP 1247375, prepared by Environ and Ramboll Environ Australia Pty Ltd as listed below:
  - *Environ (2013) Site Audit Report - GN484, prepared for Hunter Development Corporation - Wright Lane Car Park, Newcastle (Reference No: AS121614, dated 11 June 2013).*
  - *Ramboll Environ Australia Pty Ltd (2016) Site Audit Report – GN 508A, prepared for Urban Growth NSW – Newcastle Rail Corridor, NSW (Reference No: AS121809, dated 29 June 2016).*
- Environmental reports relevant to the Site, from 1993 to present prepared by Douglas Partners, CH2M Hill Australia Pty Ltd, RCA Australia, and ERM Australia as listed below:
  - *D.J. Douglas & Partners Pty Ltd (1993) Report on Contamination Assessment Proposed Commercial Development Civic Workshop Area, Honeysuckle Project Honeysuckle Newcastle (Reference No: 16670/2, dated June 1993).*
  - *CH2M Hill Australia Pty Ltd (1999) Final Phase 1 Report - Wright Lane, Civic - Lot 2 DP 856783 (Reference No: 110067.S21, dated December 1999).*
  - *RCA Australia (2003) Environmental Site Assessment – Car Park Area off Wright Lane, Honeysuckle (Reference No: 3394-002/0, dated 1 August 2003).*
  - *Douglas Partners (2006) Report on Waste Classification – Proposed Railway Platform Upgrades, Hamilton Wickham and Civic Stations (Reference No. 39593, dated 24 November 2006).*
  - *Douglas Partners (2007) Additional Sampling and Asbestos Testing - Newcastle Rail Corridor Project, Hamilton, Wickham and Civic Stations (Reference No: 39593, dated 22 March 2007).*
  - *Environmental Resources Management Australia (2007) Environmental Management Plan - Newcastle Track Renewal from Broadmeadow to Newcastle Stations, NSW (Reference No: 0067294RP01 Final, dated 27 October 2007).*
  - *Environmental Resources Management Australia (2007) Waste Classification of Ballast and Soils - Newcastle Track Renewal from Broadmeadow to Newcastle Station (Reference No: 0067294 RP1 - FINAL.DOC, dated 10 December 2007).*
  - *CH2M Hill Australia Pty Ltd (2012) Final Phase 1 and 2 Environmental Site Assessment prepared for Hunter Development Corporation - Wright Lane, Newcastle (Reference No. 427985, dated 24 February 2012).*
  - *CH2MHill Australia Pty Ltd (2013) Environmental Management Plan, Wright Lane, Newcastle NSW (Reference No: 427985, dated 16 May 2013).*
  - *Douglas Partners (2016) Targeted Detailed Site Investigation (Contamination) - Newcastle Urban Transformation and Transport Program Newcastle Rail Corridor (Reference No: 81716.00. R.006.Rev0, dated 28 June 2016).*
  - *Douglas Partners (2016) Remediation Action Plan - Newcastle Urban Transformation and Transport Program Newcastle Rail Corridor (Reference No: 81716.00. R.009.Rev0, dated 28 June 2016).*

Results of Tetra Tech's desktop review are summarised in **Table 3-2**.

Table 3-2: Summary of Desktop Review

Item	Discussion
Topography	The Newcastle 1:25,000 topographic map indicates that the Site has an elevation of 5m or less above Australian Height Datum (AHD). The Site is generally flat and bounded to the north by the University Stage 1A (Q Building) development, Honeysuckle Drive, Commercial Buildings, and the Hunter River and by commercial buildings to the South.
Geology	The Site is underlain by fill, alluvial / estuarine soils that are on top of bedrock from the Lambton Subgroup of the Newcastle Coal Measures. This subgroup comprises siltstone, sandstone, and coal seams. Sub-surface materials observed during previous environmental assessments included:

Item	Discussion
	• Fill – (0.0 to approximately 0.8 m, within local depths up to 2.3 m) brown to dark grey silty, gravelly sand, fine to medium grained, fine to coarse gravels with railway ballast, coal chitter, building waste, slag, steel fragments and marine shell inclusions. • Alluvium/ Residual – (from approximately 0.3m onwards) SAND/ Sandy CLAY, grey to brown colour fine to coarse grained with mollusc shells.
Acid Sulfate Soils	The Department of Land and Water Conservation (1997) 1:25,000 Newcastle Acid Sulfate Soil Risk Map indicates that the Site is located within areas of high (majority of Wright Lane, carpark and rail corridor) and low (southern portion of rail corridor) acid sulfate soil probability. Areas of high probability have a potential for Acid Sulfate Soils (ASS) within 1m of the ground surface level. This is likely to be present in the proposed building footprint of the campus student accommodation development (refer **Figure 2-1**). Areas of low probability have a potential for ASS to be greater than 3 m below the ground surface. This is likely to be the southernmost portions of the proposed building footprint.
Surface Water	Surface water currently generated from rainfall runoff at the Site is expected to be captured by an extensive network of public stormwater drains along Wright Lane (north direction). It is expected that the stormwater drainage will ultimately discharge into the Harbour.
Groundwater	There are eight registered groundwater bores located within 500m of the Site and associated information in previous assessments indicates that bores surrounding the Site were installed primarily for monitoring and industrial purposes only. Previous assessment works on the Site reported by CH2MHILL 2011 indicate that Standing Water Levels (SWLs) ranged from 0.266 m to 0.369 m AHD and 1.56 to 1.77m AHD during the DP 2016 assessment. SWLs recorded during the assessment of Lot 1 DP 1247375 (north of the Site) by Tetra Tech in 2019, ranged from 3.410m to 4.090 mAHD. Groundwater flow direction from previous assessments is generally north to northwest. Differences in reported SWLs may be attributed to perched water and/ or historically modified landscapes at and around the Site.
Historical Aerial Photographs	The Site has previously been used for heavy rail services from the 1900's to the mid 1990's. Features apparent on historical aerial images and photographs reviewed by Tetra Tech included: • **1916** – the Site appears to be occupied by rail lines through Lot 2 DP 1247375. • **1954** – the Site appears to be still occupied, with rail lines in Lot 2 DP 1247375. What appears to be signal boxes or similar are present along the northern end of Lot 2 DP 1247375. • **1966** – the Site appears to be relatively unchanged between 1954 and 1966. Surrounding buildings outside of the assessment area have been removed and replaced to the north of Lot 2 DP 1247375. • **1976** – Signal boxes (or similar) identified in 1954 appear to have been removed. • **1987** – Multiple buildings to the north of Lot 2 DP 1247375 have since been removed. • **1993** – Use of the Site for rail repairs appears to have ceased and Lot 2 DP 1247375 appears to be vacant. • **2004** – All Site buildings have been removed and a car park now occupies Lot 2 DP 1247375. The rail corridor is still operational. • **2019** –Site is still used as a car park, however, the rail lines have been removed and construction activities are apparent. The western end of Lot 2 DP 1247375 within the former rail corridor appears to have site sheds and amenities for construction works.

Item	Discussion
	The former rail corridor appears to be a lay down area as well as parking area for construction activities.
NSW EPA	A search of the NSW EPA database on 20 May 2020 identified two (2) sites within the Newcastle City (Newcastle City Council) on the contaminated land register as having current and/or former notices. No current EPA investigation orders and/ or Environmental Protection Licences exist for the subject site.
Previous Site Audits	**Environ (2013) Site Audit Report - GN484, prepared for Hunter Development Corporation - Wright Lane Car Park, Newcastle (Reference No: AS121614, dated 11 June 2013)** • The Site Audit Report (SAR) was commissioned by Hunter Development Corporation (HDC) to review the CH2MHill EMP and the suitability of the Site to be managed under commercial/ industrial land use purposes, (single level car park). • The SAR also included a review of data from previous environmental assessments, including the DP Contamination Assessment (1993), CH2M Hill Final Phase 1 Report (1999), RCA Environmental Site Assessment (2003), RCA Waste Classification (2006), CH2M Hill Phase 1 and Phase 2 Environmental Site Assessment (2012). • The SAR included a review and commentary of the suitability of desktop review, fieldworks completed, QA/QC suitability and interpretation of analytical results. • The SAR confirms that the CH2MHill EMP strategy is a suitable option for the Sites intended use as a car park. • The auditor indicates that there is no evidence that there is a potential risk of contamination migrating offsite once the EMP is implemented. • The SAR concluded that: o The Site in the current condition (sealed asphalt car park and grassed surfaces would present a low risk to human health. o Excavations at the Site could result in airborne asbestos fibres and exposure to lead impacted soils which may present a human health risk. o Reported groundwater contaminants are not likely to pose a human health risk based on analytical results being only slightly above the adopted guideline values and abstraction and use on Site was not considered likely. **Ramboll Environ Australia Pty Ltd (2016) Site Audit Report – GN 508A, prepared for Urban Growth NSW – Newcastle Rail Corridor, NSW (Reference No: AS121809, dated 29 June 2016)** • The SAR was commissioned by Urban Growth NSW to review the DP Remediation Action Plan (RAP) and the suitability of the proposed remedial options for mixed development purposes at four portions of the Newcastle Rail line (i.e. Newcastle Station and Bus Depot, Newcastle to Civic Station, Civic Station and Civic Station to Worth Place). • The SAR also included a review findings for previous environmental assessments, including AECOM Phase 1 Environmental Site Assessment, (2015), AECOM Sampling Analysis and Quality Plan (2015), Douglas Partners Sampling, Analysis and Quality Plan - Addendum, Targeted Detailed Site Investigation (2015), Douglas Partners Addendum, Sampling Analysis and Quality Plan, Proposed Additional Investigation (2015), Douglas Partners Targeted Detailed Site Investigation (Contamination), (2016). • The SAR included a review and commentary on the adequacy of desktop review, fieldworks completed, QA/QC assessment and interpretation of analytical results. • The SAR confirms that the DP remedial approach(s) is suitable however, recommended that site specific RAPs or remedial work plans be prepared for each of the four portions of the rail corridor with respect to the management of contamination for the specific development(s).
Previous Environmental Assessments	**D.J. Douglas & Partners Pty Ltd (1993) Report on Contamination Assessment Proposed Commercial Development Civic Workshop Area, Honeysuckle Project Honeysuckle Newcastle (Reference No: 16670/2, dated June 1993)**

Item	Discussion
	• Douglas & Partners were engaged by Property Services Group (PSG) to conduct a contamination assessment of the Honeysuckle development, which included locations within Lot 2 DP 1247375 car park area. • Six boreholes (B16, B17, B24, B25, B34 and B35) were drilled, four test pits (T18, T31, T33 and T36) were excavated and two boreholes were converted into groundwater monitoring wells (P45 and P46). • Results from assessment reported lead concentrations in excess of the adopted guidelines (i.e. commercial industrial land use criteria within the ANZEC/ NHMRC (1992) Australian and New Zealand Guidelines for the Assessment of Contaminated Sites), in soil samples collected near the disused railway turntable and the demolished railway workshop. Tetra Tech's comparison of DP's analytical results to current Health Investigation Levels listed in Schedule B1 of the National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013) (ASC NEPM) showed that lead exceeds HIL C, from proposed public domain areas (i.e. B18, B24, B25, B33, B35 and TP35). • Two groundwater monitoring wells were installed and reported concentrations of metals and Polycyclic Aromatic Hydrocarbons (PAH's) comparable to regional concentrations. **CH2M Hill Australia Pty Ltd (1999) Final Phase 1 Report - Wright Lane, Civic - Lot 2 DP 856783 (Reference No: 110067.S21, dated December 1999)** • CH2M HILL was engaged by the State Rail Authority to undertake a Phase 1 investigation of the car park area of Lot 2 DP 1247375. • Four surface soil samples (S11 to S14) were collected as part of the assessment. • These four soil samples were analysed for heavy metals and PAH's only. • The report confirmed the use of the Site as a former railway yard and found levels of arsenic and benzo(a)pyrene in soil to be above the adopted commercial industrial assessment criteria listed in ANZEC/ NHMRC (1992) at the western portion of the Site. Tetra Tech's comparison of CH2M HILL's analytical results to current Health Investigation Levels listed in Schedule B1 of the ASC NEPM indicated that benzo(a)pyrene was above ESLs for Residential/ Public Open Space. • The Site was reported by CH2M HILL to be acceptable for continued commercial/ industrial use as a carpark. **RCA Australia (2003) Environmental Site Assessment – Car Park Area off Wright Lane, Honeysuckle (Reference No: 3394-002/0, dated 1 August 2003)** • RCA was engaged by the Honeysuckle Development Corporation to undertake an environmental Site assessment located within the car park area of Lots 2 and 3 DP 1247375. • Five boreholes were drilled as part of the assessment within Lot 2 DP 1247375. • Comparison of the analytical results to the ASC NEPM commercial industrial criteria showed that there were two samples which exceeded the HILs for lead at a shallow depth (0.5 metres). The first was at the eastern end of the Site (BH01) and the second near the centre of the Site (BH03). • A comparison of the analytical results against criteria within the ASC NEPM was completed by Tetra Tech, with lead reported to exceed HIL C for samples collected from boreholes BH01 to BH03. • Lead levels reported in excess of HIL D were not considered by RCA to be concern for the proposed car park development given the proposed hardstand surface finish, which will limit exposure to those using the Site. RCA also recommend that lead remediation would be required if a more sensitive land use is considered for the Site. **ERM Australia (2007) Environmental Management Plan - Newcastle Track Renewal from Broadmeadow to Newcastle Stations, NSW (Reference No: 0067294RP01 Final, dated 27 October 2007)** • The Environmental Management Plan (EMP) was commissioned by Rail Corporation NSW, to outline soil and groundwater management measures for the Newcastle Line upgrade works.

Item	Discussion

	• The EMP was prepared based on findings from previous environmental assessments within the Newcastle line rail corridor, which included Civic Station (the Site).
	• Management measures included the removal and management of ballast and underlying materials to depths of 0.4m below ballast to the east of the Site boundary.
	
	CH2MHill Australia Pty Ltd (2012) Final Phase 1 and 2 Environmental Site Assessment prepared for Hunter Development Corporation - Wright Lane, Newcastle (Reference No. 427985, dated 24 February 2012)
	• The Phase 1 and 2 Environmental Site Assessment (ESA) was commissioned by Hunter Development Corporation and was focused within the Wright Lane car park.
	• A summary of the Site history outlined that the Site was obtained by 'Railways' in 1857 and formed part of the larger Civic Workshop, comprised of railway yards, and workshops (including blacksmiths, boilers, carpenters and plumbers) and rail turn table.
	• CH2MHill advanced three soil boreholes (BH01 to BH03), which were later converted to groundwater monitoring wells.
	• Analytical results from soil samples were assessed to be below the commercial/ industrial guidelines (superseded NEPM 1999 guidelines). Tetra Tech's comparison of results against the amended ASC NEPM guidelines showed that:
	• Lead was above HIL C for sample BH02_0.5.
	• Carcinogenic PAHs (benzo(a)pyrene TEQ) was above HIL C for samples BH02_0.5 and BH03_0.2 (subsequently removed during Worth Place road construction).
	• Asbestos was identified at one location (BH03) within fill at a depth of 1.1 metres below ground surface (mbgs). Tetra Tech notes that Worth Place (road) has since been constructed over this location.
	• A comparison of groundwater results against the ASC NEPM Marine Water GILs, was made by Tetra Tech with concentrations above GIL identified for copper and zinc.
	• The report concludes that the Site is suitable for a proposed multi-level car park, subject to the following recommendations:
	  ○ An Environmental Management Plan (EMP) be prepared to manage lead and asbestos contamination.
	  ○ Material required for off-site disposal be classified.
	  ○ Further consideration to the assessment results should a more sensitive land use be considered.
	  ○ Areas not isolated beneath hardstand require suitably validated capping layer with marker layer.
	
	The CH2MHill ESA also presented a summary of findings reported in RCA Australia (2006) Waste Classification, Wright Lane Honeysuckle. The ESA also presented a summary of lead analytical results reported by RCA. A summary of the reported findings relevant to the Site included the following:
	• RCA was engaged by Honeysuckle Development Corporation to undertake a waste classification assessment within the car park area of Lot 2 DP 1247375.
	• Seven test pits (TP1 to TP7) were excavated as part of the assessment, with test pits TP2 to TP7 within Lot 2 DP 1247375.
	• Elevated levels benzo(a)pyrene, lead, arsenic, nickel, and mercury were reported.
	• However, results from a TCLP analysis classified assessed soils as inert waste under the former NSW EPA (1999) Waste Guidelines.
	• These elevated levels of contaminants were found across the Site, particularly in the area surrounding the railway turntable. As a copy of the RCA report was not made available for review, a comparison of the results against ASC NEPM was not completed. the exception to this was lead which were included within the CH2MHILL ESA within a summary table.
	• One sample was reported to exceed the commercial industrial land use criteria for lead.

Item	Discussion

	CH2MHill Australia Pty Ltd (2013) Environmental Management Plan, Wright Lane, Newcastle NSW (Reference No: 427985, dated 16 May 2013)
	• The Environmental Management Plan (EMP) was commissioned by Newcastle Hunter Development Corporation (HDC) to outline management measures to mitigate the risk posed by identified contamination within soils off Wright Lane, Newcastle for future use of that area as a proposed car park.
	• The EMP was prepared based on findings from the CH2M Hill ESA (2012) and environmental assessments in the area which preceded it.
	• CH2MHill notes that soil at Site requires management for the intended use as a car park.
	• The EMP outlines mitigation measures to limit exposure to contaminated soils, including maintenance of a bitumen and grass capping layer, educating maintenance and construction workers when disturbing the capping layer and underlying soils, as well as other safety issues such as minimum PPE requirements.
	• CH2MHill recommended that where the land use is proposed for change, additional remediation/ management was required.
	
	Douglas Partners (2016) Targeted Detailed Site Investigation (Contamination) - Newcastle Urban Transformation and Transport Program Newcastle Rail Corridor (Reference No: 81716.00. R.006.Rev0, dated 28 June 2016)
	• The assessment was commissioned by UrbanGrowth NSW and focused on soil and groundwater assessment within the former rail corridor from the Former Newcastle Train Station west to Worth Place (west of the former Civic Station).
	• The assessment included the excavation of eight test pits and drilling of four boreholes within the former rail corridor, which were converted into groundwater monitoring wells.
	• Analytical results were compared against all ASC NEPM criteria (i.e. low and high density residential, recreational as well as commercial/ industrial health and ecological. Reported concentrations above HIL/ HSL B and HIL/ HSL C for arsenic and lead. Results also reported concentrations above EIL/ ESL values for heavy metals (copper, lead, nickel, and zinc), benzo(a)pyrene and Total Recoverable Hydrocarbons (TRH) fractions >C_{16}-C_{34} for Residential/ Public Open Space.
	• Results from groundwater assessment reported heavy metals (arsenic, cobalt, copper, manganese, zinc) and PAH's (anthracene, benzo(a)pyrene and fluoranthene) in excess of the ANZECC 2000 Marine Water Ecosystem guidelines. Groundwater exceedances were attributed to be consistent with regional conditions.
	• Remediation options provided specific to the Site included:
	  ○ Localised soil remediation.
	  ○ On-site containment.
	
	Douglas Partners (2016) Remediation Action Plan - Newcastle Urban Transformation and Transport Program Newcastle Rail Corridor (Reference No: 81716.00. R.009.Rev0, dated 28 June 2016)
	• The Remediation Action Plan (RAP) was commissioned by Urban Growth NSW, to outline methodologies, procedures, and responsibilities for the remediation of localised contaminated soil within the Site.
	• The RAP was prepared based on findings from the DP (2016) Targeted DSI.
	• DP identified locations 4 and 5 as requiring remediation, which were associated with previous assessment locations 229, 509 and 510 (location 4) and 315, 507 and 508 (location 5). Location 5 is within Lot 2 DP 1247375, former rail corridor.
	• Locations 4 and 5 were identified to be impacted by arsenic and lead and each has an estimated area of 475m^2 to a depth of approximately 0.6mbgs requiring remediation. The estimated approximate volume to be remediated from both locations 4 and 5 was 285m^3.
	• Material from each location was classified as General Solid Waste.
	Remedial options proposed for the two locations included:
	• Removal/ segregation and off-site disposal.

Item	Discussion
	• Low permeability capping layer. • The DP preferred remedial option for locations 4 and 5 was excavation and off-site disposal, however on-site management was also considered depending on the proposed future development(s). • The RAP outlines disposal methodology, onsite containment specifications for the low permeability capping layer, roles and responsibilities, regulatory approvals, site management methodology and validation requirements.
Summary of Potential Sources of Contamination	A review of historical environmental assessments indicates that the source of heavy metal and PAH contamination is likely associated with the following: • Historical filling. • Former railway yard. • Workshops. and/ or • Rail turn table. COCs were assessed to be heavy metals (predominantly lead), PAH's and asbestos.

3.3 CONTAMINATION INVESTIGATION SUMMARY

The objective of the Contamination Investigation (CI) *Phase I Preliminary Site Investigation and Phase II Detailed Site Investigation, City Campus Student Accommodation – State Significant Development Application (SSDA) (SSD-61618229) (Tetra Tech Reference: 754-NTLEN274023-R03 Rev 1, dated 4 April 2024)* was to assess if the Site was suitable (or could be made suitable) for its intended use as a university campus (which would include student accommodation) as well as interim land uses (public domain and car park).

The CI assessed the potential sources of contamination and Contaminants of Potential Concern (COPCs) identified in previous environmental investigations.

Sample locations across the Site as part of the CI were selected to achieve the minimum recommended sampling density recommended in the NSW EPA (1995) *Contaminated Sites: Sampling Design Guidelines*.

The CI included planning and fieldworks, which comprised:

1. Preparing and implementing a project specific health, safety, security and environment (HSSE) plan for Tetra Tech's field-related activities.
2. Location of underground services in selected areas by a qualified and experienced service locator prior to intrusive works commencing.
3. Field assessment program, including:
   a. Soil sampling from thirty-seven (37) boreholes (BH1 to BH20, BH32 to BH44 and MW01 to MW05).
   b. Soil sampling from eleven (11) test pits (TP21 to TP31).
   c. Groundwater sampling from two (2) groundwater monitoring wells installed as part of the 1993 Douglas Partners Assessment (wells P45 and P46).
   d. Groundwater sampling from five (5) groundwater monitoring wells installed as part of this CI (MW01 to MW05).
4. Laboratory analysis for COPCs and general properties for soil and groundwater included:
   a. Soil - Total Recoverable Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAH), Heavy Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), Asbestos, pH, Cation Exchange Capacity (CEC), Clay Content, and Iron Content.
   b. Groundwater – TRH, VOC, PAH, Heavy Metals, cations (sodium (Na), potassium (K), calcium (Ca), magnesium (Mg) and Hardness), anions Cl, SO_4, Alkalinity (calcium carbonate (CO_3), hydrogen

carbonate (HCO_3), hydroxide (OH-), Total Alkalinity), fluoride (F)), nutrients (Total Nitrogen, Total Kjeldahl Nitrogen (TKN), nitrogen oxide (NO_X), nitrogen dioxide (NO_2), nitrate (NO_3), ammonia (NH_3), Total Phosphorus), pH and EC.

5. Data appraisal and interpretation.
6. Preparation of a CI in general accordance with NSW EPA (2020) Consultants Reporting on Contaminated Land Guidelines.
7. Based on a review of available data from historical and recent assessment works, and observations made during fieldwork, Tetra Tech concluded that:
   a. Exceedances of the health-based criteria for lead occurred in one (1) sample from sample location BH10. The risk associated with lead health-based exceedance is considered to be tolerable, given it will continue to be isolated below a hardstand surface as part of the proposed campus student accommodation with commercial only on ground floor and public domain development.
   b. Exceedances of the ecological based criteria for concentrations of benzo(a)pyrene and copper in two (2) samples at two (2) sample locations (BH17 (benzo(a)pyrene) and BH18 (benzo(a)pyrene and copper)). However, the risk associated with these impacts is considered tolerable, given the proposed use of the Site is for campus student accommodation with commercial only on ground floor with associated public domain.
   c. No suspected asbestos continuing material was observed across Lot 2 DP 1247375.
   d. Heavy metals detected within groundwater samples are considered to be associated with regional groundwater characteristics from historical industrial operations and reclamation of inundated areas with uncontrolled fill material. Ammonia concentrations detected in monitoring well MWP45, are attributed to decay of organic matter as part of the nitrogen cycle over time under low oxygen conditions.

Based on the conclusions presented above, Tetra Tech considered that no unacceptable health risk attributed to land contamination was identified at Lot 2 DP 1247375.

Potentially unacceptable ecological risk was identified as locations BH17 and BH18, however is unlikely to require remediation because introduced vegetation is reasonably expected to be planted in an imported commercial growing medium. Future use of both Sites for academic and student accommodation (accommodation, with non-residential use at ground level) would not require consideration to ecological receptors.

Lot 2 DP 1247375 was considered suitable for the proposed campus student accommodation and associated public domain provided remediation is completed under a RAP.

Lot 2 DP 1247375 when developed into campus student accommodation and associate public domain, would be required to be appropriately managed under a Long-term Environmental Management Plan (LTEMP) for interim and future uses depending on the remedial design adopted. The LTEMP would be prepared to manage environmental risk posed to construction workers, and to the surrounding public and environment, by construction excavation activity and to manage waste in accordance with appropriate New South Wales statutes.

Revisions to the interim concept plan and future re-development at Lot 2 DP 1247375 (depending on the final design) may require additional remedial works that may consist of the excavation, relocation and re-burial within the footprint of future buildings and/ or hardstand surfaces. This would need to be undertaken in accordance with a revision to the RAP.

Both the RAP and EMP should include an appropriate Unexpected Finds Procedure (UFP), to provide a procedure for emergency response should additional visible ACM material, or any other unknown contamination, be uncovered during site redevelopment.

3.3.1 Asbestos in Fill

Sample collection, screening and analysis was completed in general accordance with Section 11.3.2 of Schedule B2 of the ASC NEPM and included the following:

- Fill material was collected from each borehole and test pit location and initially placed into 15L of plastic bulk bags.
- Samples were collected from surface level to an approximate depth of 0.2 mbgs.
- Tetra Tech notes that samples collected at borehole locations obtained using a 300mm diameter auger attachment in order to collect a sufficient sample. Sampling depth ranges would typically range from surface to approximately 0.2 to 0.3mbgs.
- A 10L sub-sample was taken from the bulk sample and was weighed and screened through a 7mm x 7mm sieve. The material retained on the sieve was examined for the presence of any cement sheeting fragments or other material with the potential to contain asbestos. Any suspect asbestos material retained on the sieve was collected and placed in double zip lock bags.
- 500ml of screened soil was collected and placed in double zip lock bags and with samples of any suspect material retained on the sieve was forwarded to the laboratory for analysis.

Tetra Tech notes that for samples collected from boreholes BH39 to BH44, were less than the required 10L and due to a narrower auger (150mm) being used to drill these locations and the sample material sieved containing a higher proportion of aggregates and cobble sized rock, less than 500ml of screened sample was forwarded to the laboratory for a quantitative asbestos analysis. Therefore, the analytical results from these borehole locations were reported with an LOR of 0.01% w/w.

During the assessment fieldworks, material with the potential to be asbestos containing (e.g. cement sheeting) was not observed.

No asbestos fines less than 7mm x 7mm were found during laboratory analysis of field screened 500ml soil samples. The weight of asbestos in the 500ml samples were reported less than the 0.001% w/w Health Screening Levels for asbestos fines/ friable asbestos. No asbestos fibres were identified by trace analysis using polarised light microscopy.

Analytical results from analysed screened samples less than 500ml (due to coarse fraction inclusions) at locations BH39 to BH34, submitted for analysis were reported to be less than 0.01% w/w. No asbestos fibres were identified by trace analysis using polarised light microscopy.

3.3.2 Groundwater Contamination Status

The presence of heavy metals in groundwater at concentrations above the marine water default guideline values were identified during the GME.

Known heavy metal impacted filling material within the Honeysuckle area is considered the likely cause, and that impact by heavy metals on groundwater is a regional factor and the likelihood that the Site alone has contributed materially to heavy metal contamination in groundwater is low.

Reported ammonia concentrations are likely to be related to natural decay of organic matter in layers of alluvium within the former Honeysuckle Shoreline, which has broken down as part of the nitrogen cycle over time under low oxygen conditions. Tetra Tech acknowledges that processes at the former Newcastle steelworks and the ICI facility on Kooragang produced ammonia in waste liquids released to the Hunter River under licence, however, Tetra Tech considers that these secondary sources are unlikely to act as a potential source of ammonia in groundwater beneath the site.

When Lot 2 DP 1247375 is occupied with building footprint, paved with a hardstand surface or landscaped as part of the proposed development comprising commercial/ student accommodation or for interim car parking,

Tetra Tech expects that any heavy metals and ammonia in groundwater beneath Lot 2 DP 1247375 will have less potential for movement because recharge of shallow groundwater will be substantially reduced due to the presence of building footprints, hardstand surfaces, imported growing medium or pavement over most of the currently unsealed areas.

3.4 CI ADDENDUM SUMMARY

An addendum to the CI (*Addendum to the Phase I Preliminary Site Investigation and Phase II Detailed Site Investigation (Tetra Tech Reference: 754-NTLEN274023-R02, Rev 1, dated 04 December 2023*) (Addendum CI) was required to address the data gap represented by the substation and the former turntable, which were not able to be assessed at the time of the CI.

The additional assessment included planning and fieldworks, which comprised:

- Preparing and implementing a project specific health, safety, environment and quality (HSEQ) plan for
- Tetra Tech's field-related activities.
- Location of underground services by a qualified and experienced service locator prior to intrusive works commencing.
- Field assessment program, including:
  - Soil sampling from six boreholes (BH01 to BH6A).
  - Soil sampling from five test pits (BH07 to BH11).
  - Groundwater sampling from two newly installed groundwater monitoring wells (MW06 and MW07).
  - Groundwater sampling from three existing groundwater monitoring wells (MW01, MW05 and
  - MWP45).
- Laboratory analysis for COPCs for soil and groundwater included:
  - Soil - Total Recoverable Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX),
  - Polycyclic Aromatic Hydrocarbons (PAH), Organochloride/ Organophosphate Pesticides (OCP/ OPP),
  - Polychlorinated Biphenyls (PCBs), Heavy Metals (arsenic, cadmium, chromium, copper, lead,
  - mercury, nickel and zinc) and Asbestos.
  - Groundwater – TRH, BTEX, PAH, OCP, PCB and Heavy Metals.
  - Data appraisal and interpretation.
  - Preparation of an Addendum to the CI report in general accordance with NSW EPA (2020) *Consultants Reporting on Contaminated Land Guidelines*.

Based on the observations made during fieldworks and analytical findings from investigations completed to date at the Site, Tetra Tech concludes that:

- Health based exceedances were reported from within the locomotive turntable area. The exceedances were for lead and asbestos containing material associated with the placement of controlled filling material. Material within the turntable area presents a potential human health risk posed to maintenance and construction crews as well as the general public if not adequately remediated and/ or managed.
- Heavy metal exceedances were reported for arsenic, copper and lead above the ecological based criteria from within the turntable area. Due to the assessed health-based exceedances, and as the turntable is proposed to be repurposed as part of future development works, it is anticipated that this area would require the remediation to enable the proposed recreational land use.
- Heavy metals detected within groundwater samples are considered to be associated with regional groundwater characteristics from historical industrial operations and reclamation of inundated areas with uncontrolled fill material.

- Potential top-down contamination from the substation was not detected from boreholes and/ or monitoring wells assessed.

Based on the conclusions presented above, Tetra Tech considers that material from within the locomotive turntable area currently presents an unacceptable human and ecological health risk. Additional assessment within soils below the sub-station was not completed due to its live status.

Based on the findings from the additional assessment works within the turntable area, a revision was made to the Tetra Tech (2023) *Honeysuckle City Campus Development Project: Remediation Action Plan, Site 2 and 3 Development (Reference No. 754-NTLEN213472-R07 Rev1, dated 4 December 2023)*. The revised Stage 1B RAP was reported in *Tetra Tech (2024) City Campus Student Accommodation Project, Remediation Action Plan, Stage 1B Development (Ref. 754-NTLEN213472-R07 Rev 3, dated 2 April 2024)*. The Site would be required to be appropriately managed under a Long-term Environmental Management Plan (LTEMP) for future uses depending on the remedial design adopted.

3.4.1 Data Gaps

At the time of undertaking additional assessments of the turntable and substation as part of the Tetra Tech CI Addendum, the substation was still in operation, therefore the contamination status within the footprint of the substation is currently unknown and will require assessment once it is decommissioned and the structure demolished.

4. CONCEPTUAL SITE MODEL

4.1 POTENTIAL CONTAMINATION SOURCES AND ASSOCIATED CONTAMINANTS OF CONCERN

A summary of the potential contamination sources and the associated Contaminants of Potential Concern (COPCs) associated with the Site is presented in Table 4-1.

Table 4-1: Sources of Contamination and Associated Contaminants of Concern

AEC	Potentially Contaminating Activity	COPCs	Likelihood of Contamination	Comments
The whole of Site	Fill of Unknown Origin and Quality	Heavy metals, and asbestos	Moderate to High	Historic filling of the Site with fill of unknown origin. Similar observations to previous assessments were made during the Tetra Tech's 2021 assessment. ballast, coal chitter, building waste, slag, steel fragments and mollusc shells. The north-west portion of the Site was subject to land reclamation (likely dredged sands and other imported material).
Substation	Refurbishment or upgrades to the subject resulting in the contamination of soils or groundwater. Fill of unknown origin and quality Pest control	TRH, PAH PCBs, OCPs, lead and asbestos	Low to Moderate	Based on the observations and analytical findings (both soil and groundwater), the potential for contamination impact from the following influences is low: • Capacitors containing COPCs to have leaked during maintenance or refurbishment works. • Improper demolition or removal of materials containing hazardous materials. • Impact from the use of pesticides within cable trenches is low. We note that given the live status of the substation, there is a potential for top-down migration of contamination into the substation footprint not intercepted as part of the additional assessment works.
Former Locomotive Turntable	Impact to underlying and surrounding media from spills and leaks of diesel and fallout from ash from steam engines Potential maintenance and repair activities.	TRH, BTEX, PAH PCBs, lead and asbestos	Low	Impact to soil and groundwater from maintenance and repairs.

	Fill of unknown origin and quality placed following closure.	Heavy metals, TRH and asbestos	High	Based on observations and analytical results, the material used to backfill the turntable was a mixture of blast furnace slag, waste fill and demolition waste.
Areas around former structures **Historical rail line and support buildings** **Machinery maintenance**	Potential Weathering of Hazardous Building Materials Improper Demolition of Former Structures	Asbestos and lead	Moderate to High	Weathering of hazardous building materials such as lead paint, asbestos and other building materials such as galvanised iron. Potentially present from former site structures.
Railway Line	Mechanical repairs to former machinery (steam and diesel engines, steam boilers and/ or pipe lagging) within the within and adjacent to the former rail corridor	TRH, heavy metals and asbestos	Moderate	There is the potential for petroleum hydrocarbons used in the maintenance of trains and other machinery associated with the railway line to have leaked/ spilled. Asbestos and heavy metals are also likely to have impacted the railway corridor from train operations and maintenance. Potential use of fill material of unknown quality or origin may have been imported for the construction of the railway line. There is potential for top-down migration from contamination through surface soils into underlying groundwater.

Total Recoverable Hydrocarbons (TRH), Benzene, Toluene, Ethylbenzene and Xylene (BTEX), Polycyclic Aromatic Hydrocarbons (PAH), Polychlorinated Biphenyls (PCBs), Organochlorine Pesticides (OCP), heavy metals (arsenic, cadmium, chromium, copper, lead, mercury and zinc).

4.2 SOURCE CONTAMINATION, TRANSPORT MECHANISMS, PATHWAYS AND RECEPTORS

A summary of the potentially affected media, key potential receptors and transport mechanisms is presented in Table 4-2.

Table 4-2: Source Contamination, Transport Mechanisms and Receptors

Primary Sources	Secondary Sources	Transport Mechanisms	Exposure Routes	Exposure Receptors
The whole of Site **Substation** **Areas around former structures** **Historical rail line and support buildings** **Machinery maintenance** **Railway Line** **Machinery maintenance activities** **Locomotive Turntable**	Impacted fill and shallow natural soils (from about 0.3m to 1.0m) from potential leaching of COCs from contaminated fill into underlying soils and/ or groundwater	• Leaching from soil to groundwater and movement with groundwater seepage • Surface water runoff • Dust generation during construction and/ or mobilisation by wind from unsealed surfaces	• Soil Ingestion • Dermal Contact with Soil • Outdoor dust inhalation • Incidental ingestion of groundwater • Dermal contact with groundwater	• Site Users • On Site Workers • Construction Workers • Maintenance Workers • Ecological – surface water, aquatic ecosystems, transitory wildlife

4.3 KEY EXPOSURE PATHWAYS

A summary of the key potential exposure pathways is presented in Table 4-3.

Table 4-3: Key Potential Exposure Pathways

Receptor/ Media	Exposure Pathway	Comment
Maintenance/ Construction Workers	Potentially Complete	There is a potential for workers involved in excavation to be exposed to soils containing contaminants via dermal contact, ingestion and inhalation pathways (particularly asbestos) during redevelopment work, and any ongoing maintenance works.
Current and Future Site Users	Potentially Complete	Unsealed surfaces may present a potentially complete pathway to dermal contact, and ingestion of soils.
	Potentially Incomplete	Sealed surfaces or surfaces covered with grass are likely to have an incomplete pathway for those accessing the Site as the exposure is likely for short periods of time.
Ecological	Potentially Complete	Leaching of COPCs into surface water runoff and/ or groundwater likely given the Site is largely unsealed, therefore a complete pathway would probably exist. Surface water runoff has the potential to transport sediment containing COCs from unsealed surfaces during rainfall events into stormwater drainage systems. Given the distance to the nearest receptor a complete pathway may only exist during periods of heavy rain or storm events.
Groundwater	Potentially incomplete	There is a potential for workers in a shallow trench to be exposed to groundwater containing dissolved metals via dermal contact and incidental ingestion during development or maintenance works given groundwater is less than 5mbgs.

5. MANAGEMENT PLAN FOR EXCAVATIONS

Excavations proposed for the works include trenching for the installation of utilities and services including telecommunications, gas, water and sewer. Most of the excavations with be relatively shallow i.e. <1.0 metres below ground surface (mbgs) with the exception of sewer which will be installed at a typical depth of approximately 5mbgs and lift shafts which may extend 3 – 4mbgs.

For proposed excavations within fill materials during works, the following procedures must be followed.

- Preparation of a Construction Environment Management Plan (CEMP) for excavations noting the depth location, depth and potential volume of excavated material, and management procedures for handling excavated fill including appropriate PPE. The CEMP should reference this Contaminated Land Management Plan.
- During excavations, carry out a visual assessment of excavations and stockpiles to check that excavated materials do not include potentially contaminated materials. Section 5.1 outlines indicators of potential contamination. Should contaminated material be encountered, a suitably qualified environmental consultant should be engaged, and the steps outlined in Section 5.3 implemented.

5.1 VISUAL ASSESSMENT OF MATERIAL

The excavated materials will be visually assessed for indications of contamination as they are excavated and/or moved around the Site. The visual assessments will be used to identify indicators of potential contamination or areas of contamination previous identified (i.e. lead and asbestos). Such indicators will include:

- Soils that exhibit a strong odour.
- Soils that appear to be oil-stained, fibrous or have unusual colours.
- Soils that contain lead slag materials, are black, metalliferous or shiny.
- Soils that contain asbestos containing material (ACM) (e.g. cement sheeting, insulation, pipe lagging, building materials with a sprayed covering (e.g. vermiculite) etc) and other building materials.

If potentially contaminated materials are identified, these will either be:

- Stockpiled in a location separate from the other site works and further assessed, in accordance with the procedures outlined in the following sections. OR
- Be left in-situ undisturbed (where practicable) and further assessed, , in accordance with the procedures outlined in the following sections.

Should unexpected materials be identified within site soils, the Unexpected Finds Protocol presented in Section 7 must be implemented.

5.2 MATERIAL TRACKING

During works, the Site Superintendent/ Principal Contractor will be responsible for the tracking of soil and fill materials that are imported to the Site, and removed from the Site, to provide required information for Site validation following removal of impacted soils.

Accurate records must be maintained to ensure that, on-site reuse of excavated soil is consistent with site acceptance criteria. A register of validation samples collected from excavations and stockpiles will be maintained by the environmental consultant. Any required validation activities should be carried out by a suitably qualified environmental consultant in accordance with the relevant NSW EPA endorsed guidelines (if required).

Material tracking forms will be used during works to provide relevant information about:

1. **Off-site Reuse / Disposal Form**: provides a record of the soil-like materials removed from the site including the type, volume, origin and approved fate of the material based on advice from the environmental consultant.
2. **Material Stockpiling Form**: provides a record of soil-like material temporarily placed in stockpiles within the site including the type, origin, volume and temporary on-site storage location of the material. Where known, the intended fate of the material would also be documented. This form would be used for material excavated from the site awaiting beneficial on-site reuse and/or off-site disposal, and material imported to the site for use as fill.
3. **Imported Materials:** Must be tracked as per the following requirements and the following information shall also be recorded:
    - Truck and/or bin registration number
    - Origin of material
    - Material type
    - Approximate volume
    - Relevant classification document
    - Proposed use onsite
    - Proposed location for use
    - Observations and photographs of material and confirmation it matches approved material.

In addition to the above forms, copies of weighbridge dockets from off-site disposal and importation of material will be retained by the Site Superintendent/ Principal Contractor.

5.3 MANAGEMENT OF POTENTIALLY CONTAMINATED MATERIAL

5.3.1 Temporary Stockpiling

These general procedures will be followed during stockpiling of excavated potentially contaminated material:

- Potentially contaminated material (including slag) should be separated (if possible) and stockpiled separately from other stockpiled soils in an isolated area of the Site.
- Access to stockpiles of potentially contaminated fill will be limited by keeping the stockpiles within the site's fencing.
- Stockpiles will be placed on level ground. Stockpiles will not be placed on slopes greater than 5°.
- Stockpiles will be placed on strong impermeable plastic sheeting such as high-density polyethylene (HDPE). If this procedure is not followed there is the potential for contaminants to migrate into the surface soils.
- The stockpile heights will be kept to a maximum of approximately 2m.
- Where stockpiles are proposed to remain in a location overnight, the stockpiles will be covered by weighted HDPE sheets or tarpaulins to prevent erosion of stockpiled materials. Heavy objects not containing sharp edges will be placed on the sheets to prevent them from being blown by winds.
- Adequate hay bales and/or silt fences will be placed around the perimeter of the stockpile area to filter runoff from the stockpiles and prevent overland stormwater flow from affecting the base of the stockpiles; and
- A stormwater diversion bund will be created up gradient of the stockpiles to prevent stormwater running through the stockpiles.

The stockpiles should be assessed by a suitably qualified environmental consultant, in accordance with Section 5.3, as soon as practical, to remove the risk of stockpiling potentially contaminated materials on site.

5.3.2 Management of Open Excavations

Excavations resulting from the removal of potentially contaminated soil will be barricaded in order to restrict access to the excavation areas. Appropriate warning signs will be placed around the excavations, in accordance with applicable regulations and codes of practice.

The excavations will remain barricaded until such time when the excavations have been validated and backfilled (where appropriate).

The validation of excavations should be carried out by a suitably qualified environmental scientist, in accordance with Section 5.3, as soon as practical, to remove the risk of open excavations on site.

5.3.3 Haulage of Soils

Trucks transporting soil or imported fill to and from the site must be covered to prevent dust generation. Dust generation from movement of material within the works boundaries should also be minimised either by covering the load or by wetting the load down prior to transport from one section of the site to the next. The following procedures will be followed on-site to limit the potential for transport of soil/dust off-site via vehicular movement:

1. Vehicles, plant and equipment on the site at any one time will be kept to a practical minimum.
2. Vehicles, plant and equipment entry to and exit from the site will be kept to a practical minimum.
3. Movements within site to use defined haul roads.
4. Transport of loads within the site boundaries (cut to fill activities) should minimise the generation of dust (covering or wetting down the loads).
5. Plant and equipment will be washed down before it leaves the Site.

5.3.4 Assessment of Potentially Contaminated Stockpiled Materials

Sampling of Stockpiles

Assessment of stockpiles for re-use on site, or to provide waste classification to allow disposal to landfill, the stockpile sampling will be undertaken in accordance with Section 6.4 of the Stage 1B RAP, with consideration to the following:

- Soil samples from large stockpiles will be taken with the aid of excavators to provide representative samples of material from within the stockpiles.
- Samples will be taken from the centre of the excavator bucket in order to minimise the potential for cross-contamination.
- A clean pair of disposable gloves will be worn when collecting each sample.
- Samples will be kept chilled while in the field and in transit to the laboratory.
- Where stockpiles are not placed on impervious material, sampling of the stockpile footprints at a rate of 1 sample per 25m^2, with a minimum of 3 samples collected.

5.3.5 Laboratory analysis for stockpile disposal to landfill

Where required, the stockpile waste classification samples will be dispatched to a NATA-accredited laboratory for analysis. Each sample will be analysed for the following suite of contaminants:

- TRH.
- BTEX.
- PAH.
- Asbestos (Presence/Absence)
- Heavy Metals.

In addition, selected samples may be analysed for leachability using the Toxicity Characteristic Leaching Procedure (TCLP), based on the initial results.

The volume and type of waste material will be tracked using the relevant material tracking form as described in Section 5.2.

Classified waste is to be transported to an appropriately licensed facility. In some cases (i.e. disposal of special (asbestos) waste), disposal approval may be required from the landfill prior to transportation.

5.3.6 Requirements for Material Transport

Minimum requirements for transport of material from the Site are:

1. All material transported off-site by a licensed contractor.
2. Excess dust or load material will be removed from the outside of the truck (and dog where relevant) prior to leaving the site. This may require on-site a wheel wash or spray wash to dislodge excess material. Where soil is tracked outside the site, it will be promptly cleaned up in a manner that does not adversely affect the surrounding land, surface water bodies or local stormwater system.
3. Trucks will be covered prior to leaving the site and throughout travel to the disposal site.
4. Trucks will enter and exit the site in predetermined points and will follow strict transport routes to and from the disposal site/s.
5. Trucks will not wait in the streets surrounding the Site.

5.3.7 Licenced Waste Disposal Facilities

The following facilities detained below in Table 5-1 are licenced to accept various types of contaminated soils that may be required to be disposed during the works.

Table 5-1: Waste Facilities and Types of Waste Accepted (Newcastle)

Waste Facility	Address	Environmental Protection Licence	Waste Accepted
Summerhill Waste Management Centre	141 Minmi Rd, Wallsend NSW 2287	5897	General Solid Waste, Special Waste Asbestos
Cleanaway Technical Services	Raven Street, Kooragang, NSW 2304	6124	Various Hazardous and Restricted materials including contaminated soil and liquids

5.3.8 Reuse on-site

Excavated soils with contaminant concentrations below the site assessment criteria may be reused on-site. The material should be assessed for its potential to pose unacceptable risk to human and ecological receptors, and for aesthetic quality in the context of future use of the placement area. The material will be considered unsuitable for reuse if potential unacceptable risk or unacceptable aesthetic quality is identified.

Where appropriate, soil samples shall be analysed for site COPCs, which include the following:

1. Heavy Metals (Arsenic, Cadmium, Chromium (total), Copper, Mercury, Nickel, Lead and Zinc)

2. TRH.
3. BTEX.
4. PAH.
5. Asbestos (Presence/Absence) or assessment in line with the WA Asbestos guidelines and the ASC NEPM should a specific assessment of asbestos concentrations be required for a specific land use setting.

Depending on the findings from additional assessment completed, additional analytes may be required to be analysed to assess the suitability for on-site re-use purposes (e.g. PCB, OCP etc.).

5.3.9 Validation of Excavations

Excavations resulting from the removal of potentially contaminated material will need to be validated prior to works re-commencing in those areas. Validation will be required in order to assess whether the potentially contaminated material has been adequately removed, or if further excavations or management of the material are necessary.

The methodology for validation sampling is provided in Section 6.4 of the Stage 1B RAP. Typically, validation samples are collected at a frequency of one per 25m^2 on bases and 1 per 10 linear meters on walls of excavations based on the NSW EPA (2022) Sampling Design: Part 1 Application. Depending on the size of the excavation, the environmental consultant will assess the validation sampling frequency.

The validation samples would be tested for the chemicals of concern identified, as outlined in Section 5.3 above.

6. SAFETY AND ENVIRONMENTAL MANAGEMENT PROCEDURES

During excavations, the following management measures will be adopted:

6.1 PERSONAL PROTECTIVE EQUIPMENT

In order to reduce short and long-term health risks associated with the potential exposure to the chemicals of concern, the minimum level of Personal Protective Equipment (PPE) required for people, during the enabling works, is listed below:

- **Body Protection.** High-visibility clothing should be worn on-site as per Contractor requirements
- **Head Protection.** Personnel working around excavation equipment will be required to wear a hard-hat. The hard hat must be in date, worn properly and not altered in ways that would lessen the degree of protection offered.
- **Eye Protection.** Eye protection is required to prevent eye injuries resulting from contact with dust, contaminated soil or liquid. Safety glasses are required to be worn by site personnel during the works.
- **Foot Protection.** Steel toed boots without laces will be worn by on-site personnel.
- **Skin Protection.** Long sleeves and trousers are to be worn. Skin protection will be required to prevent absorption of contaminated soil into the body. Gloves will be worn by personnel involved in site activities which will come into contact with contaminated soil or liquid. Sunscreen (SPF +30) shall also be worn to protect exposed skin areas not covered by PPE from the sun.
- **Hearing Protection.** Site workers will be required to have hearing protection (ear plugs or earmuffs) on site during works. Personnel who are likely to be exposed to high noise levels on site will be required to wear hearing protection.

Site personnel will be made aware during induction and at toolbox meetings that PPE required to be worn may limit manual dexterity, hearing, visibility and may increase the difficulty of performing tasks. PPE places an additional strain on the user when performing work that requires physical activity.

Eating, drinking, chewing gum or tobacco, smoking or other practices that involves hand to mouth transfer increases the probability of ingestion of foreign matter into the body. Hands must be thoroughly washed before eating, drinking or smoking.

6.2 STORMWATER MANAGEMENT AND SEDIMENT CONTROL

Adequate stormwater runoff, run-on and sediment control measures will be put in place for the excavation works. The measures should form a Soil and Water Management Plan, a sub-plan top the CEMP to be prepared by the Site Superintendent/ Principal Contractor for the works.

Where temporary stockpiling of material is required, the stockpiles would need to be managed in a way to prevent harm to the environment and general public from potentially contaminated soils within the stockpiles. Section 5.3.1 provides guidance on managing stockpiled material.

6.3 DUST CONTROL AND AIR MONITORING

Dust control is required to prevent airborne dust being inhaled by human receptors. Airborne dust may be generated by wind action from loose earth left on the ground. This could cause migration of contaminated dust, as well as cause a nuisance for the surrounding area and must be controlled. A comprehensive Air Quality Management Plan, A sub-plan to the CEMP to be prepared by the Site Superintendent/ Principal Contractor for the works.

The following management measures should be implemented to prevent dust impacts.

- A communications and complaints register should be kept on site to ensure that concerns of local residents and workers are recorded and addressed.
- Boundary fences should be maintained around the perimeter of the site to prevent dust from migrating laterally from these areas.
- Excavated soils should be watered as required to minimise the potential for dust generation.
- If dust migration from excavation areas is considered excessive due to high winds, the works should be delayed or limited during these periods.
- Trucks removing material from the site should have loads covered.
- Vehicular movements entering and exiting the site should be kept to a minimum; and
- Works should be limited during times of high winds.

6.4 WORKS WITHIN THE NEWCASTLE CITY COUNCIL WORKS CORRIDOR

Any works that are conducted within the CN services corridor on or through lands under the control of the Council will be required to be undertaken in general accordance with the Newcastle City Council, *Newcastle Technical Manual Contaminated Land Management, 2012.* The document outlines the procedures and requirements for the management of contaminated materials encountered on Council lands. The technical manual has been included as Appendix B of the attached Unexpected Finds Protocol.

7. UNEXPECTED FINDS PROCEDURES

7.1 PURPOSE

This procedure outlines a methodology for consistent response and management of unexpected finds during proposed enabling, early and development works. This procedure considers heritage obligations under the Heritage Act 1977 (NSW), National Park and Wildlife Act 1974 (NSW), *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth)* and the *Coroners Act 2009 (NSW)*.

7.2 SCOPE

This procedure applies to all contractors and sub-contractors conducting excavation works at the Site including any support of works. These include the installation of service trenches, stormwater drains and all bulk earthworks activities.

This procedure considers that an application for a Project specific Aboriginal Heritage Impact Permit (AHIP) has been applied for under Section 90 of the National Parks and Wildlife Act 1974 to manage harm or potential harm to Aboriginal objects and places. Detailed investigations undertaken as part of the AHIP process notwithstanding, unexpected heritage items may still be unearthed during excavation works being undertaken on site. This procedure is applicable in those cases and triggers a cessation of work and guides on the relevant processes of seeking technical advice and regulatory notification.

7.3 APPLICABLE LEGISLATION AND PROCEDURES

- *Heritage Act 1977 (NSW).*
- *National Parks and Wildlife Act 1974 (NSW).*
- *Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth).*
- *Coroner's Act 2009 (NSW).*
- *Unexpected Heritage Items 2015 (RMS).*

7.4 TYPES OF UNEXPECTED FINDS

For this procedure an 'Unexpected find' is defined as any unanticipated potential contaminant or archaeological discovery not identified during previous assessments. An unexpected find may include:

- Contaminated materials (including lead slag and ash).
- Buried infrastructure (e.g. underground storage tanks, pipes, footings).
- LNAPL (Light Non-Aqueous Phase Liquid)/DNAPL (Dense Non-Aqueous Phase Liquid) contamination.
- Asbestos.
- Potential acid sulphate soils.
- Aboriginal and Non-Aboriginal Heritage artefacts.
- Human skeletal remains.

7.5 GENERAL INITIAL RESPONSE

If during works, there is any unexpected find the following applies:

- Cease Work Immediately and notify the Site Supervisor.

- Identification and classification of the find (Aboriginal/European Heritage, buried infrastructure, possible ACM, Contaminants).
- Evacuate and Isolate the area.
- Provide PPE to workers as required (for contaminated material including Underground Storage Tanks (UST's), pipes, ACM.
- Photograph the find and mark the identified location using a GPS.
- Install temporary fencing and signage.
- Notify the University Health and Safety representative.
- Execute a toolbox talk to all site staff to communicate the hazard and associated responses; and
- Notify the University and Engage specialist consultants as required.

7.6 MANAGEMENT OF ASBESTOS

Asbestos places worker health at risk when elevated levels of asbestos fibers are breathed into the lungs. The Safework NSW guideline for Managing Asbestos in or On Soil, 2014 states the following regarding asbestos exposure:

"The likelihood of exposure occurring depends upon the potential for the asbestos material to release fibres, whether the asbestos material is contained or covered, and any operational control measures or personal protective equipment which have been applied to limit the generation and/or inhalation of airborne fibres.

Non-friable asbestos, previously referred to as 'bonded asbestos', in sound condition represents a low human health risk. However, friable asbestos materials or damaged, crumbling bonded asbestos, have the potential to generate, or be associated with, free asbestos fibres and therefore must be carefully managed to minimise the release of asbestos fibres into the air."

If in situ soil (surface/fill) or stockpiled material is suspected to contain asbestos, the Site Supervisor should be informed immediately. It should be assumed that the soil is asbestos impacted, and work immediately ceased. A suitably qualified environmental consultant or LAA, should be contacted to sample the material for confirmation of asbestos presence and type (friable or bonded).

If confirmed, the Site Supervisor must ensure the implementation of asbestos management procedures as outlined in an approved project specific Asbestos Management Plan (AMP) to be prepared by the building contractor and included as a sub-plan within their CEMP. The control measures will include but not be limited to:

- Identifying contaminant boundaries as determined by an independent LAA or suitably qualified environmental consultant.
- Minimize disturbance to in situ soils or stockpiles containing potential ACM until the asbestos management procedures have been implemented.
- Isolating, securing and clearly identifying the area of potential ACM impact site using signs and barriers.
- Application of dust reduction/control measures such as spraying of water and application of wetting agents.
- Providing workers with appropriate PPE based on the suspected level of contamination and the control measures implemented.
- Sampling of the suspected contaminated materials and/ or air monitoring either by an LAA or suitably qualified environmental consultant.
- Execute a site toolbox talk focused on the provision of information to workers on hazards and safe work practices to minimise airborne dust exposure.

A LAA should be engaged, and a comprehensive assessment conducted as required. If asbestos is confirmed, any impacted material must be removed by a licensed asbestos removalist and a clearance certificate obtained from a LAA.

7.6.1 Disposal of Bonded Asbestos Materials

Handling and disposal of asbestos waste will be carried out in accordance with an approved AMP prepared by a suitably environmental consultant and executed by a Licensed Asbestos Removal Contractor (LARC). The following general procedures would be undertaken, but do not constitute an AMP.

Hand-picked asbestos waste (i.e. removal of bonded asbestos fragments) removed during the construction works shall be collected and double bagged in heavy duty, low density polyethylene 0.2mm thick bags. A maximum bag size of 1,200mm (length) x 900mm (width) shall be used and bags shall be filled to no more than 50 per cent capacity.

The bags must be labelled as containing “Asbestos Waste” and that dust inhalation must be avoided. The bags are to be ‘double-necked’ and sealed by wire ties or tape. The bags shall then be disposed to the nearest licensed facility as asbestos waste. The loaded weight of the bags shall not exceed 20kg each. Each bag or other container shall be labelled on its outermost surface with warning statements.

Bags or primary containers which have held asbestos material shall not be re-used, and containers marked as above shall not be used for other purposes and shall be disposed of accordingly as per requirements for ACM.

Care must be taken to ensure that the integrity of the plastic bags is not damaged during handling or transportation. Vehicles may be checked for cleanliness prior to leaving the work site.

Controlled wetting of waste shall be employed, where practicable, to reduce dust emissions during bag sealing. Excessive water logging shall be avoided as the excess of contaminated water may leak out of the bags, thereby creating a future source of airborne dust.

The asbestos waste shall be disposed of at a landfill licensed to receive asbestos waste in accordance with State and EPA requirements. Documentary evidence (waste disposal dockets) of the disposal shall be collected and provided. This will include name of the authorised waste facility, weighbridge docket and registration number of vehicles for every disposal.

7.7 CONTAMINATED MATERIALS

In the event suspected contaminated materials (lead slag, ash, UST’s, footings, pipes, flowing free phase hydrocarbons, oily wastes odorous or suspicious looking soils etc.) are discovered, steps must be taken to assess the materials and minimize potential impact on the environment. Upon discovering the items work will cease and an assessment of immediate risks carried out by the Site Supervisor and Project Manager.

Following the initial assessment, a suitably qualified environmental consultant will be engaged to assess the short and long-term risks to human health and the environment and provide options for mitigation, management and/or and disposal. Contaminated materials must be assessed for the suitability to be retained for on-site isolation in accordance with measures detailed within the Stage 1B RAP or disposed at a licensed facility under an appropriate waste classification in accordance with the *NSW EPA Waste Classification Guidelines (2014)*.

All contaminated materials on site to be managed in accordance with the CLMP.

7.8 POTENTIAL ACID SULPHATE SOILS (PASS)

Based on the proposed depth of remedial works PASS materials are not expected to be encountered during excavation. However, should PASS be encountered during construction works, appropriate management procedures detailed within the *City Campus Student Accommodation (SSD-61618229) Acid Sulfate Soil Management Plan (Tetra Tech reference: 754-NTLEN274023-R10 Rev 1, dated 8 March 2024)* must be followed.

7.9 SKELETAL REMAINS

During the progression of excavation works bones may be unexpectedly exhumed. If the bones are clearly human in origin, work will cease, access will be prevented to the immediate area by installing barriers and contact the local police immediately. The police may take control of the site for investigative purposes. The bones are not to be touched or disturbed. The coroner will assess the bones to determine if they are under 100 years old. If the bones are assessed to be over 100 years old, they are managed, human or otherwise, as heritage items.

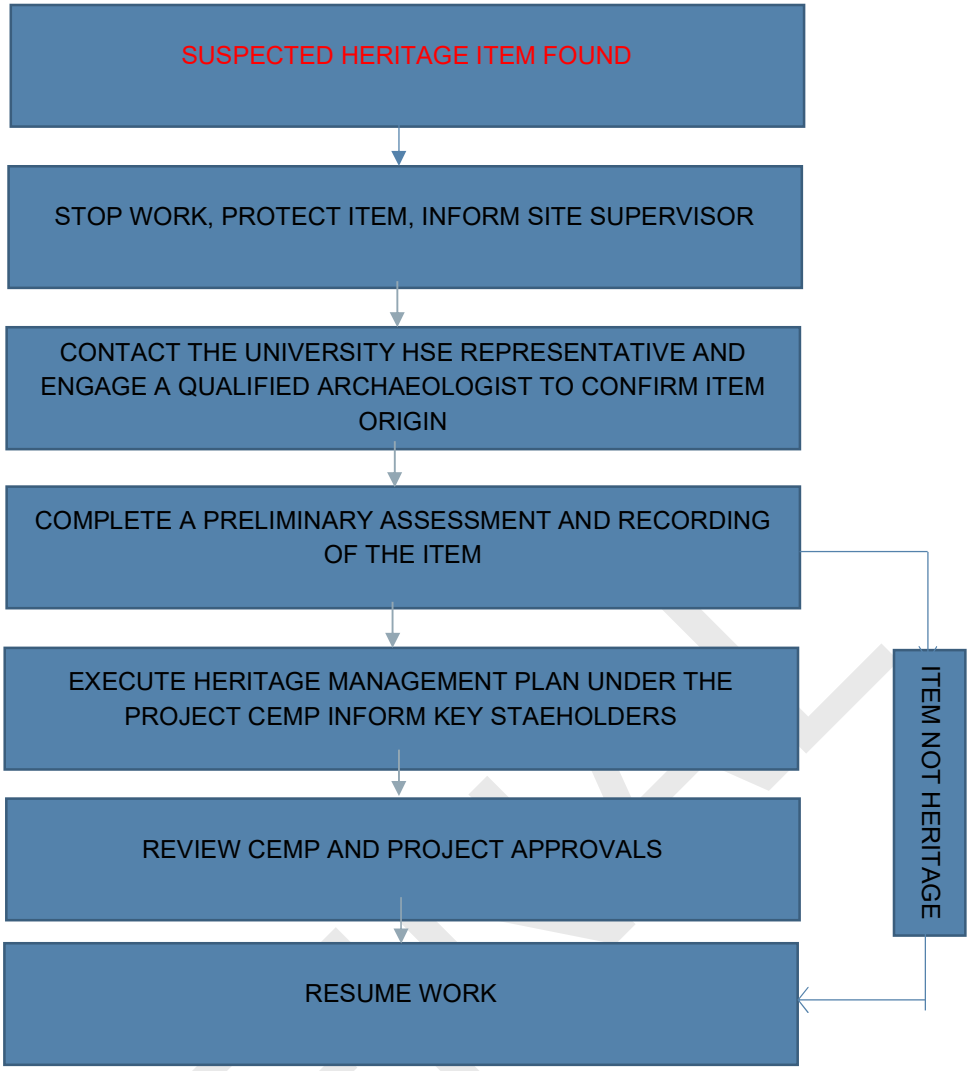
If the origin of the bones cannot be immediately identified as human, a suitably qualified Archaeologist or Anthropologist should be engaged to undertake an assessment of origin. Approval from the coroner, police, Aboriginal groups, Office of Heritage, Anthropologist or the client may be required before bones can be removed.

7.10 ABORIGINAL HERITAGE

The identification of any relic, artefact or material suspected to be of Aboriginal original triggers an immediate cessation of works. The Site Supervisor and or Project Manager shall be notified immediately, who will in turn contact the University Health and Safety (HSE) representative. A qualified archaeologist must be engaged to confirm the find.

Following this, the Site Supervisor and or Project Manager must complete a preliminary assessment and recording of the item. If the item was identified to not be of Aboriginal origin works will immediately recommence following that clearance. Should Aboriginal Heritage items be confirmed the University HSE representative will then notify NSW Police, National Parks and Wildlife Service and Local Aboriginal stakeholders. If an approved Heritage Management Plan exists as part of an approved CEMP this must be executed.

The following flowchart illustrates the required actions following the suspected identification of Aboriginal heritage objects.



The NSW Department of Climate Change, Energy, the Environment and Water – Environment and Heritage. require notification and an AHIP permit is required prior to removal of artefacts. The remediation and construction works will be carried out under an AHIP. Site inductions should include an introduction and awareness to the possible presence of Aboriginal heritage and the expectation and procedures regarding their management. Aboriginal Artefacts could include but not limited to stone tools, shell middens, axe grinding grooves, rock art, burials and scarred trees. Please refer to the included *RMS Unexpected Heritage Items Procedure 2015* included in Appendix C: for further procedural and visual guidance.

8. REFERENCES

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Cth) and the Coroners Act 2009 (NSW).
- CH2M Hill Australia Pty Ltd (1999) Final Phase 1 Report - Wright Lane, Civic - Lot 2 DP 856783 (Reference No: 110067.S21, dated December 1999).
- CH2M Hill Australia Pty Ltd (2012) Final Phase 1 and 2 Environmental Site Assessment prepared for Hunter Development Corporation - Wright Lane, Newcastle (Reference No. 427985, dated 24 February 2012).
- CH2MHill Australia Pty Ltd (2013) Environmental Management Plan, Wright Lane, Newcastle NSW (Reference No: 427985, dated 16 May 2013).
- Coroner's Act 2009 (NSW).
- Contaminated Land Management Act (1997).
- D.J. Douglas & Partners Pty Ltd (1993) Report on Contamination Assessment Proposed Commercial Development Civic Workshop Area, Honeysuckle Project Honeysuckle Newcastle (Reference No: 16670/2, dated June 1993).
- Douglas Partners (2016) Targeted Detailed Site Investigation (Contamination) - Newcastle Urban Transformation and Transport Program Newcastle Rail Corridor (Reference No: 81716.00. R.006.Rev0, dated 28 June 2016).
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- Environmental Resources Management Australia (2007) Environmental Management Plan - Newcastle Track Renewal from Broadmeadow to Newcastle Stations, NSW (Reference No: 0067294RP01 Final, dated 27 October 2007).
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- Environmental Resources Management Australia (2007) Waste Classification of Ballast and Soils - Newcastle Track Renewal from Broadmeadow to Newcastle Station (Reference No: 0067294 RP1 - FINAL.DOC, dated 10 December 2007).
- Heritage Act 1977 (NSW),
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- National Environment Protection (Assessment of Site Contamination) Amendment Measure 1999 (2013) (ASC NEPM)
- NSW EPA (2014) Waste Classification Guidelines: Part 1 Classifying Waste.
- National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No. 1), Volume 2, Schedule B1 (ASC NEPM 1999 (2013).
- Newcastle City Council, Newcastle Technical Manual Contaminated Land Management, 2012
- NSW EPA Resource Recovery Orders and Resource Recovery Exemptions under Part 9, Clause 93 of the POEO Waste Regulations (2014).
- NSW EPA (2020) Consultants Reporting on Contaminated Land – Contaminated Land Guidelines.
- NSW EPA Guidelines for NSW Site Auditor Scheme 3rd Edition (2017).
- Protection of the Environment Operation Act 1997 (POEO Act)
- Protection of the Environment Operations Act (1997) and Waste Regulation (2014, 2016).

- Ramboll Environ Australia Pty Ltd (2016) Site Audit Report – GN 508A, prepared for Urban Growth NSW – Newcastle Rail Corridor, NSW (Reference No: AS121809, dated 29 June 2016).
- RCA Australia (2003) Environmental Site Assessment – Car Park Area off Wright Lane, Honeysuckle (Reference No: 3394-002/0, dated 1 August 2003).
- RMS (2015) Unexpected Heritage Items.
- Site Audit Statement (SAS) WRR15A (Summary Site Audit Report, William Ryall, Contamination Management Pty Ltd, dated 27 September 2002).
- Tetra Tech (2024) City Campus Student Accommodation Project, Remediation Action Plan, Stage 1B Development (Ref. 754-NTLEN213472-R07 Rev 3, dated 2 April 2024).
- Tetra Tech (2024) Phase I Preliminary Site Investigation and Phase II Detailed Site Investigation, City Campus Student Accommodation – State Significant Development Application (SSDA) (SSD-61618229), (Ref: 754-NTLEN274023-R03 Rev 1, dated 4 April 2024)
- Tetra Tech (2023) Sampling and Analysis Quality Plan, Student Accommodation Development at 20 Civic Lane, Newcastle NSW (Lot 2 DP 1247375 and Part Lot 5 DP1247375) (Ref: 754-NTLEN320411-R01-DRAFT, dated 7 July 2023).
- The Work Health and Safety Act (2011).
- Woodward-Clyde (1999) Environmental Management Plan (EMP), Honeysuckle Development Newcastle.

9. LIMITATIONS

In preparing this report, current guidelines for assessment and management of contaminated land were followed. This work has been conducted in good faith in accordance with Tetra Tech's understanding of the client's brief and general accepted practice for environmental consulting.

This report was prepared for the University of Newcastle with the objectives to provide guidance on the management of contaminated materials and other unexpected finds during works. No warranty, expressed or implied, is made as to the information and professional advice included in this report. Anyone using this document does so at their own risk and should satisfy themselves concerning its applicability and, where necessary, should seek expert advice in relation to the particular situation.

We draw your attention to the enclosed sheet entitled "*Important information about your Tetra Tech Coffey Environmental Report*" which should be read in conjunction with this report.

IMPORTANT INFORMATION ABOUT YOUR TETRA TECH COFFEY ENVIRONMENTAL REPORT

Introduction

This report has been prepared by Tetra Tech Coffey for you, as Tetra Tech Coffey's client, in accordance with our agreed purpose, scope, schedule and budget.

The report has been prepared using accepted procedures and practices of the consulting profession at the time it was prepared, and the opinions, recommendations and conclusions set out in the report are made in accordance with generally accepted principles and practices of that profession.

The report is based on information gained from environmental conditions (including assessment of some or all of soil, groundwater, vapour and surface water) and supplemented by reported data of the local area and professional experience. Assessment has been scoped with consideration to industry standards, regulations, guidelines and your specific requirements, including budget and timing. The characterisation of site conditions is an interpretation of information collected during assessment, in accordance with industry practice.

This interpretation is not a complete description of all material on or in the vicinity of the site, due to the inherent variation in spatial and temporal patterns of contaminant presence and impact in the natural environment. Tetra Tech Coffey may have also relied on data and other information provided by you and other qualified individuals in preparing this report. Tetra Tech Coffey has not verified the accuracy or completeness of such data or information except as otherwise stated in the report. For these reasons the report must be regarded as interpretative, in accordance with industry standards and practice, rather than being a definitive record.

Your report has been written for a specific purpose

Your report has been developed for a specific purpose as agreed by us and applies only to the site or area investigated. Unless otherwise stated in the report, this report cannot be applied to an adjacent site or area, nor can it be used when the nature of the specific purpose changes from that which we agreed.

For each purpose, a tailored approach to the assessment of potential soil and groundwater contamination is required. In most cases, a key objective is to identify, and if possible quantify, risks that both recognised and potential contamination pose in the context of the agreed purpose. Such risks may be financial (for example, clean up costs or constraints on site use) and/or physical (for example, potential health risks to users of the site or the general public).

Limitations of the Report

The work was conducted, and the report has been prepared, in response to an agreed purpose and scope, within time and budgetary constraints, and in reliance on certain data and information made available to Tetra Tech Coffey.

The analyses, evaluations, opinions and conclusions presented in this report are based on that purpose and scope, requirements, data or information, and they could change if such requirements or data are inaccurate or incomplete.

This report is valid as of the date of preparation. The condition of the site (including subsurface conditions) and extent or nature of contamination or other environmental hazards can change over time, as a result of either natural processes or human influence. Tetra Tech Coffey should be kept appraised of any such events and should be consulted for further investigations if any changes are noted, particularly during construction activities where excavations often reveal subsurface conditions.

In addition, advancements in professional practice regarding contaminated land and changes in applicable statues and/or guidelines may affect the validity of this report. Consequently, the currency of conclusions and recommendations in this report should be verified if you propose to use this report more than 6 months after its date of issue.

The report does not include the evaluation or assessment of potential geotechnical engineering constraints of the site.

Interpretation of factual data

Environmental site assessments identify actual conditions only at those points where samples are taken and on the date collected. Data derived from indirect field measurements, and sometimes other reports on the site, are interpreted by geologists, engineers or scientists to provide an opinion about overall site conditions, their likely impact with respect to the report purpose and recommended actions.

Variations in soil and groundwater conditions may occur between test or sample locations and actual conditions may differ from those inferred to exist. No environmental assessment program, no matter how comprehensive, can reveal all subsurface details and anomalies. Similarly, no professional, no matter how well qualified, can reveal what is hidden by earth, rock or changed through time.

The actual interface between different materials may be far more gradual or abrupt than assumed based on the facts obtained. Nothing can be done to change the actual site conditions which exist, but steps can be taken to reduce the impact of unexpected conditions.

For this reason, parties involved with land acquisition, management and/or redevelopment should retain the services of a suitably qualified and experienced environmental consultant through the development and use of the site to identify variances, conduct additional tests if required, and recommend solutions to unexpected conditions or other unrecognised features encountered on site. Tetra Tech Coffey would be pleased to assist with any investigation or advice in such circumstances.

Recommendations in this report

This report assumes, in accordance with industry practice, that the site conditions recognised through discrete sampling are representative of actual conditions throughout the investigation area. Recommendations are based on the resulting interpretation.

Should further data be obtained that differs from the data on which the report recommendations are based (such as through excavation or other additional assessment), then the recommendations would need to be reviewed and may need to be revised.

Report for benefit of client

Unless otherwise agreed between us, the report has been prepared for your benefit and no other party. Other parties should not rely upon the report or the accuracy or completeness of any recommendation and should make their own enquiries and obtain independent advice in relation to such matters.

Tetra Tech Coffey assumes no responsibility and will not be liable to any other person or organisation for, or in relation to, any matter dealt with or conclusions expressed in the report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in the report.

To avoid misuse of the information presented in your report, we recommend that Tetra Tech Coffey be consulted before the report is provided to another party who may not be familiar with the background and the purpose of the report. In particular, an environmental disclosure report for a property vendor may not be suitable for satisfying the needs of that property's purchaser. This report should not be applied for any purpose other than that stated in the report.

Interpretation by other professionals

Costly problems can occur when other professionals develop their plans based on misinterpretations of a report. To help avoid misinterpretations, a suitably qualified and experienced environmental consultant should be retained to explain the implications of the report to other professionals referring to the report and then review plans and specifications produced to see how other professionals have incorporated the report findings.

Given Tetra Tech Coffey prepared the report and has familiarity with the site, Tetra Tech Coffey is well placed to provide such assistance. If another party is engaged to interpret the recommendations of the report, there is a risk that the contents of the report may be misinterpreted and Tetra Tech Coffey disowns any responsibility for such misinterpretation.

Data should not be separated from the report

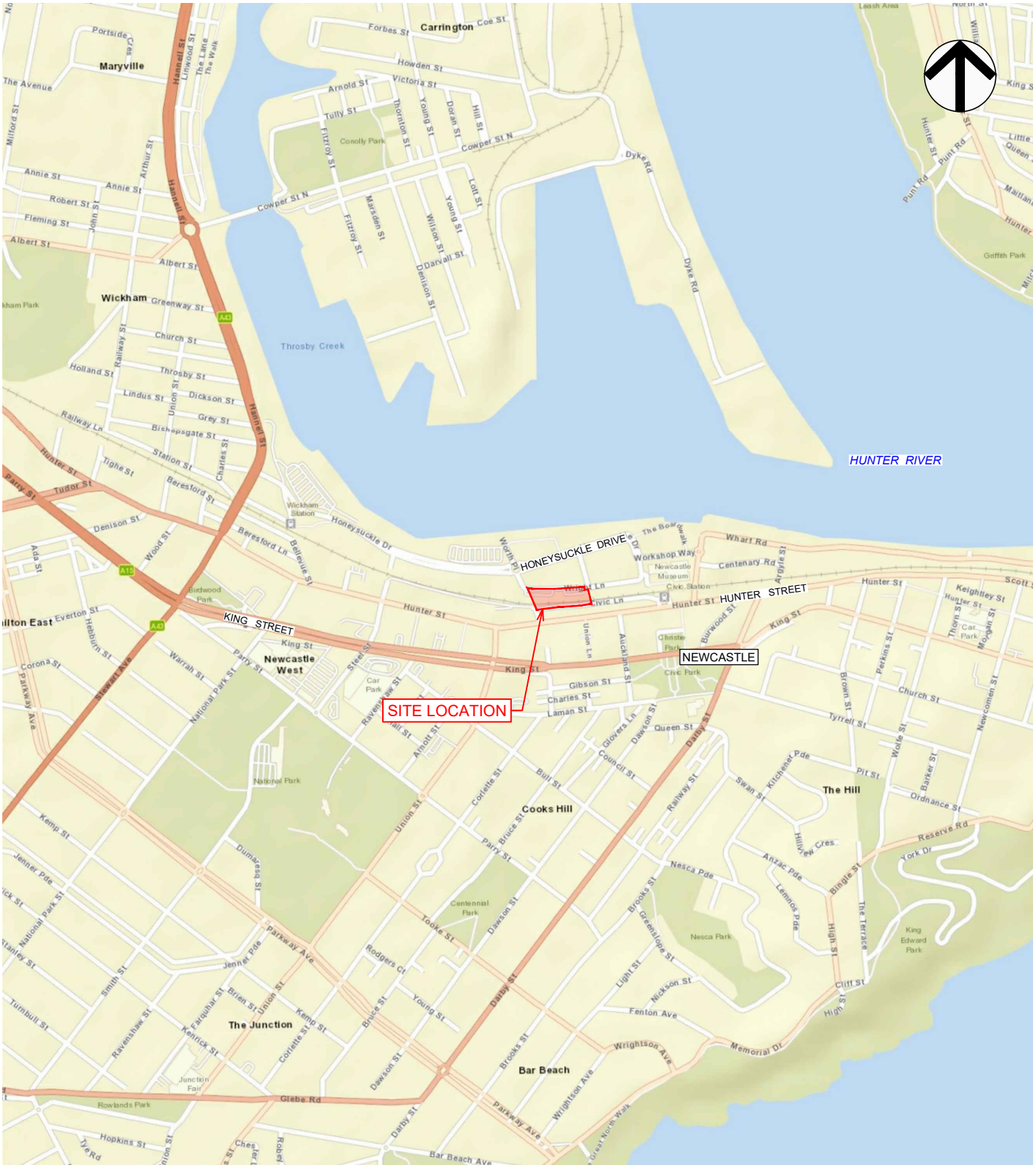
The report as a whole presents the findings of the site assessment and the report should not be copied in part or altered in any way. Logs, figures, laboratory data, drawings, etc. are customarily included in our reports and are developed by scientists or engineers based on their interpretation of field logs, field testing and laboratory evaluation of samples. This information should not under any circumstances be redrawn for inclusion in other documents or separated from the report in any way.

This report should be reproduced in full. No responsibility is accepted for use of any part of this report in any other context or for any other purpose or by third parties.

Responsibility

Environmental reporting relies on interpretation of factual information using professional judgement and opinion and has a level of uncertainty attached to it, which is much less exact than other design disciplines. This has often resulted in claims being lodged against consultants, which are unfounded. As noted earlier, the recommendations and findings set out in this report should only be regarded as interpretive and should not be taken as accurate and complete information about all environmental media at all depths and locations across the site.

APPENDIX A: FIGURES



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SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, © OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

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approved	-
date	22-02-2024
scale	AS SHOWN
original size	A4

TETRA TECH COFFEY

client: UNIVERSITY OF NEWCASTLE

project: CLMP-UFP - CITY CAMPUS STUDENT ACCOMMODATION (SSD-61618229)

title: SITE LOCATION PLAN

project no: 754-NTLEN320411-R08 | figure no: FIGURE 1 | rev: A

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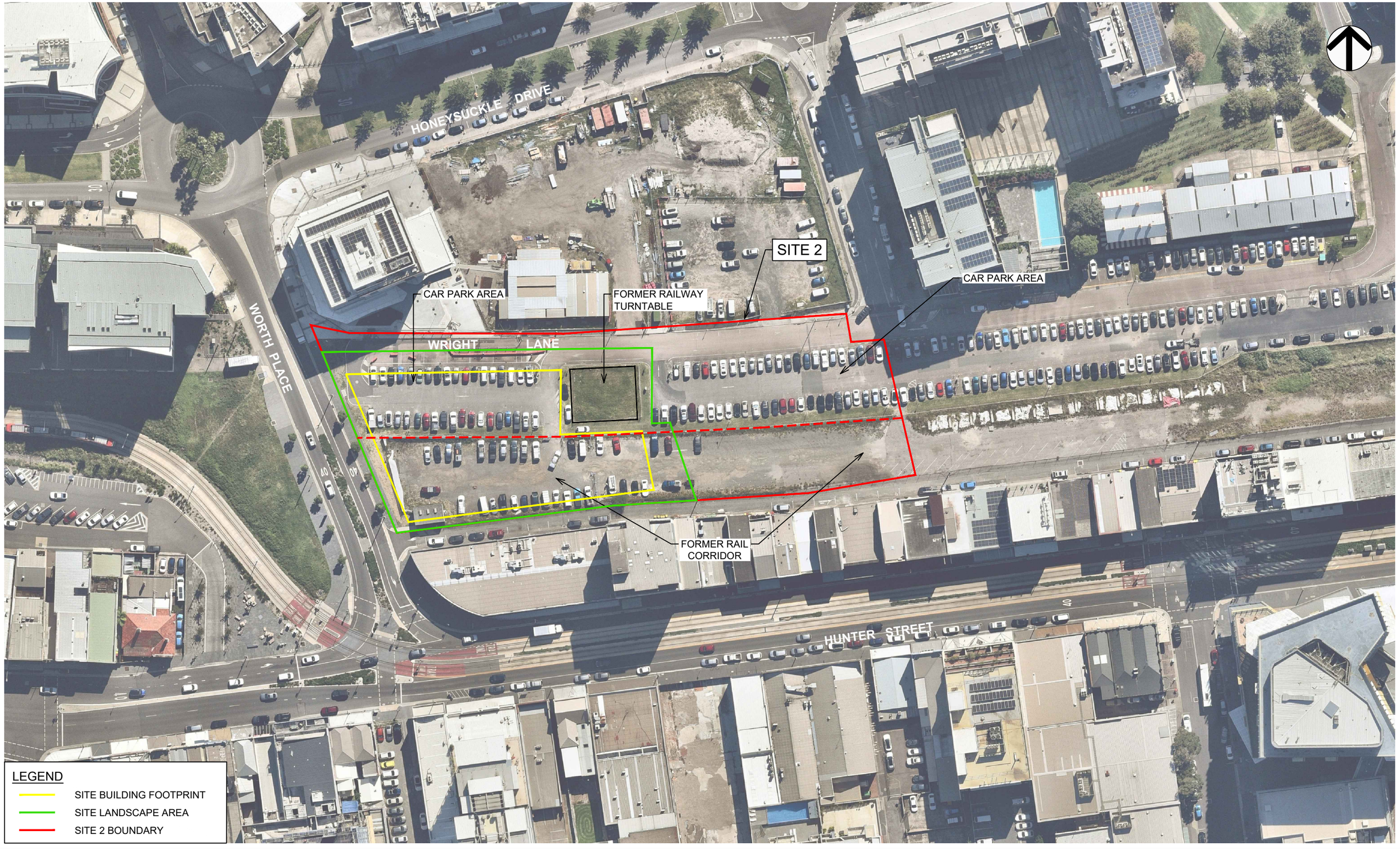

revision	no.	description	drawn	approved	date
	A	ORIGINAL ISSUE			

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SOURCE: NEARMAP IMAGE - 14/04/2021

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scale	AS SHOWN
original size	A3

TETRA TECH COFFEY

client: UNIVERSITY OF NEWCASTLE

project: CLMP-UFP - CITY CAMPUS STUDENT ACCOMMODATION (SSD-61618229)

title: SITE PLAN

project no: 754-NTLEN320411-R08 | figure no: FIGURE 2 | rev: A

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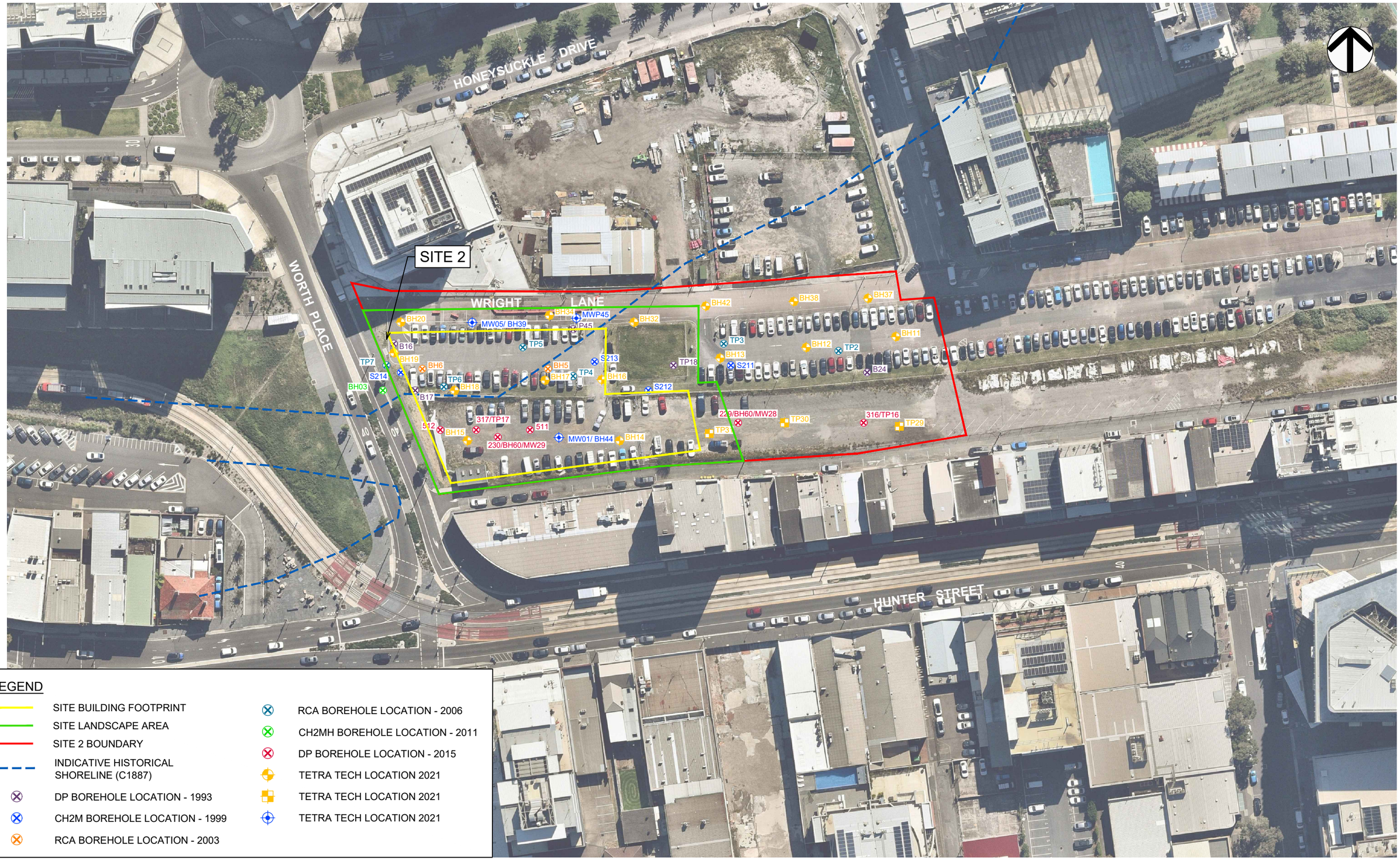

LEGEND

- SITE BUILDING FOOTPRINT
- SITE LANDSCAPE AREA
- SITE 2 BOUNDARY
- INDICATIVE HISTORICAL SHORELINE (C1887)
- DP BOREHOLE LOCATION - 1993
- CH2M BOREHOLE LOCATION - 1999
- RCA BOREHOLE LOCATION - 2003
- RCA BOREHOLE LOCATION - 2006
- CH2MH BOREHOLE LOCATION - 2011
- DP BOREHOLE LOCATION - 2015
- TETRA TECH LOCATION 2021
- TETRA TECH LOCATION 2021
- TETRA TECH LOCATION 2021

revision	no.	description	drawn	approved	date
	A	ORIGINAL ISSUE			

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Scale (metres) 1:1000

drawn	CS / DR
approved	-
date	22-02-2024
scale	AS SHOWN
original size	A3

TETRA TECH COFFEY

client: UNIVERSITY OF NEWCASTLE

project: CLMP-UFP - CITY CAMPUS STUDENT ACCOMMODATION (SSD-61618229)

title: PREVIOUS ENVIRONMENTAL ASSESSMENT LOCATIONS

project no: 754-NTLEN320411-R08 | figure no: FIGURE 3 | rev: A

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APPENDIX B: NEWCASTLE CITY COUNCIL, TECHNICAL MANUAL CONTAMINATED LAND MANUAL

Technical Manual

Contaminated Land Management

Production:

Newcastle Technical Manual Contaminated Land Management was prepared by the Future City Group of The City of Newcastle.

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Updated June 2012

CONTENTS

1. Contaminated Land Management

This Manual:

- supplements Section 5.02 of the Newcastle DCP 2012 by providing detailed technical information relating to the use and development of land that is or may be contaminated
- outlines procedures and requirements for the early identification of sites, determination of rezoning and development applications, the recording and use of information and the provision of information to the community
- outlines requirements for the carrying out of remediation work.
- provides a statement of policy to be followed by The City of Newcastle when exercising its planning functions in relation to land that may be contaminated
- provides a local context for decision making that is generally consistent with the Contaminated Land Planning Guidelines notified under Section 145C of the *Environmental Planning and Assessment Act 1979*.

2. Contaminated Land Management Principles

Contaminated land management is a process that may take place at any phase of development including plan making, site preparation, construction, demolition and ongoing site use.

Appropriate management of contaminated land is important to the health and safety of the community and to ensure that contaminated sites can be remediated for sustainable reuse.

Council functions to which this Technical Manual applies

- the preparation of local environmental plans
- the preparation and approval of development control plans
- the preparation and adoption of plans of management for community land
- the determination of development applications
- the modification of development consents
- the determination of activities under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (where the Council is the determining authority)
- the recording and keeping of information relating to land contamination, and the furnishing of such information to the public, such as by the issue of Planning Certificates under section 149 of the EP&A Act.

SEPP 55 - Remediation of Land

This Technical Manual specifies requirements in respect of 'category 2 remediation work', as provided for under clause 9(f) of State Environmental Planning Policy No. 55 - Remediation of Land.

Category 2 remediation work does not require Council development consent however it is required to comply with the requirements of this Technical Manual.

3. Development Assessment

Initial evaluation

When making a determination in respect of any of the applicable matters referred to above that would authorise a change of use of land or the carrying out of earthworks, the Council is to undertake an initial evaluation generally in accordance with the Contaminated Land Planning Guidelines.

Matters to be considered include:

- whether the land is within an investigation area or remediation area
- whether the land is currently used for an activity listed in Part 8 – Potentially Contaminating Activities
- whether Council records show that an activity listed in Part 8 – Potentially Contaminating Activities has ever been carried out, approved, licensed or otherwise regulated on the land
- if a site inspection is held, whether there is any obvious evidence that the land may have been associated with an activity listed in Part 8 – Potentially Contaminating Activities
- whether the land has at any time been previously zoned for industrial, agricultural or defence purposes
- whether any Council records indicate that the use of the land has been restricted due to possible contamination (for example, notices issued by the NSW State Government that have been forwarded to the Council)
- whether any Council records indicate that the land has been the subject of complaints concerning pollution or illegal dumping of wastes
- whether the Council is aware of the results of previous investigations concerning contamination of the land
- whether the Council is aware of information concerning contamination impacts on immediately adjacent land which could affect the subject land.

Conditions of consent

In making its determination, the Council is to consider:

- the need to impose conditions relating to the remediation issues outlined in Part 5 – Remediation Work
- in the case of development applications, whether it would be appropriate to issue a deferred commencement consent or a staged consent
- the management of soil and groundwater contamination to ensure that the community is not unduly disadvantaged by accepting the dedication of public assets which have increased human health or environmental risks or have potentially higher asset management costs due to contamination.

4. Dedication of assets to Council

Contamination investigation requirements

The investigation of soil and groundwater contamination should be carried out in accordance with NSW State Government approved contaminated sites sampling design guidelines.

Acceptable soil contaminations levels

Assets to be dedicated to Council must meet the following National Environment Protection (Assessment of Site Contamination) Measure (**NEPM) Health Investigation Level (HIL)** and must also at a minimum meet the **General solid waste** (non-putrescible) criteria as defined in the NSW DECC Waste Classification Guidelines as outlined in Table 1 below.

Table 1. Investigation levels and waste classification criteria that must be met:

	Investigation levels and waste criteria that must be met	
	NEPM Health Investigation Level (HIL)	Waste classification
Soil under roads	HIL 'F' (Commercial/Industrial)	General solid waste
Open space & footpath areas	HIL 'E' (Parks, recreational open space)	General solid waste
Other assets	Use appropriate HIL for most sensitive landuse permissible under the zoning	General solid waste

Specific investigation requirements for sampling of road parcels

For the detailed investigation of contamination of road areas the road must be regarded as a separate parcel of land for the purposes of the sampling design. Accordingly an appropriate number of samples must be taken within the actual parcel of land to be dedicated to Council in order to adequately investigate/delineate contamination.

At a minimum soil samples should be taken at 3 depths per sampling location to define the possible vertical extent of contamination including one surface sample and one at the depth of the lowest possible service.

Note: this should be considered a minimum requirement and further samples may be required to adequately categorise contamination in accordance with NSW State Government approved sampling guidelines.

5. Remediation Work

Applicable matters

This Part applies to remediation work, that is, works carried out for the purpose of:

- removing, dispersing, destroying, reducing, mitigating or containing the contamination of any land
- eliminating or reducing any hazard arising from the contamination of the land (including by preventing the entry of persons or animals on the land).

Category 1 remediation work

Category 1 remediation work is a special category of remediation work defined by State Environmental Planning Policy No. 55 - Remediation of Land (SEPP 55). Under SEPP 55, category 1 remediation work may only be carried out with development consent.

The exact definition of category 1 remediation is complicated, and interested persons should refer to clauses 9 and 14 of SEPP 55.

Category 2 remediation work

Category 2 remediation work is any remediation work that is not Category 1 remediation work.

Under SEPP 55, category 2 remediation work may be carried out without development consent. However, if remediation work is carried out in a manner that does not comply with a policy adopted under the Contaminated Land Planning Guidelines (that is, this Technical Manual), such work is then classified as category 1 remediation work.

In accordance with clause 16 of SEPP 55, prior notice of category 2 remediation work to Council is required at least 30 days before commencement of works.

In addition to the information that must be submitted to Council in clause 16 of SEPP 55, Council will require the following information to be submitted at least 14 days prior to the commencement of category 2 remediation works:

- copies of any Preliminary Investigation, Detailed Investigation and Remedial Action Plan for the subject site
- contact details for the remediation contractor and party responsible for ensuring compliance of remediation work with all relevant regulatory requirements (if different to remediation contractor).

Although consent is not required for Category 2 remediation work, Council will need to be satisfied that the site is suitable for the proposed use when considering any subsequent development applications for the subject site. Hence it is recommended that comprehensive records are maintained during the remediation and validation works for all sites.

Requirements for category 2 remediation work

Category 2 remediation work must be carried out in accordance with the following required site management provisions. These provisions have been formulated to ensure that category 2 remediation work does not adversely impact on the environment or public amenity.

> *Note:* These site management provisions have been adapted from the SSROC (1999) Model Policy on Contaminated Land.

All category 2 remediation works shall be conducted in accordance with the site management provisions listed below. The site management provisions apply to all of the Newcastle Local Government Area (LGA).

Category 2 remediation work that does not comply with the site management provisions outlined in this section will be classified as category 1 remediation work and will require development consent.

Development applications lodged for category 1 remediation works should identify any areas of non-compliance with the site management provisions listed below and identify any alternative site management measures to be implemented.

Note: It is the responsibility of those remediating a site to ensure compliance with all relevant environmental legislation and regulations. Compliance with the site management provisions outlined below does not imply that all relevant environmental legislation and regulations have been complied with. Non-compliance with relevant environmental legislation and regulations such as the Protection of the Environment Operations Act 1997 may incur on-the-spot fines for minor offences or more substantial fines and imprisonment for more serious offences.

It is the responsibility of those remediating a site to ensure compliance with the Heritage Act 1995 in relation to excavation permits for land that is likely to result in the disturbance of relics.

Hours of Operation

All remediation work which is audible on residential premises shall be conducted within the following hours:

Monday - Friday 7am - 6pm

Saturday 8am - 1pm

No work is permitted on Sundays or Public Holidays.

Soil and Water Management

The *Managing Urban Stormwater: Soils and Construction 4th Edition - Vol. 1* (the "Blue Book") published by Landcom, 2004 outlines Council's requirements for the preparation of a soil and water management plan. All remediation works shall be conducted in accordance with a soil and water management plan. A copy of the plan shall be kept onsite and made available to Council Officers on request. All erosion and sediment measures must be maintained in a functional condition throughout the remediation works.

A summary of the soil and water management measures for category 2 remediation work in relation to stockpiles, site access, excavation pump-out, landscaping/rehabilitation and bunding are discussed below:

Stockpiles

- no stockpiles of soil or other materials shall be placed on footpaths or nature strips unless prior Council approval has been obtained
- all stockpiles of soil or other materials shall be placed away from drainage lines, gutters or stormwater pits or inlets
- all stockpiles of soil or other materials likely to generate dust or odours shall be covered
- all stockpiles of contaminated soil shall be stored in a secure area and be covered if remaining more than 24 hours. (A secure area is addressed by the requirement for **Site Security** below.)
- if landfarming techniques are being employed, alternative control measures and contingencies must be put in place to address the potential for odour and dust impacting off-site.

Site Access

Vehicle access to the site shall be stabilised to prevent the tracking of sediment onto the roads and footpath. Soil, earth, mud or similar materials must be removed from the roadway by sweeping, shovelling, or a means other than washing, on a daily basis or as required. Soil washings from wheels shall be collected and disposed of in a manner that does not pollute waters.

Excavation Pump-out

All excavation pump-out water must also be analysed for suspended solid concentrations, pH and any contaminants of concern identified during the preliminary or detailed site investigation, prior to discharge to the stormwater system. The analytical results must comply with relevant NSW State Government endorsed standards and guidelines for water quality as applicable to the contaminants and the receiving waters. Other options for the disposal of excavation pump-out water include disposal to sewer with prior approval from the Hunter Water Corporation, or off-site disposal by a liquid waste transporter for treatment/disposal to an appropriate waste treatment/processing facility.

Landscaping/Rehabilitation

All exposed areas shall be progressively stabilised and/or revegetated to prevent dust and erosion on the completion of remediation works.

Bunding

All landfarming areas for hydrocarbon contaminated soils shall be bunded to contain surface water runoff from the landfarm areas and to prevent the leaching of hydrocarbons into the subsurface. All surface water discharges from the bunded areas to Council's stormwater system must comply with relevant NSW State Government endorsed standards and guidelines for water quality as applicable to the contaminants and the receiving waters.

Noise

Category 2 remediation work shall comply with appropriate NSW State Government construction noise guidelines.

All equipment and machinery shall be operated in an efficient manner to minimise the emission of noise.

Vibration

The use of any plant and/or machinery shall not cause vibrations in excess of the relevant NSW State Government guidelines and Australian Standards, on any premises.

Dust Control

Dust emissions shall be confined within the site boundary. The following dust control procedures shall be employed to comply with this requirement:

- erection of dust screens around the perimeter of the site
- securely covering all loads entering or exiting the site
- use of water sprays across the site to suppress dust
- covering of all stockpiles of contaminated soil remaining more than 24 hours
- keeping excavation surfaces moist.

Odour Control

No offensive odours shall be detected at any boundary of the site during remediation works by an authorised Council Officer relying solely on sense of smell. The following procedures may be employed to comply with this requirement:

- use of appropriate covering techniques such as the use of plastic sheeting to cover excavation faces or stockpiles
- use of fine mist sprays
- use of a hydrocarbon mitigating agent on the impacted areas/materials
- adequate maintenance of equipment and machinery to minimise exhaust emissions.

Volatile or semi-volatile compounds that could generate odours include monocyclic aromatic hydrocarbons (styrene, benzene, toluene, xylene, ethyl benzene, butyl benzene), polycyclic aromatic hydrocarbons (PAHs), hydrogen sulfide, hydrogen cyanide, pesticides, polychlorinated biphenyls (PCBs) and herbicides.

Groundwater

Any contamination assessment should address the potential for contamination of groundwater at the site to have occurred. Any work below the water table requires a licence from the NSW State Government under Part 5 of the *Water Act 1912*, and the *Water Management Act 2000*. These works include bores for water supply, testing and monitoring, and any extraction. If groundwater at the site is found to be contaminated then the appropriate NSW State Government agency is to be notified. Any remedial actions proposed for the site to remediate contaminated groundwater should consider monitoring provisions and the NSW State Government groundwater policies.

Copies of all Groundwater Investigations (Preliminary and Detailed) and the Remedial Action Plan for the site are to be submitted to the appropriate NSW State Government department 14 days prior to the commencement of works.

Groundwater shall be analysed for pH and any contaminants of concern identified during the preliminary or detailed site investigation, prior to discharge to the stormwater system. The analytical results must comply with relevant NSW State Government guidelines and standards for water quality.

Other options for the disposal of groundwater include disposal to sewer with prior approval from the Hunter Water Corporation, or off-site disposal by a liquid waste transporter for treatment/disposal to an appropriate waste treatment/processing facility.

Transport

All haulage routes for trucks transporting soil, materials, equipment or machinery to and from the site shall be selected to meet the following objectives:

- comply with all road traffic rules
- minimise noise, vibration and odour to adjacent premises
- utilise State Roads and minimise use of local roads.

Applicants may consult Council prior to selecting the most suitable transport route.

Category 2 remediation work shall ensure that all site vehicles:

- conduct deliveries of soil, materials, equipment or machinery during the hours of remediation work identified above under **Hours of Operation**
- securely cover all loads to prevent any dust or odour emissions during transportation
- exit the site in a forward direction
- do not track soil, mud or sediment onto the road.

Hazardous Materials

Hazardous and/or liquid wastes arising from the remediation work shall be removed and disposed of in accordance with the requirements of the relevant NSW State Government agencies, together with the relevant regulations, namely:

- *Protection of the Environment Operations Act 1997* and Regulations
- *Occupational Health and Safety* Act *2000* and Regulations
- *Contaminated Land Management Act 1997* and Regulations
- *Environmentally Hazardous Chemicals Act 1985* and Regulations.

Disposal of Contaminated Soil

The disposal of contaminated soil shall have regard to the provision of both the *Protection of the Environment Operations Act 1997* and Regulations and relevant state agency waste guidelines.

Any queries associated with the off-site disposal of waste from a contaminated site should be referred to the appropriate NSW state government agency. If contaminated soil or other waste is transported to a site unlawfully, the owner of the waste and the transporter are both guilty of an offence.

Containment/Capping of Contaminated Soil

No contaminated soil shall be encapsulated or capped on the site that contains concentrations of contaminants that are above the soil investigation levels for urban development sites in NSW for the range of landuses permissible on the subject site. For example, a site zoned commerical/industrial shall not encapsulate or cap soil containing concentrations of contaminants above the ‘commercial or industrial NEHF F health-based investigation levels’. The soil investigation levels for urban redevelopment in NSW are contained in Guidelines approved by the NSW State Government.

Note: Approval to cap contaminated soil which exceeds the soil investigation levels for the range of landuses permissible on the site can be sought through a development application to Council (category 1 remediation).

Importation of Fill

All fill imported on to the site shall be validated to ensure it is suitable for the proposed land use from a contamination perspective and will not impact adversely on the drainage of the site.

Council may require details of appropriate validation of imported fill material to be submitted with any application for future development of the site. Hence all fill imported onto the site should be validated by either one or both of the following methods during remediation works:

- imported fill should be accompanied by documentation from the supplier which certifies that the material has been excavated or quarried from areas that are not contaminated with manufactured chemicals or

process residues, as a result of industrial, commercial, mining or agricultural activities, and that it does not contain any sulfidic ores or soils or any other waste

- sampling and analysis of the fill material conducted in accordance with the NSW State Government approved sampling design guidelines to ensure that the material is not contaminated.

Site Signage and Contact Numbers

A sign displaying the contact details of the remediation contractor (and site manager if different to remediation contractor) shall be displayed on the site adjacent to the site access. This sign shall be displayed throughout the duration of the remediation works.

Community Consultation

Owners and/or occupants of premises adjoining and across the road from the site shall be notified by the proponent at least two days prior to the commencement of category 2 remediation works.

Site Security

The site shall be secured to prevent unauthorised access by means of an appropriate fence.

Occupational Health & Safety

It is the employer's responsibility to ensure that all site remediation works comply with all Occupational Health and Safety and Construction Safety Regulations of the NSW WorkCover Authority.

Removal of Underground Storage Tanks

The removal of underground storage tanks shall be undertaken in accordance with the requirements of all relevant NSW State Government Agencies including WorkCover NSW. The tank removal shall be conducted in accordance with all relevant standards, guidelines, codes of practice and legislation including the *Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008*.

6. Plan Making

Initial evaluation

Evaluation is to be based upon records held by Newcastle City Council that are readily accessible, and may also be based upon factual information gained from a site inspection. There is no requirement to research or consider records held by other agencies.

Matters to be considered include:

- whether the land is within an investigation area or remediation area
- whether the land is currently used for an activity listed in Part 8 – Potentially Contaminating Activities
- whether Council records show that an activity listed in Part 8 – Potentially Contaminating Activities has ever been carried out, approved, licensed or otherwise regulated on the land
- if a site inspection is held, whether there is any obvious evidence that the land may have been associated with an activity listed in Part 8 – Potentially Contaminating Activities

- whether the land has at any time been previously zoned for industrial, agricultural or defence purposes
- whether any Council records indicate that the use of the land has been restricted due to possible contamination (for example, notices issued under the *Contaminated Land Management Act 1997* by State Government Agencies that have been forwarded to the Council)
- whether any Council records indicate that the land has been the subject of complaints concerning pollution or illegal dumping of wastes
- whether the Council is aware of the results of previous investigations concerning contamination of the land
- whether the Council is aware of information concerning contamination impacts on immediately adjacent land which could affect the subject land.

Is a site investigation required?

Where a site investigation is required, it is to be carried out in accordance with the Contaminated Land Planning Guidelines.

Insufficient information on which to make a decision exists if there are significant gaps in historical information for a site, or if land uses are not described in sufficient detail to identify the presence or absence of uses listed in Part 8 - Potentially Contaminating Activities during periods in which such uses could be lawfully carried out.

Site investigation process

If contamination is or may be present, the site is to be the subject of a site investigation process. Please refer to Part 3 – Development Assessment for details pertaining to the site investigation process.

7. Information Management

Record keeping

So as to facilitate the exercise of its planning functions generally in accordance with the Contaminated Land Planning Guidelines, the Council is to keep sufficient and appropriate records relating to the existence or likelihood of land contamination. Such records may include:

- previous property descriptions (for cross-referencing purposes)
- chronological land use history
- complaints about contamination or potentially contaminating activities and whether the complaints were substantiated
- information from any initial evaluations
- information from any site investigations, including preliminary investigation reports, detailed investigation reports, remedial action plans, validation and site monitoring reports or any other contamination assessment reports
- site audit statements and site audit reports

- notifications of remediation given under State Environmental Planning Policy No. 55 - Remediation of Land
- previous zones and permissible uses, particularly uses listed in Part 8 – Potentially Contaminating Activities
- rezoning requests, development consents and building approvals for uses listed in Part 8 -Potentially Contaminating Activities or where contamination was an issue
- rezoning requests, development applications and building applications that were refused on the basis of contamination-related issues
- declarations, orders and notices under the *Contaminated Land Management Act 1997* (where the Council has been informed by the Environment Protection Authority)
- voluntary investigation proposals and voluntary remediation proposals under the *Contaminated Land Management Act 1997* (where the Council has been informed by the Environment Protection Authority).

Supply of information

Information about land contamination held within the Council's records is to be supplied to the public only by the following means:

- by issuing Planning Certificates (upon application by any person, and subject to payment of the prescribed fee)
- by making the following documents identified on the Planning Certificates and held by the Council available for inspection (upon request by the holder of the Planning Certificate, free of charge):
  - site investigation reports (including preliminary investigation reports, detailed investigation reports, remedial action plans, validation and site monitoring reports) or any other contamination assessment reports prepared by consultants
  - site audit reports
  - site audit statements.
- by making the following documents held by the Council available for inspection (upon request by any person, free of charge):
  - the register of development applications and consents kept under clause 264 of the *Environmental Planning and Assessment Regulation 2000*
  - documents relating to development applications and development consents kept available for public inspection under clause 266 of the *Environmental Planning and Assessment Regulation 2000*
  - the record of approvals kept under section 113 of the *Local Government Act 1993*
  - business papers and minutes of council and committee meetings
  - other documents that may be inspected under section 12(1) of the *Local Government Act 1993.*
- by providing access to documents in accordance with the *Government Information (Public Access) Act 2009 (GIPA Act)*.

Planning Certificates - prescribed information

This clause applies to the provision of information on planning certificates under section 149(2) of the EP&A Act, as prescribed by Schedule 4 of *the Environmental Planning and Assessment Regulation 2000* and section 59(2) of the *Contaminated Land Management Act 1997.*

The Council is to provide the following prescribed information:

- a statement that Council has by resolution adopted a policy to restrict development of the land because of the likelihood of the land being contaminated – if it is considered to be contaminated or potentially contaminated
- a statement that the land is significantly contaminated land - if it is within such an area or site at the date when the certificate is issued*

Note: This disclosure relates to the matter "whether or not the council has adopted a policy to restrict the development of the land because of the likelihood of land slip, bushfire, flooding, tidal inundation subsidence, acid sulphate soils or any other risk". (Item 7 of Schedule 4, EP&A Regulation 2000).

- a statement that the land is subject to a management order - if it is subject to such an order at that date*
- a statement that the land is the subject of a voluntary management proposal or ongoing maintenance order that is subject to an agreement with the NSW State Government - if it is the subject of such a proposal or order which has not been fully carried out, at the date when the certificate is issued*
- a statement that the land is the subject of a site audit statement - if a copy of such a statement has been provided at any time to the Council.

*** Information provided only to the extent that the Council has been informed by the NSW State Government.**

Planning Certificates – additional information

This clause applies to the provision of additional information on planning certificates under section 149(5) of the EP&A Act.

Where an applicant for a Planning Certificate has requested (and paid for) additional information under section 149(5), the Council is to disclose the following information.

- If the Council is in possession of a site investigation report, site audit report, or any other contamination assessment report relating to the land:
  - a statement that the Council is in possession of any such report
  - details of the author, title and date of each report
  - whether or not the report or reports indicate that the land is affected by elevated concentrations of soil or groundwater contaminants, (and if so, whether any recommendations have been made regarding restrictions or special conditions over the use or development of the land)
  - a statement that the reports held by the Council may be examined upon request at the office of the Council
  - a statement that any person relying on the certificate is advised to examine and consider the contents of each report.

- If the Council is in possession of records evidencing that a potentially contaminating activity may have been conducted on the land:
  - a statement that a potentially contaminating activity may have been conducted on the land
  - brief details of the known potentially contaminating activity
  - a statement that any person relying on the certificate is advised to make their own investigations as to whether the land is affected by elevated concentrations of soil or groundwater contaminants.
- If the Council is in possession of records evidencing that the land may be affected by soil or groundwater contaminant migration originating from nearby land:
  - a statement that the land may be affected by soil or groundwater contaminant migration originating from nearby land
  - brief details of the known possible source of soil or groundwater contaminant migration
  - a statement that any person relying on the certificate is advised to make their own investigations as to whether the land is affected by elevated concentrations of soil or groundwater contaminants.
- Details of the date, subject matter and informant of any notice of remediation work under State Environmental Planning Policy No. 55 - Remediation of Land - if any such notice has been received by the Council in relation to the land.

Note: It is the aim of Council to record all contaminated sites on the property information system and s149 certificates, however this is a very time consuming process which requires continual updating and review as land is subdivided and new potentially contaminating activities are commenced and discovered. Therefore, the lack of reference to contamination on a s149 certificate should not be taken as an assurance that the site is not contaminated.

8. Potentially Contaminating Activities

- acid or alkali plant and formulation
- agricultural or horticultural activities
- airports
- asbestos production and disposal
- chemicals manufacture and formulation
- defence works
- drum reconditioning works
- dry cleaning establishments
- electrical manufacturing (transformers)
- electroplating and heat treatment processes
- engine works
- explosives industry
- gas works

- iron and steel works
- landfill sites
- metal treatment
- mining and extractive industries
- oil production and storage
- paint formulation and manufacture
- pesticide manufacture and formulation
- power stations
- railway yards
- scrap yards
- service stations
- sheep and cattle dips
- smelting and refining
- tanning and associated trades
- waste storage and treatment
- wood preservation
- other activities that the Council considers to be a potentially contaminating activity.

Source: Based on Table 1 in Department of Urban Affairs and Planning and Environment Protection Authority (1998) Managing Land Contamination: Planning Guidelines, DUAP, Sydney.

9. Sources of Site History Information

- Past aerial photographs
- Council records - town planning, development and building applications, complaints, pollution incident reports
- local historical publications
- current and previous site owners
- current and previous site workers
- long-term residents
- past and present telephone books
- Noxious Trades Act register of Noxious Trades
- NSW Environment Protection Authority Section 35 Notices, past and present scheduled premises, unhealthly building land
- Hunter Water Corporation Trade Waste Agreements

- WorkCover Authority Dangerous Goods Branch
- Energy Australia sites containing present and past electrical substations.

Source: Adapted from SSROC (1999) Model Policy on Contaminated Land.

10. References

These references include both current and superseded references on which the policy was made.

- *Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites 1992* (Australia and New Zealand Environment Conservation Council and National Health and Medical Research Council)
- *Code of Practice The Removal and Disposal of Underground Petroleum Storage Tanks AIP CP22 -1994* (Australian Institute of Petroleum)
- *Contaminated Land Management Act 1997* and Regulations
- *Contaminated Land Management Technical Manual 13*
- *Contaminated Sites: Guidelines for Assessing Service Station Sites 1994* (EPA)
- *Contaminated Sites: Guidelines for the NSW Site Auditor Scheme 1998* (EPA)
- *Contaminated Sites: Sampling Design Guidelines 1995* (EPA)
- *Draft Noise Guide for Local Government 2002* (EPA)
- *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes 1999* (EPA)
- *Environmentally Hazardous Chemicals Act 1985* and Regulations
- *Environmental Criteria for Road Traffic Noise 1999* (EPA)
- *Environmental Guidelines: Solid Waste Landfills 1996* (EPA)
- *Environmental Noise Control Manual* (EPA)
- *Guidelines on Significant Risk of Harm from Contaminated Land and the Duty to Report 1999* (EPA)
- *Government Information (Public Access) Act 2009 (GIPA Act).*
- *Guidelines for Consultants Reporting on Contaminated Sites 1997* (EPA)
- *Interim Construction Noise Guideline 2009* (NSW DECC)
- *Managing Land Contamination: Planning Guidelines SEPP55 - Remediation of Land 1998* (DUAP and EPA)
- *Managing Urban Stormwater: Soils and Construction 4th Edition - Vol. 1* (the "Blue Book") published by Landcom, 2004
- *Model Policy on Contaminated Land 1999* (SSROC)
- *NSW Industrial Noise Policy 2000* (EPA)
- *Occupational Health and Safety Act 2000* and Regulations

- *Preparing an Erosion and Sediment Control Plan* (Department of Land and Water Conservation)
- *Protection of the Environment Operations Act 1997* and Regulations
- *State Environmental Planning Policy No. 55 - Remediation of Land 1998* (NSW Government)
- *Waste Classification Guidelines* (NSW DECC).

APPENDIX C: RMS UNEXPECTED HERITAGE ITEMS PROCEDURE

Transport Roads & Maritime Services

Unexpected Heritage Items

Heritage Procedure 02

November 2015

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Contents

Appendices

Please note

This procedure applies to all development and activities concerning roads, road infrastructure and road related assets undertaken by Roads and Maritime.

For advice on how to manage unexpected heritage items as a result of activities related to maritime infrastructure projects, please contact the Senior Environmental Specialist (Heritage).

1 Purpose

This procedure has been developed to provide a consistent method for managing unexpected heritage items (both Aboriginal and non-Aboriginal) that are discovered during Roads and Maritime activities. This procedure includes Roads and Maritime's heritage notification obligations under the *Heritage Act 1977* (NSW), *National Parks and Wildlife Act 1974* (NSW), A*boriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) and the *Coroner's Act 2009* (NSW).

This document provides relevant background information in Section 3, followed by the technical procedure in Sections 6 and 7. Associated guidance referred to in the procedure can be found in Appendices A-H.

2 Scope

This procedure assumes that an appropriate level of Aboriginal and non-Aboriginal heritage assessment has been completed before work commences on site. In some cases, such as exempt development, detailed heritage assessment may not be required.

Despite appropriate and adequate investigation, unexpected heritage items may still be discovered during maintenance and construction works. When this happens, this procedure must be followed. This procedure provides direction on when to stop work, where to seek technical advice and how to notify the regulator, if required.

This procedure applies to <u>all</u> Road and Maritime construction and maintenance activities

This procedure **applies to**:

- The discovery of any unexpected heritage item (usually during construction), where Roads and Maritime does not have approval to disturb the item or where safeguards for managing the disturbance (apart from this procedure) are not contained in the environmental impact assessment.
- All Roads and Maritime projects that are approved or determined under Part 3A (including Transitional Part 3A Projects), Part 4, Part 5 or Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), or any development that is exempt under the Act.

This procedure must be followed by Roads and Maritime staff, alliance partners (including local council staff working under Road Maintenance Council Contracts, [RMCC]), developers under works authorisation deeds or any person undertaking Part 5 assessment for Roads and Maritime.

This procedure **does not** apply to:

- The legal discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with OEH's *Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW* (2010); an Aboriginal Heritage Impact Permit (AHIP) issued under the *National Parks and Wildlife Act 1974*; or an approval issued under the *Heritage Act 1977*[1].
- The legal discovery and disturbance of heritage items as a result of investigations (or other activities) that are required to be carried out for the purpose of complying with any environmental assessment requirements under Part 3A (including Transitional Part 3A Projects) or Part 5.1 of the EP&A Act.
- The legal discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP[2]; an approval issued under the *Heritage Act 1977*; the Minister for Planning's conditions of project approval; or safeguards (apart from

[1] RMS' heritage obligations are incorporated into the conditions of heritage approvals.

[2] RMS *Procedure for Aboriginal cultural heritage consultation and investigation* (2011) recommends that Part 4 and Part 5 projects that are likely to impact Aboriginal objects during construction seek a whole-of-project AHIP. This type of AHIP generally allows a project to impact known and potential Aboriginal objects within the entire project area, without the need to stop works. It should be noted that an AHIP may exclude impact to certain objects and areas, such as burials or ceremonial sites. In such cases, the project must follow this procedure.

this procedure) that are contained in the relevant environmental impact assessment.

All construction environment management plans (CEMPs) must make reference to and/or include this procedure (often included as a heritage sub-plan). Where approved CEMPs exist they must be followed in the first instance. Where there is a difference between approved CEMPs and this procedure, the approved CEMP must be followed. Where an approved CEMP does not provide sufficient detail on particular issues, this procedure should be used as additional guidance. When in doubt always seek environment and legal advice on varying approved CEMPs.

3 Types of unexpected heritage items and their legal protection

The roles of project, field and environmental staff are critical to the early identification and protection of unexpected heritage items. **Appendix A** illustrates the wide range of heritage discoveries found on Roads and Maritime projects and provides a useful photographic guide. Subsequent confirmation of heritage discoveries must then be identified and assessed by technical specialists (usually an archaeologist).

An 'unexpected heritage item' means any unanticipated discovery of an actual or potential heritage item, for which Roads and Maritime does not have approval to disturb[3] or does not have a safeguard in place (apart from this procedure) to manage the disturbance.

These discoveries are categorised as either:

(a) Aboriginal objects

(b) Historic (non-Aboriginal) heritage items

(c) Human skeletal remains.

The relevant legislation that applies to each of these categories is described below.

3.1 Aboriginal objects

The *National Park and Wildlife Act 1974* protects *Aboriginal objects* which are 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 (or both) the occupation of that area by persons of non Aboriginal extraction, and includes Aboriginal remains*"[4].

Examples of Aboriginal objects include stone tool artefacts, shell middens, axe grinding grooves, pigment or engraved rock art, burials and scarred trees.

IMPORTANT!

All Aboriginal objects, regardless of significance, are protected under law.

If any impact is expected to an Aboriginal object, an Aboriginal Heritage Impact Permit (AHIP) is usually required from the Office of Environment and Heritage (OEH)[5]. Also, when a person becomes aware of an Aboriginal object they must notify

[3] Disturbance is considered to be any physical interference with the item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).
[4] Section 5(1) *National Park and Wildlife Act 1974*.
[5] Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

the Director-General of OEH about its location[6]. Assistance on how to do this is provided in Section 7 (Step 5).

3.2 Historic heritage items

Historic (non-Aboriginal) heritage items may include:

- Archaeological 'relics'
- Other historic items (i.e. works, structures, buildings or movable objects).

3.2.1 Archaeological relics

The *Heritage Act 1977* protects *relics* which are defined as:

"*any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises NSW, not being Aboriginal settlement; and is of State or local heritage significance*"[7].

Relics are archaeological items of local or state significance which may relate to past domestic, industrial or agricultural activities in NSW, and can include bottles, remnants of clothing, pottery, building materials and general refuse.

IMPORTANT!

All relics are subject to statutory controls and protections.

If a relic is likely to be disturbed, a heritage approval is usually required from the NSW Heritage Council[8]. Also, when a person discovers a relic they must notify the NSW Heritage Council of its location[9]. Advice on how to do this is provided in Section 7 (Step 5).

3.2.2 Other historic items

Some historic heritage items are not considered to be 'relics'; but are instead referred to as works, buildings, structures or movable objects. Examples of these items that Roads and Maritime may encounter include culverts, historic road formations, historic pavements, buried roads, retaining walls, tramlines, cisterns, fences, sheds, buildings and conduits. Although an approval under the *Heritage Act 1977* (NSW) may not be required to disturb these items, their discovery must be managed in accordance with this procedure.

As a general rule, an archaeological relic requires discovery or examination through the act of excavation. An archaeological excavation permit under Section 140 of the Heritage Act is required to do this. In contrast, 'other historic items' either exist above the ground's surface (e.g. a shed), or they are designed to operate and exist beneath the ground's surface (e.g. a culvert).

[6] This is required under s89(A) of the *National Park and Wildlife Act 1974* (NSW) and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

[7] Section 4(1) *Heritage Act 1977*.

[8] Except when Part 3A, Division 4.1 of Part 4 or Part 5.1 of the *EP&A Act* applies.

[9] This is required under s146 of the *Heritage Act 1977* and applies to **all projects** assessed under Part 3A, Part 4, Part 5 and Part 5.1 of the *EP&A Act*, including exempt development.

Despite this difference, it should be remembered that relics can often be associated with 'other heritage items', such as archaeological deposits within cisterns and underfloor deposits under buildings.

3.3 Human skeletal remains

Human skeletal remains can be classed as:

- Reportable deaths
- Aboriginal objects
- Relics

Where it is suspected that less than 100 years has elapsed since death, human skeletal remains come under the jurisdiction of the State Coroner and the *Coroners Act* 2009 (NSW). Under s 35(2) of the Act, a person must report the death to a police officer, a coroner or an assistant coroner as soon as possible. This applies to all human remains less than 100 years old[10] regardless of ancestry. Public health controls may also apply.

Where remains are suspected of being more than 100 years old, they are considered to be either Aboriginal objects or non-Aboriginal relics depending on the ancestry of the individual. Aboriginal human remains are protected under the *National Parks and Wildlife Act 1974*, while non-Aboriginal remains are protected under the *Heritage Act 1977*.

The approval and notification requirements of these Acts are described above in sections 3.1 and 3.2. Additionally, the discovery of Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under s 20(1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

IMPORTANT!

All human skeletal remains are subject to statutory controls and protections.

All bones must be treated as potential human skeletal remains and work around them must stop while they are protected and investigated urgently.

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Guidance on what to do when suspected human remains are found is in **Appendix E**.

[10] Under s 19 of the *Coroners Act 2009*, the coroner has no jurisdiction to conduct an inquest into reportable death unless it appears to the coroner that (or that there is reasonable cause to suspect that) the death or suspected death occurred within the last 100 years.

4 Responsibilities

The following roles and responsibilities are relevant to this procedure:

Role	Definition/responsibility
Aboriginal Cultural Heritage Advisor (ACHA)	Provides Aboriginal cultural heritage advice to project teams. Acts as Aboriginal community liaison for projects on cultural heritage matters. Engages and consults with the Aboriginal community as per the Roads and Maritime *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.
Aboriginal Sites Officer (ASO)	Is an appropriately trained and skilled Aboriginal person whose role is to identify and assess Aboriginal objects and cultural values. For details on engaging Aboriginal Sites Officers, refer to Roads and Maritime *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.
Archaeologist (A)	Professional consultant, contracted on a case-by-case basis to provide heritage and archaeological advice and technical services (such as reports, heritage approval documentation etc). Major projects with complex heritage issues often have an on call Project archaeologist.
Project Manager (PM)	Ensures all aspects of this procedure are implemented. The PM can delegate specific tasks to a construction environment manager, Roads and Maritime site representatives or regional environment staff, where appropriate.
Regional Environment Staff (RES)	Provides advice on this procedure to project teams. Ensuring this procedure is implemented consistently by supporting the PM. Supporting project teams during the uncovering of unexpected finds. Reviewing archaeological management plans and liaising with heritage staff and archaeological consultants as needed.
Registered Aboriginal Parties (RAPs)	RAPs are Aboriginal people who have registered with Roads and Maritime to be consulted about a proposed Roads and Maritime project or activity in accordance with OEH's Aboriginal cultural heritage consultation requirements for proponents (2010).
Senior Environmental Specialist (Heritage) (SES(H))	Provides technical assistance on this procedure and archaeological technical matters, as required. Reviewing the archaeological management plans and facilitating heritage approval applications, where required. Assists with regulator engagement, where required.
Team Leader - Regional Maintenance Delivery (TL-RMD)	Ensures Regional Maintenance Delivery staff stop work in the vicinity of an unexpected heritage item. Completes Unexpected Heritage Item Recording Form 418 and notifies WS-RMD.
Technical Specialist	Professional consultant contracted to provide specific technical advice that relates to the specific type of unexpected heritage find (eg a forensic or physical anthropologist who can identify and analyse human skeletal

	remains).
Works Supervisor - Regional Maintenance Delivery (WS-RMD)	Ensures Regional Maintenance Delivery staff are aware of this procedure. Supports the Team Leader - Regional Maintenance Delivery during the implementation of this procedure and ensures reporting of unexpected heritage items through environment management systems.

5 Acronyms

The following acronyms are relevant to this procedure:

Acronym	Meaning
A	Archaeologist
ACHA	Aboriginal Cultural Heritage Advisor
AHIP	Aboriginal Heritage Impact Permit
ASO	Aboriginal Site Officer
CEMP	Construction Environment Management Plan
OEH	Office of Environment and Heritage.
PACHCI	Procedure for Aboriginal Cultural Heritage Consultation and Investigation
PM	Project Manager
RAP	Registered Aboriginal Parties
RES	Regional Environmental Staff
SES(H)	Senior Environmental Specialist (Heritage)
TL-RMD	Team Leader – Regional Maintenance Division
RMD	Regional Maintenance Delivery
RMS	Roads and Maritime
WS-RMD	Works Supervisor - Regional Maintenance Division

6 Overview of the Procedure

On discovering something that could be an unexpected heritage item ('the item'), the following procedure must be followed. There are eight steps in the procedure. These steps are summarised in **Figure 1** below and explained in detail in Section 7.

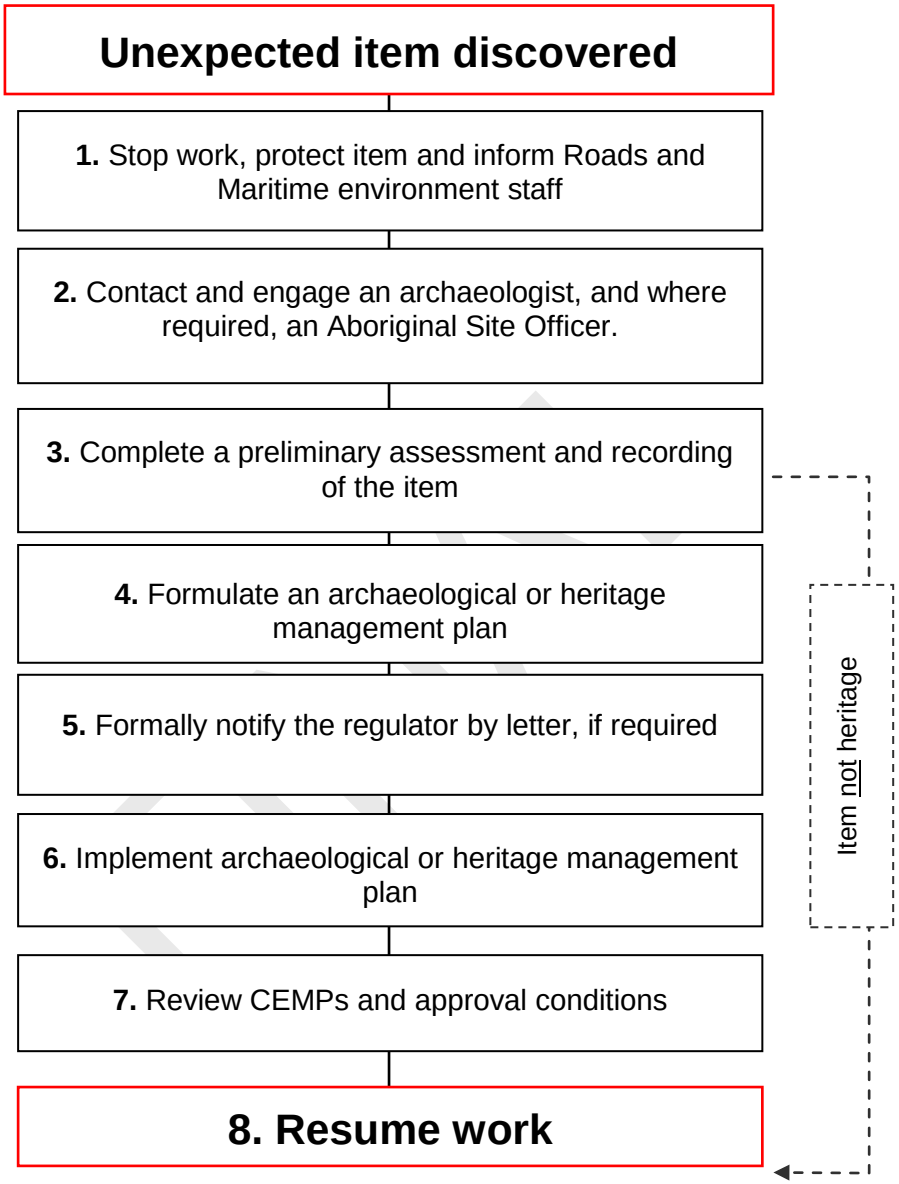


Figure 1: Overview of steps to be undertaken on the discovery of an unexpected heritage item.

IMPORTANT!

RMS may have approval or specific safeguards in place (apart from this procedure) to impact on certain heritage items during construction. If you discover a heritage item and you are unsure whether an approval or safeguard is in place, STOP works and follow this procedure.

7 Unexpected heritage items procedure

Table 1: Specific tasks to be implemented following the discovery of an unexpected heritage item.

Aboriginal Cultural Heritage Advisor (ACHA); Aboriginal Sites Officer (ASO); Archaeologist (A); Project Manager (PM); Regional Environment Staff (RES); Registered Aboriginal Parties (RAPs); Senior Environmental Specialist (Heritage) (SES(H)); Team leader – Roads and Maintenance Division (TL - RMD); Works supervisor – Roads and Maintenance Division (WS - RMD).

Step	Task	Responsibility	Guidance & Tools
1	**Stop work, protect item and inform Roads and Maritime environment staff**		
1.1	Stop all work in the immediate area of the item and notify the Project Manager or Team Leader-RMD. (For maintenance activities, the Team Leader is to also notify the Works Supervisor-RMD)	All	**Appendix A** (Identifying Unexpected Heritage items)
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical.	PM or TL-RMD	
1.3	Inform all site personnel about the no-go zone. No further interference, including works, ground disturbance, touching or moving the item must occur within the no-go zone.	PM or TL-RMD	
1.4	Inspect, document and photograph the item using 'Unexpected Heritage Item Recording Form 418'.	PM or TL-RMD	**Appendix B** (Unexpected Heritage Item Recording Form 418) **Appendix C** (Photographing Unexpected Heritage items)

Step	Task	Responsibility	Guidance & Tools
1.5	Is the item likely to be bone? If **yes**, follow the steps in Appendix E – 'Uncovering bones'. Where it is obvious that the bones are human remains, you must notify the local police by telephone immediately. They may take command of all or part of the site. If **no**, proceed to next step.	PM or WS-RMD	**Appendix E** (Uncovering Bones)
1.6	Is the item likely to be: a) A relic? (A relic is evidence of past human activity which has local or state heritage significance. It may include items such as bottles, utensils, remnants of clothing, crockery, personal effects, tools, machinery and domestic or industrial refuse) and/or b) An Aboriginal object? (An Aboriginal object may include a shell midden, stone tools, bones, rock art or a scarred tree). If **yes**, proceed directly to Step 1.8 If **no**, proceed to next step.	PM or WS-RMD	**Appendix A** (Identifying heritage items)
1.7	Is the item likely to be a "work", building or standing structure? (This may include tram tracks, kerbing, historic road pavement, fences, sheds or building foundations). If **yes**, can works avoid further disturbance to the item? (E.g. if historic road base/tram tracks have been exposed, can they be left in place?) If **yes**, works may proceed without further disturbance to the item. Complete Step 1.8 within 24 hours. If works cannot avoid further disturbance to the item, works must not recommence at this time. Complete the remaining steps in this procedure.	PM or WS-RMD	**Appendix A** (Identifying heritage items)

Step	Task	Responsibility	Guidance & Tools
1.8	Inform relevant Roads and Maritime Regional Environmental Staff of item by providing them with the completed 'Form 418'.	PM or WS-RMD (RES)	**Appendix D** (Key Environmental Contacts)
1.9	Regional Environmental Staff to advise Project Manager or Works Supervisor whether RMS has an approval or safeguard in place (apart from this procedure) to impact on the 'item'. (An approval may include an approval under the *Heritage Act*, the *National Parks and Wildlife Act* or the *Planning and Assessment Act*). Does RMS have an approval, permit or appropriate safeguard in place to impact on the item? If **yes**, work may recommence in accordance with the approval, permit or safeguard. There is no further requirement to follow this procedure. If **no**, continue to next step.		
1.10	Liaise with Traffic Management Centre where the delay is likely to affect traffic flow.	PM or WS-RMD	
1.11	Report the item as a 'Reportable Event' in accordance with the Roads and Maritime *Environmental Incident Classification and Reporting Procedure*. Implement any additional reporting requirements related to the project's approval and CEMP, where relevant.	PM or WS-RMD	RMS Environmental Incident Classification and Reporting Procedure
2	**Contact and engage an archaeologist and, where required, an Aboriginal site officer**		
2.1	Contact the Project (on-call) Archaeologist to discuss the location and extent of the item and to arrange a site inspection, if required. The project CEMP may contain contact details of the Project Archaeologist. OR	PM or WS-RMD (A; RES; SES(H))	Also see **Appendix D** (Key Environmental Contacts)

Step	Task	Responsibility	Guidance & Tools
	Where there is no project archaeologist engaged for the works, engage a suitably qualified and experienced archaeological consultant to assess the find. A list of heritage consultants is available on the RMS contractor panels on the Buyways homepage. Regional environment staff and Roads and Maritime heritage staff can also advise on appropriate consultants.		Buyways
2.2	Where the item is likely to be an Aboriginal object, speak with your Aboriginal Cultural Heritage Advisor to arrange for an Aboriginal Sites Officer to assess the find. Generally, an Aboriginal Sites Officer would be from the relevant local Aboriginal land council. If an alternative contact person (ie a RAP) has been nominated as a result of previous consultation, then that person is to be contacted.	PM or WS-RMD (ACHA; ASO)	
2.3	If requested, provide photographs of the item taken at Step 1.4 to the archaeologist, and Aboriginal Sites Officer if relevant.	PM or WS-RMD (RES)	**Appendix C** (Photographing Unexpected Heritage items)
3	**Preliminary assessment and recording of the find**		
3.1	In a minority of cases, the archaeologist (and Aboriginal Sites Officer, if relevant) may determine from the photographs that no site inspection is required because no archaeological constraint exists for the project (*eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object*'). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.2	Arrange site access for the archaeologist (and Aboriginal Sites Officer, if relevant) to inspect the item as soon as practicable. In the majority of cases a site inspection is required to conduct a preliminary assessment.	PM or WS-RMD	
3.3	Subject to the archaeologist's assessment (and the Aboriginal Sites Officer's assessment, if relevant), work may recommence at a set distance from the item. This is to protect any other archaeological material that may exist in the vicinity, which has not yet been uncovered. Existing protective fencing established in Step 1.2 may need to be adjusted to	A/PM/ASO/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	reflect the extent of the newly assessed protective area. No works are to take place within this area once established.		
3.4	The archaeologist (and Aboriginal Sites Officer, if relevant) may provide advice after the site inspection and preliminary assessment that no archaeological constraint exists for the project (*eg the item is not a 'relic', a 'heritage item' or an 'Aboriginal object'*). Any such advice should be provided in writing (eg via email) and confirmed by the Project Manager or Works Supervisor - RMD.	A/PM/ASO/ WS-RMD	Proceed to Step 8
3.5	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). Regional environment staff and/or Roads and Maritime heritage staff can provide contacts for such specialist consultants.	RES/SES(H)	**Appendix D** (Key Environmental Contacts)
3.6	Where the item has been identified as a 'relic', 'heritage item' or an 'Aboriginal object' the archaeologist should formally record the item.	A	
3.7	The regulator can be notified informally by telephone at this stage by the archaeologist, Project Manager (or delegate) or Works Supervisor - RMD. Any verbal conversations with regulators must be noted on the project file for future reference.	PM/A/WS-RMD	
4	**Prepare an archaeological or heritage management plan**		
4.1	The archaeologist must prepare an archaeological or heritage management plan (with input from the Aboriginal Sites Officer, where relevant) shortly after the site inspection. This plan is a brief overview of the following: (a) description of the feature, (b) historic context, if data is easily accessible, (c) likely significance, (d) heritage approval and regulatory notification requirements, (e) heritage reporting requirements, (f) stakeholder consultation requirements, (g) relevance to other project approvals and management plans etc.	A/ASO	**Appendix F** (Archaeological/ Heritage Advice Checklist)
4.2	In preparing the plan, the archaeologist with the assistance of regional environment staff must review the CEMP, any heritage sub-plans, any conditions of heritage approvals, conditions of project approval (and or Minister's Conditions of Approval) and heritage assessment documentation (eg Aboriginal Cultural Heritage Assessment Report). This will outline if the unexpected item is consistent with previous heritage/project approval(s)	A/RES/PM	**Appendix F** (Archaeological/ Heritage Advice Checklist)

Step	Task	Responsibility	Guidance & Tools
	and/or previously agreed management strategies. The Project Manager and regional environment staff must provide all relevant documents to the archaeologist to assist with this. Discussions should occur with design engineers to consider if re-design options exist and are appropriate.		
4.3	The archaeologist must submit this plan as a letter, brief report or email to the Project Manager outlining all relevant archaeological or heritage issues. This plan should be submitted to the Project Manager as soon as practicable. Given that the archaeological management plan is an overview of all the necessary requirements (and the urgency of the situation), it should take no longer than two working days to submit to the Project Manager.	A	
4.4	The Project Manager or Works Supervisor must review the archaeological or heritage management plan to ensure all requirements can reasonably be implemented. Seek additional advice from regional environment staff and Roads and Maritime heritage staff, if required.	PM/RES/SES(H)/ WS-RMD	
5	**Notify the regulator, if required.**		
5.1	Review the archaeological or heritage management plan to confirm if regulator notification is required. Is notification required? If **no**, proceed directly to Step 6 If **yes**, proceed to next step.	PM/RES/SES(H)/ WS-RMD	
5.2	If notification is required, complete the template notification letter.	PM or WS-RMD	**Appendix G** (Template Notification Letter)
5.3	Forward the draft notification letter, archaeological or heritage management plan and the site recording form to regional environment staff and Senior Environmental Specialist (Heritage) for review, and consider any suggested amendments.	PM/RES/SES(H)/ WS-RMD	

Step	Task	Responsibility	Guidance & Tools
5.4	Forward the signed notification letter to the relevant regulator (ie notification of relics must be given to the Heritage Division, Office of Environment and Heritage (OEH), while notification for Aboriginal objects must be given to the relevant Aboriginal section of OEH). Informal notification (via a phone call or email) to the regulator prior to sending the letter is appropriate. The archaeological management plan and the completed site recording form must be submitted with the notification letter. For Part 3A and Part 5.1 projects, the Department of Planning and Environment must also be notified.	PM or WS-RMD	**Appendix D** (Key Environmental Contacts)
5.5	A copy of the final signed notification letter, archaeological or heritage management plan and the site recording form should be kept on file by the Project Manager or Works Supervisor- RMD and a copy sent to the Senior Environmental Specialist (Heritage).	PM or WS-RMD	
6	**Implement archaeological or heritage management plan**		
6.1	Modify the archaeological or heritage management plan to take into account any additional advice resulting from notification and discussions with the regulator.	A/PM or WS-RMD (RES)	
6.2	Implement the archaeological or heritage management plan. Where impact is expected, this would include such things as a formal assessment of significance and heritage impact assessment, preparation of excavation or recording methodologies, consultation with registered Aboriginal parties, obtaining heritage approvals etc, if required.	PM or WS-RMD (RAPs and RES)	PACHCI Stage 3
6.3	Where heritage approval is required contact regional environment staff for further advice and support material. Please note time constraints associated with heritage approval preparation and processing. Project scheduling may need to be revised where extensive delays are expected.	PM/RES/WS-RMD	
6.4	For Part 3A/Part 5.1 projects, assess whether heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning and Environment. Seek advice from regional environment staff and Environment Branch specialist staff if unsure.	PM/RES	

Step	Task	Responsibility	Guidance & Tools
6.5	Where statutory approvals (or project approval modification) are required, impact upon relics and/or Aboriginal objects must not occur until heritage approvals are issued by the appropriate regulator.	PM or WS-RMD	
6.6	Where statutory approval (or Part 3A/Part 5.1 project modification) is not required and where recording is recommended by the archaeologist, sufficient time must be allowed for this to occur.	PM or WS-RMD	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material is removed from site, where required. Interested third parties (eg museums or local councils) should be consulted on this issue. Contact regional environment staff and Senior Environmental Specialist (Heritage) for advice on this matter, if required.	PM or WS-RMD	
7	**Review CEMPs and approval conditions**		
7.1	Check whether written notification is required to be sent to the regulator before re-commencing work. Where this is not explicit in heritage approval conditions, expectations should be clarified directly with the regulator.	PM	
7.2	Update the CEMP, site mapping and project delivery program as appropriate with any project changes resulting from final heritage management (eg retention of heritage item, salvage of item). Updated CEMPs must incorporate additional conditions arising from any heritage approvals, and Aboriginal community consultation if relevant. Include any changes to CEMP in site induction material and update site workers during toolbox talks.	PM	
8	**Resume work**		
8.1	Seek written clearance to resume project work from regional environment staff and the archaeologist (and regulator, if required). Clearance would only be given once all archaeological excavation and/or heritage recommendations (where required) are complete. Resumption of project work must be in accordance with the all relevant project/heritage approvals/determinations.	RES/A/PM/WS-RMD	
8.2	If required, ensure archaeological excavation/heritage reporting and other heritage	PM/A/WS-RMD	

Step	Task	Responsibility	Guidance & Tools
	approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and/or disposal strategies.		
8.3	Forward all heritage/archaeological assessments, heritage location data and its ownership status to the Senior Environmental Specialist (Heritage). They will ensure all heritage items in Roads and Maritime ownership and/or control are considered for the Roads and Maritime S170 Heritage and Conservation Register.	PM/SES(H)/ WS-RMD	
8.4	If additional unexpected items are discovered this procedure must begin again from Step 1.	PM/TL-RMD	

8 Seeking advice

Advice on this procedure should be sought from Roads and Maritime regional environment staff in the first instance. Contractors and alliance partners should ensure their own project environment managers are aware of and understand this procedure. Regional environment staff can assist non-Roads and Maritime project environment managers with enquires concerning this procedure.

IMPORTANT!

Roads and Maritime Services staff and contractors are not to seek advice on this procedure directly from the Office of Environment and Heritage without first seeking advice from regional environment staff and heritage policy staff.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from the contracted archaeologist. Technical specialist advice can also be sought from heritage policy staff within Environment Branch to assist with the preliminary archaeological identification and technical reviews of heritage/archaeological reports.

9 Related information

Contact details: Senior Environmental Specialist (Heritage), Environment Branch, 02 8588 5754

Effective date: 01 February 2015

Review date: 01 February 2016

This procedure should be read in conjunction with:

- Roads and Maritimes' *Heritage Guidelines 2015.*
- Roads and Maritime Services *Environmental Incident Classification and Reporting Procedure*
- Roads and Maritime's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*
- RTA *Environmental Impact Assessment Guidelines.*

This procedure replaces:

- Procedure 5.5 ("*unexpected discovery of an archaeological relic or Aboriginal object*") outlined in the RTA's *Heritage Guidelines* 2004.

Other relevant reading material:

- NSW Heritage Office (1998), *Skeletal remains: guidelines for the management of human skeletal remains*.
- Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal remains.*
- Department of Health (April 2008), *Policy Directive: Burials - exhumation of human remains*[11].

[11] http://www.health.nsw.gov.au/policies/pd/2008/pdf/PD2008_022.pdf

Appendix A

Identifying Unexpected Heritage Items

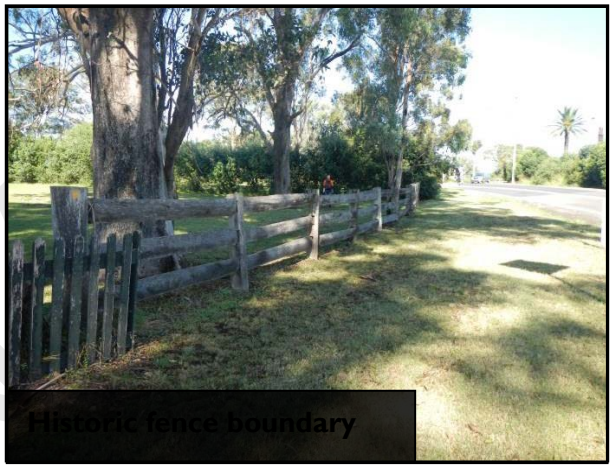
The following images can be used to assist in the preliminary identification of potential unexpected items (both Aboriginal and non-Aboriginal) during construction and maintenance works. Please note this is not a comprehensive typology.

Top left hand picture continuing clockwise: Stock camp remnants (Hume Highway Bypass at Tarcutta); Linear archaeological feature with post holes (Hume Highway Duplication), Animal bones (Hume Highway Bypass at Woomargama); Cut wooden stake; Glass jars, bottles, spoon and fork recovered from refuse pit associated with a Newcastle Hotel (Pacific Highway, Adamstown Heights, Newcastle area).

Top left hand picture continuing clockwise: Woodstave water pipe with tar and wire sealing (Horsley Drive); Tram tracks (Sydney); Brick lined cistern (Clyde); Retaining wall (Great Western Highway, Leura).

Top left hand picture continuing clockwise: Road pavement (Great Western Highway, Lawson); Sandstone kerbing and guttering (Parramatta Road, Mays Hill); Telford road (sandstone road base, Great Western Highway, Leura); Ceramic conduit and sandstone culvert headwall (Blue Mountains, NSW); Corduroy road (timber road base, Entrance Road, Wamberai).

Top left hand corner continuing clockwise: Alignment Pin (Great Western Highway, Wentworth Falls); Survey tree (MR7, Albury); Survey tree (Kidman Way, Darlington Point, Murrumbidgee); Survey tree (Cobb Highway, Deniliquin); Milestone (Great Western Highway, Kingswood, Penrith); Alignment Stone (near Guntawong Road, Riverstone). Please note survey marks may have additional statutory protection under the *Surveying and Spatial Information Act 2002*.



Top left hand corner continuing clockwise: Remnant bridge piers (Putty Road, Bulga); Wooden boundary fence (Campbelltown Road, Denham Court); Dairy shed (Ballina); Golden Arrow Mine Shaft.

Top left hand corner: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images show a selection of stone

artefacts retrieved from test and salvage archaeological excavations during the Hume Highway Duplication and Bypass projects from 2006-2010.

Appendix B

Unexpected Heritage Item Recording Form 418

Unexpected heritage item recording form

Date:		**Recorded by:** (Include name and position)	
Project name:			
Description of works being undertaken (eg Removal of failed pavement by excavation and pouring concrete slabs in 1m x 1m replacement sections).			
Description of exact location of item (eg Within the road formation on Parramatta Road, east bound lane, at the corner of Johnston Street, Annandale, Sydney).			

Description of item found (What type of item is it likely to be? Tick the relevant boxes).

A. A relic	☐	A 'relic' is evidence of a past human activity relating to the settlement of NSW with local or state heritage significance. A relic might include bottles, utensils, plates, cups, household items, tools, implements, and similar items.
B. A 'work, building or structure'	☐	A 'work' can generally be defined as a form infrastructure such as tram tracks, a culvert, road base, a bridge pier, kerbing, and similar items.
C. An Aboriginal object	☐	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones.
D. Bone	☐	Bones can either be human or animal remains. **Remember that you must contact the local police immediately by telephone if you are certain that the bone(s) are human remains.**
E. Other	☐	

Provide short description of item (eg Metal tram tracks running parallel to road alignment. Good condition. Tracks set in concrete, approximately 10cms (100 mm) below the current ground surface).	

Sketch
(Provide a sketch of the item's general location in relation to other road features so its approximate location can be mapped without having to re-excavate it. In addition, please include details of the location and direction of any photographs of the item taken).

Action taken (Tick either A *or* B)

A. Unexpected item **would not** be further impacted on by works ☐

Describe how works would avoid impact on the item. (eg The tram tracks will be left *in situ*, and recovered with road paving).

B. Unexpected item **would be** further impacted on by works ☐

Describe how works would impact on the item. (eg Milling is required to be continued to 200 mm depth to ensure road pavement requirements are met. Tram tracks will need to be removed).

[redacted]

Project manager / works supervisor signature	

Appendix C

Photographing Unexpected Heritage Items

Photographs of unexpected items in their current context (*in situ*) may assist heritage staff and archaeologists to better identify the heritage values of the item. Emailing good quality photographs to specialists can allow for better quality and faster heritage advice. The key elements that must be captured in photographs of the item include its position, the item itself and any distinguishing features. All photographs must have a scale (ruler, scale bar, mobile phone, coin) and a note describing the direction of the photograph.

Context and detailed photographs

It is important to take a general photograph (Figure 1) to convey the location and setting of the item. This will add much value to the subsequent detailed photographs also required (Figure 2).

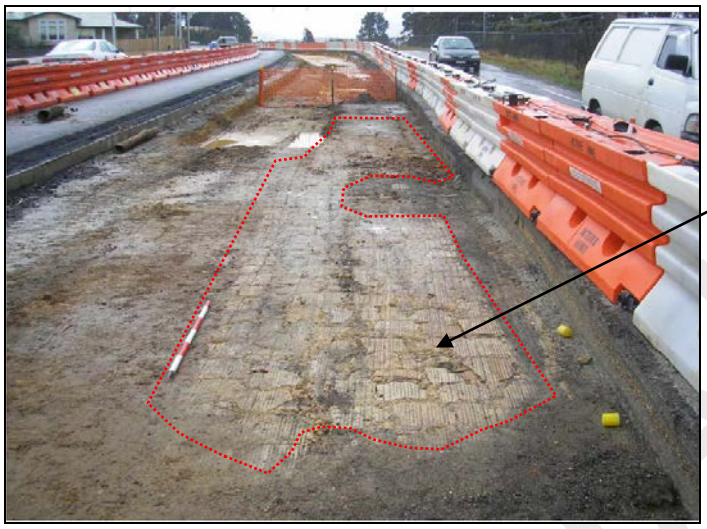


Figure 2: Close up detail of the sandstone surface showing material type, formation and construction detail. This is essential for establishing date of the feature.

Figure 1: Telford road uncovered on the Great Western Highway (Leura) in 2008.

Photographing distinguishing features

Where unexpected items have a distinguishing feature, close up detailed photographs must be taken of this, where practicable. In the case of a building or bridge, this may include diagnostic details architectural or technical features. See Figures 3 and 4 for examples.

Figure 3: Ceramic bottle artefact with stamp.

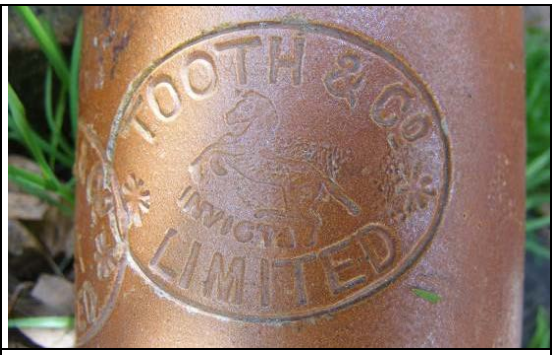


Figure 4: Detail of the stamp allows '*Tooth & Co Limited*' to be made out. This is helpful to a specialist in gauging the artefact's origin, manufacturing date and likely significance.

Photographing bones

The majority of bones found on site will those of be recently deceased animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, Roads and Maritime must contact the police immediately (see Appendix F for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. Heritage staff in Environment Branch can confirm if bones are human or non-human if provided with appropriate photographs.

Ensure that photographs of bones are not concealed by foliage (Figure 5) as this makes it difficult to identify. Minor hand removal of foliage can be undertaken as long as disturbance of the bone does not occur. Excavation of the ground to remove bone(s) should not occur, nor should they be pulled out of the ground if partially exposed. Where sediment (adhering to a bone found on the ground surface) conceals portions of a bone (Figure 6) ensure the photograph is taken of the bone (if any) that is not concealed by sediment.

Figure 5: Bone concealed by foliage.

Figure 6: Bone covered in sediment

Ensure that all close up photographs include the whole bone and then specific details of the bone (especially the ends of long bones, the *epiphysis*, which is critical for species identification). Figures 7 and 8 are examples of good photographs of bones that can easily be identified from the photograph alone. They show sufficient detail of the complete bone and the epiphysis.

Figure 7: Photograph showing complete bone.

Figure 8: Close up of a long bone's epiphysis.

Appendix C

Key Environmental Contacts

Key environmental contacts

Hunter region	Environmental Manager (Hunter)	4924 0440
	Aboriginal Cultural Heritage Advisor	4924 0383
Northern region	Environment Manager (North)	6640 1072
	Aboriginal Cultural Heritage Advisor	6604 9305
Southern region	Environmental Manager (South)	6492 9515
	Aboriginal Cultural Heritage Advisor	4221 2767
South West region	Environment Manager (South West)	6937 1634
	Aboriginal Cultural Heritage Advisor	6937 1647
Sydney region	Environment Manager (Sydney)	8849 2516
	Aboriginal Cultural Heritage Advisor	8849 2583
Western region	Environment Manager (West)	6861 1628
	Aboriginal Cultural Heritage Advisor	6861 1658
Pacific Highway Office	Environment Manager	6640 1375
Regional Maintenance Delivery	Environment Manager	9598 7721
Environment Branch	Senior Environmental Specialist (Heritage)	8588 5754

Heritage Regulators

Heritage Division Office of Environment and Heritage Locked Bag 5020 Parramatta NSW 2124 Phone: (02) 9873 8500	Department of the Environment (Clth) GPO Box 787 Canberra ACT 2601 Phone: (02) 6274 1111
Office of Environment and Heritage (Sydney Metropolitan) Planning and Aboriginal Heritage Section PO Box 668 Parramatta NSW 2124 Phone: (02) 9995 5000	Office of Environment and Heritage (North Eastern NSW) Planning and Aboriginal Heritage Section Locked Bag 914 Coffs Harbour NSW 2450 Phone: (02) 6651 5946
Office of Environment and Heritage (North Western NSW) Environment and Conservation Programs PO Box 2111 Dubbo NSW 2830 Phone: (02) 6883 5330	Office of Environment and Heritage (Southern NSW) Landscape and Aboriginal Heritage Protection Section PO Box 733 Queanbeyan NSW 2620 Phone: (02) 6229 7188

Project-Specific Contacts

Position	Name	Phone Number
Project Manager		
Site/Alliance Environment Manager		
Regional Environmental Officer		
Aboriginal Cultural Heritage Advisor		
Consultant Archaeologist		
Local Police Station		
OEH: Environment Line		131 555

Appendix E

Uncovering Bones

This appendix provides Project Managers with (1) advice on what to do when bones are discovered; (2) guidance on the notification pathways; and (3) additional considerations and requirements when managing the discovery of human remains.

1. First uncovering bones

Stop all work in the vicinity of the find. All bones uncovered during project works should be **treated with care and urgency** as they have the potential to be human remains. Therefore they must be identified as either human or non-human as soon as possible by a qualified forensic or physical anthropologist. These specialist consultants can be sought by contacting regional environment staff and/or heritage staff at Environment Branch.

On the very rare occasion where it is *instantly obvious* from the remains that they are human, the Project Manager (or a delegate) should **inform the police by telephone** prior to seeking specialist advice. It will be obvious that it is human skeletal remains where there is no doubt, as demonstrated by the example in Figure 1. Often skeletal elements in isolation (such as a skull) can also clearly be identified as human. Note it may also be obvious that human remains have been uncovered when soft tissue and clothing are present.

Figure 1: Schematic of a complete skeleton that is 'obviously' human[12].

Figure 2: Disarticulated bones that require assessment to determine species.

This preliminary phone call is to let the police know that Roads and Maritime is undertaking a specialist skeletal assessment to determine the approximate date of death which will inform legal jurisdiction. The police may wish to take control of the site at this stage. If not, a forensic or physical anthropologist must be requested to make an on-site assessment of the skeletal remains.

[12] After Department of Environment and Conservation NSW (2006), *Manual for the identification of Aboriginal Remains*: 17.

Where it is not 'obvious' that the bones are human (in the majority of cases, illustrated by Figure 2), specialist assessment is required to establish the species of the bones. Photographs of the bones can assist this assessment if they are clear and taken in accordance with guidance provided in Appendix C. Good photographs often result in the bones being identified by a specialist without requiring a site visit; noting they are nearly always non-human. In these cases, non-human skeletal remains must be treated like any other unexpected archaeological find.

If the bones are identified as human (either by photographs or an on-site inspection) a technical specialist must determine the likely ancestry (Aboriginal or non-Aboriginal) and burial context (archaeological or forensic). This assessment is required to identify the legal regulator of the human remains so **urgent notification** (as below) can occur. Preliminary telephone or verbal notification by the Project Manager or regional environment staff is considered appropriate. This must be followed up later by Roads and Maritime's formal letter notification as per Appendix G when a management plan has been developed and agreed to by the relevant parties.

2. Range of human skeletal notification pathways

The following is a summary of the different notification pathways required for human skeletal remains depending on the preliminary skeletal assessment of ancestry and burial context.

A. Human bones are from a recently deceased person (*less than* 100 years old).

> **☑ Action**
> A police officer must be notified immediately as per the obligations to report a death or suspected death under s35 of the *Coroners Act 2009* (NSW). It should be assumed the police will then take command of the site until otherwise directed.

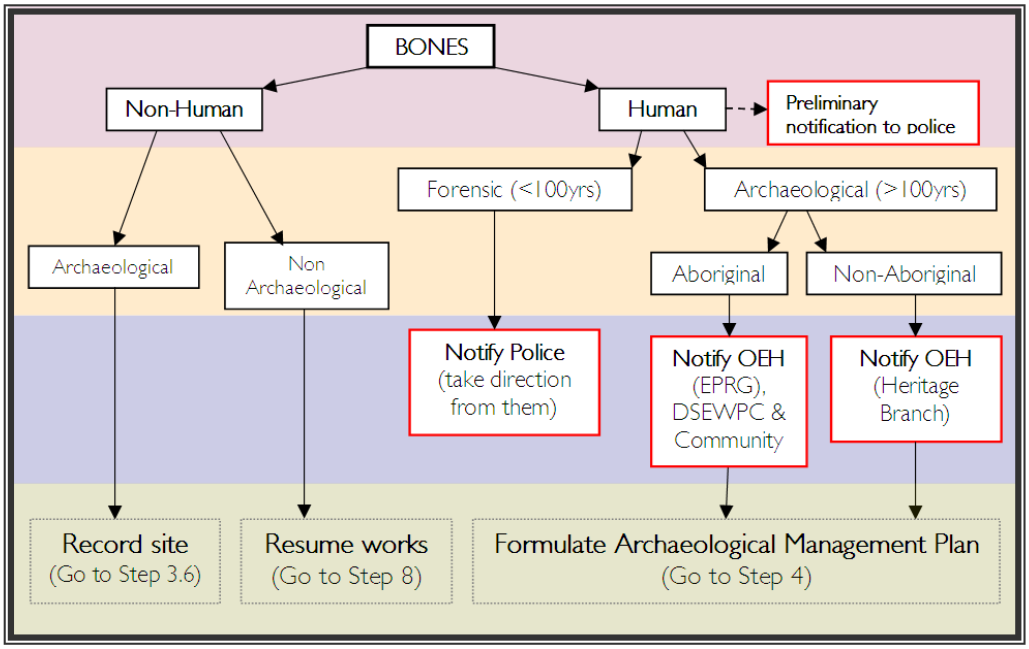
B. Human bones are archaeological in nature (*more than* 100 years old) and are likely to be *Aboriginal* remains.

> **☑ Action**
> The OEH and the RMS Aboriginal Cultural Heritage Advisor (ACHA) must be notified immediately. The ACHA must contact and inform the relevant Aboriginal community stakeholders who may request to be present on site. Relevant stakeholders are determined by the RTA's *Procedure for Aboriginal Cultural Heritage Consultation and Investigation*.

C. Human bones are archaeological in nature (*more than* 100 years old) and likely to be *non-Aboriginal* remains.

> **☑ Action**
> The OEH (Heritage Branch, Conservation Team) must be notified immediately.

The simple diagram below summarises the notification pathways on finding bones.



After the appropriate verbal notifications (as described in B and C), the Project Manager must proceed through the *Unexpected Heritage Items Procedure* to formulate an archaeological management plan (Step 4). Note no archaeological management plan is required for forensic cases (A), as all future management is a police matter. Non-human skeletal remains must be treated like any other unexpected archaeological find and so must proceed to recording the find as per Step 3.6.

3. Additional considerations and requirements

Uncovering archaeological human remains must be managed intensively and needs to consider a number of additional specific issues. These issues might include facilitating culturally appropriate processes when dealing with Aboriginal remains (such as repatriation and cultural ceremonies). Roads and Maritime's ACHA can provide advice on this and how to engage with the relevant Aboriginal community. Project Managers, more generally, may also need to consider overnight site security of any exposed remains and may need to manage the onsite attendance of a number of different external stakeholders during assessment and/or investigation of remains. Project Managers may also be advised to liaise with local church/religious groups and the media to manage community issues arising from the find. Additional investigations may be required to identify living descendants, particularly if the remains are to be removed and relocated.

If exhumation of the remains (from a formal burial or a vault) is required, Project Managers should also be aware of additional approval requirements under the *Public Health Act 1991* (NSW). Specifically, Roads and Maritime is required to apply to the Director General of NSW Department of Health for approval to exhume human remains as per Clause 26 of the *Public Health (Disposal of Bodies) Regulation 2002* (NSW)[13]. Further, the exhumation of such remains needs to consider health risks such as infectious disease control, exhumation procedures and reburial approval and registration. Further guidance on this matter can be found at the NSW Department of Health website.

In addition, due to the potential significant statutory and common law controls and prohibitions associated with interfering with a public cemetery, project teams are

[13] This requirement is in addition to heritage approvals under the *Heritage Act 1977*.

advised, when works uncover human remains adjacent to cemeteries, to confirm the cemetery's exact boundaries.

Appendix F

Archaeological Heritage Advice Checklist

The following checklist can be used by the Project Manager and the archaeologist to ensure all relevant archaeological issues are considered when developing the management plan required at Step 4 of this procedure.

An archaeological or heritage management plan can include a range of activities and processes, which differ depending on the find and its significance.

	Required	**Outcome/notes**
Assessment and investigation		
• Assessment of significance	Yes/No	
• Assessment of heritage impact	Yes/No	
• Archaeological excavation	Yes/No	
• Archival photographic recording	Yes/No	
Heritage approvals and notifications		
• AHIPs, Section 140, S139 exceptions etc	Yes/No	
• Regulator relics/objects notification	Yes/No	
• Roads and Maritime's S170 Heritage and Conservation Register listing requirements	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Aboriginal stakeholder consultation requirements and how it relates to RTA *Procedure for Aboriginal Cultural Heritage Consultation and Investigation* (PACHCI).	Yes/No	
• Advice from regional environmental staff, Aboriginal Cultural Heritage Advisor, Roads and Maritime heritage team.	Yes/No	
Artefact/ heritage item management		
• Retention or conservation strategy (eg items may be subject to long conservation and interpretation) • Disposal strategy (eg former road pavement) • Short term and permanent storage locations (interested third parties should be consulted on this issue).	Yes/No	
• Control Agreement for Aboriginal objects.	Yes/No	
Program and budget		
• Time estimate associated with archaeological or heritage conservation work.		
• Total cost of archaeological/heritage work.		

Appendix G

Template Notification Letter

PASTE INTO RMS LETTER TEMPLATE

"[Select and type date]"

[Select and type reference number]

[Select and type file number]

[Insert recipient's name and address, see **Appendix D**]

[Select and type salutation and name],

Re: Unexpected heritage item discovered during Roads and Maritime Services project works.

I write to inform you of an unexpected [select: relic, heritage item or Aboriginal object] found during Roads and Maritime Services construction works at [insert location] on [insert date]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

This letter is in accordance with the notification requirement under [select: Section 146 of the *Heritage Act 1977* (NSW) or Section 89(A) of the *National Parks and Wildlife Act 1974* (NSW) **NB:** There may be not be statutory requirement to notify of the discovery of a 'heritage Item that is not a relic or Aboriginal object].

NB: On finding Aboriginal human skeletal remains this letter must also be sent to the Commonwealth Minister for Sustainability, Environment, Water, Populations and Communities (SEWPC) in accordance with notification requirements under Section 20(1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth).

[Provide a brief overview of the project background and project area. Provide a summary of the description and location of the item, including a map and image where possible. Also include how the project was assessed under the *Environmental Planning and Assessment Act 1979* (NSW) (eg Part 5). Also include any project approval number, if available].

Roads and Maritime Services [*or contractor*] has sought professional archaeological advice regarding the item. A preliminary assessment indicates [provide a summary description and likely significance of the item]. Please find additional information on the site recording form attached.

Resulting from these preliminary findings, Roads and Maritime Services *[or contractor]* is proposing [provide a summary of the proposed archaeological/heritage approach (eg develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation/interpretation strategy). Also include preliminary justification of such heritage impact with regard to project design constraints and delivery program].

The proposed approach will be further developed in consultation with a nominated Office of Environment and Heritage staff member.

Please contact me if you have any input on this approach or if you require any further information.

Yours sincerely

[Sender name and position]

[Attach the archaeological/heritage management plan and site recording form].

About this release

Reference number	RMS 12.003 **|** PN 285 P02
Title	Unexpected Heritage Items Procedure
Parent procedure	RMS Heritage Guidelines
Prepared by	Environment Officer (Heritage) Gretta Logue Environment Officer (Heritage) Daniel Percival
Approved by	Manager Environmental Policy, Planning and Assessment Michael Crowley
Document location	Objective - SF2013/153770 / Unexpected heritage items procedure.doc
Document status	Version 1.0, 16 March 2015

Version	Date	Revision description
1.0	01/11/11	First issue
Revised	23 July 2012	Amended to reflect that (a) unexpected finds do not include items covered by a relevant approval; (b) Aboriginal people must be consulted where an unexpected find is likely to be an Aboriginal object; (c) the Department of Planning and Environment must be notified in accordance with Step 5 of this procedure for Part 3A and Part 5.1 projects.
Revised	09 October 2013	Amended to clarify that the procedure applies to all types of unexpected heritage items, not just archaeological items. The procedure introduces the term 'Historic Items' to cover both 'archaeological relics' and 'other historic items' such as works, structures, buildings and movable objects. The title of the document has been amended to better reflect this clarification.
Revised	16 March 2015	The procedure was streamlined to address all project types including maintenance works. The separate maintenance procedure (formerly Appendix B) was removed. Names and titles updated throughout.

Your comments and suggestions to improve this or any of the Heritage Guidelines and associated documents may be sent to:

Senior Environmental Specialist (Heritage)
Environmental Policy, Planning and Assessment
Environment Branch, Roads and Maritime Services
Level 17, 101 Miller Street
North Sydney, NSW 2060
Ph: 8588 5726

rms.nsw.gov.au

heritage@rms.nsw.gov.au

Customer feedback
Roads and Maritime
Locked Bag 928,
North Sydney NSW 2059

Transport
Roads & Maritime
Services