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TfNSW

**T4291 SMWSA – ENABLING WORKS AT BADGERYS
CREEK ROAD AREA AND AEROTROPOLIS**

CONTRACT NUMBER: 21.0000139278.1275

ELIZABETH DRIVE
CONSTRUCTION ENVIRONMENT MANAGEMENT PLAN

16 May 2022

Revision No: 3.2

TABLE OF CONTENTS

1	DOCUMENT CONTROL.....	7
1.1	APPROVAL.....	7
1.2	DOCUMENT REVISION STATUS	7
1.3	DISTRIBUTION (CONTROLLED COPIES).....	7
1.4	LIST OF EMERGENCY AND KEY CONTACTS.....	8
1.5	GLOSSARY/ABBREVIATIONS.....	9
2	CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN COMPLIANCE MATRIX.....	11
3	INTRODUCTION.....	12
3.1	PURPOSE OF THIS PLAN.....	12
3.2	OBJECTIVES OF THIS PLAN.....	13
4	PROJECT OVERVIEW.....	24
4.1	PROJECT CONTEXT	24
4.1.1	<i>Advanced and Enabling Works (AEW) – Roadworks</i>	<i>24</i>
4.2	PROJECT DESCRIPTION.....	25
4.3	WORK ACTIVITIES.....	26
4.4	PROJECT DURATION.....	26
5	LEGISLATIVE REQUIREMENTS	28
5.1	STATUTORY CONTEXT	28
5.2	LEGISLATIVE REQUIREMENTS	28
5.3	PERMITS AND LICENCES	31
5.4	GUIDELINES AND STANDARDS	32
6	ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION	32
6.1	INTEGRATED MANAGEMENT SYSTEM	32
6.2	ENVIRONMENTAL MANAGEMENT SYSTEM	33
6.3	ENVIRONMENTAL POLICY	33
6.4	CONSTRUCTION ENVIRONMENTAL MANAGEMENT FRAMEWORK	33
6.5	ROLES AND RESPONSIBILITIES.....	33
6.5.1	<i>KEY TFNSW ROLES AND RESPONSIBILITIES.....</i>	<i>37</i>
6.5.2	<i>INDEPENDENT ROLES AND RESPONSIBILITIES.....</i>	<i>38</i>
6.6	ENVIRONMENTAL MANAGEMENT FRAMEWORK	40
6.6.1	<i>RISK ASSESSMENT.....</i>	<i>41</i>
6.6.2	<i>ENVIRONMENTAL CONTROL MAPS.....</i>	<i>41</i>
6.7	CHANGES TO THE PROJECT	41
6.8	CUMULATIVE IMPACTS	42
6.9	REGISTER OF HOLD POINTS.....	42
6.10	TRAINING, AWARENESS AND COMPETENCE.....	44
6.10.1	<i>Inductions.....</i>	<i>44</i>
6.11	ENVIRONMENTAL TRAINING REQUIREMENTS.....	45
6.11.1	<i>Continual Improvement - Environmental Awareness.....</i>	<i>46</i>
6.11.2	<i>Training Records.....</i>	<i>46</i>
6.11.3	<i>Toolbox Talks.....</i>	<i>46</i>
6.11.4	<i>Daily Pre-Start Meetings.....</i>	<i>47</i>
6.12	SELECTION AND MANAGEMENT OF SUB CONTRACTORS	47
7	INCIDENTS AND EMERGENCY MANAGEMENT	48
7.1	ENVIRONMENTAL INCIDENT CLASSIFICATION	49
7.2	ER AND SECRETARY NOTIFICATION (COA A41-A43)	50
7.3	INTERNAL INCIDENT AND EMERGENCY NOTIFICATION PROCESS	51
7.4	EXTERNAL INCIDENT AND EMERGENCY NOTIFICATION PROCESS (CLASS 1)	51
7.5	ENVIRONMENTAL EMERGENCY PREPAREDNESS	51
7.6	EMERGENCY CONTACTS.....	52
7.7	EMERGENCY CONSTRUCTION WORKS	53
7.8	HAZARDOUS MATERIALS	53
7.9	ENVIRONMENTAL EMERGENCY PREPAREDNESS	53
8	ENVIRONMENTAL MONITORING AND REVIEW	53

8.1	CONTINUOUS IMPROVEMENT	54
8.2	ENVIRONMENTAL INSPECTIONS	54
8.3	SITE INSPECTIONS	55
8.4	ENVIRONMENTAL REPRESENTATIVE, TFNSW AND INDEPENDENT AUDITOR INSPECTIONS	55
8.5	AGENCY INSPECTIONS.....	55
8.6	ENVIRONMENTAL MONITORING	55
8.7	SURFACE WATER QUALITY MONITORING PROGRAM	56
8.8	GROUNDWATER MONITORING PROGRAM	57
8.9	ENVIRONMENTAL AUDITING	57
8.10	INTERNAL CEMP AUDITS	57
8.11	SUB-CONTRACTOR AUDITS	58
9	ENVIRONMENTAL NON-COMPLIANCES AND NON-CONFORMANCES	58
9.1	ENVIRONMENTAL NON-COMPLIANCE	58
9.2	NON-COMPLIANCE NOTIFICATION (A44-A45)	58
9.3	NON-COMPLIANCE NOTIFICATION PROCESS	58
9.4	CORRECTIVE AND PREVENTATIVE ACTIONS.....	59
9.5	PREVENTATIVE ACTIONS WILL BE IDENTIFIED AS FOLLOWS:	59
9.6	NON-COMPLIANCE REPORTS AND CLOSE-OUT	59
9.7	ENVIRONMENTAL REPORTING.....	60
10	CEMP REVIEW AND COMPLIANCE.....	60
10.1	CEMP REVISION.....	61
10.2	DOCUMENT CONTROL	61
11	STAKEHOLDER AND COMMUNITY INVOLVEMENT.....	62
11.1	OVERVIEW	62
11.2	COMMUNITY COMMUNICATION STRATEGY.....	62
11.3	BUSINESS COMMUNICATION STRATEGY	63
11.4	COMPLAINTS HANDLING PROCEDURE.....	64
11.5	COMPLAINTS MANAGEMENT	64
11.6	COMPLAINTS MEDIATOR	65
11.7	COMMUNITY INTERACTION ROLES AND RESPONSIBILITIES.....	65
11.7.1	<i>Project Manager.....</i>	65
11.7.2	<i>Management Team</i>	65
11.7.3	<i>Transport for NSW Communications Manager</i>	66
11.7.4	<i>Construction Community Advisor</i>	66
11.8	URBAN DESIGN OF TEMPORARY WORKS	66
11.9	BUSINESS AND PROPERTY IMPACTS.....	67
12	GENERAL SITE WORKS	70
12.1	WORKING HOURS	70
12.2	SITE LAYOUT.....	71
12.2.1	<i>Boundary Screening.....</i>	71
12.2.2	<i>Site Identification.....</i>	71
12.3	REINSTATEMENT OF WORK AREAS	72
13	TRAFFIC MANAGEMENT	73
13.1	TRAFFIC REQUIREMENTS	73
13.2	EXISTING ENVIRONMENT AND IMPACTS	75
13.3	TRAFFIC MITIGATION MEASURES	76
14	CONSTRUCTION NOISE AND VIBRATION MANAGEMENT	78
14.1	NOISE AND VIBRATION REQUIREMENTS.....	78
14.2	EXISTING ENVIRONMENT.....	82
14.3	BACKGROUND NOISE LEVELS.....	83
14.4	CONSTRUCTION NOISE AND ASSESSMENT OBJECTIVES.....	84
14.5	QUANTITAVE NOISE ASSESSMENT CRITERIA.....	84
14.6	OTHER LAND USES	85
14.7	TRAFFIC NOISE ASSESSMENT GOALS.....	85
14.8	SLEEP DISTURBANCE	86
14.9	VIBRATION CRITERIA.....	86

14.10	NOISE IMPACTS	87
14.11	VIBRATION IMPACTS	87
14.12	NOISE AND VIBRATION MITIGATION MEASURES	87
14.13	OUT OF HOURS WORKS	92
14.14	TRAINING	93
14.15	MONITORING AND INSPECTION	93
14.16	COMPLAINTS HANDLING AND INCIDENT RESPONSE	93
15	HERITAGE MANAGEMENT	95
15.1	HERITAGE REQUIREMENTS	95
15.2	EXISTING ABORIGINAL HERITAGE AND IMPACTS	99
15.3	EXISTING NON-ABORIGINAL HERITAGE AND IMPACTS	100
15.4	HERITAGE MITIGATION MEASURES	102
15.4.1	Archival Recording	102
16	FLORA AND FAUNA	104
16.1	FLORA AND FAUNA REQUIREMENTS	104
16.2	EXISTING ENVIRONMENT AND POTENTIAL IMPACTS	111
16.3	FLORA AND FAUNA MITIGATION MEASURES	112
17	VISUAL AMENITY	113
17.1	VISUAL AMENITY REQUIREMENTS	113
17.2	EXISTING ENVIRONMENT AND IMPACTS	114
17.3	VISUAL AMENITY MITIGATION MEASURES	114
17.4	MONITORING	115
18	SOIL AND WATER MANAGEMENT	116
18.1	SOIL AND WATER REQUIREMENTS	116
18.2	EXISTING ENVIRONMENT	121
18.3	SOIL AND WATER MITIGATION MEASURES	122
18.4	SURFACE WATER MONITORING	123
18.4.1	Weather Events	124
18.4.2	Water Discharge	124
18.5	PROGRESSIVE EROSION AND SEDIMENT CONTROL PLANS	124
19	AIR QUALITY MANAGEMENT	126
19.1	AIR QUALITY REQUIREMENTS	126
19.2	EXISTING ENVIRONMENT AND POTENTIAL DUST RECEIVERS	128
19.3	AIR QUALITY MONITORING PROGRAM	129
19.3.1	Available Baseline Data	129
19.3.2	Baseline Data to be Collected	131
19.3.3	Monitoring to be Undertaken	131
19.3.4	Parameters and Frequency of Monitoring	131
19.3.5	Reporting of Monitoring Results	131
19.3.6	Analysis of Monitoring Results	131
19.3.7	Mitigation Measures	132
19.3.8	Review of Data	132
19.4	AIR QUALITY MITIGATION MEASURES	132
20	WASTE MANAGEMENT	133
20.1	WASTE MANAGEMENT REQUIREMENTS	133
20.2	WASTE MITIGATION MEASURES	135
APPENDIX A	ISO 14001 CERTIFICATION	137
APPENDIX B	ENVIRONMENT POLICY	139
APPENDIX C	COA, CEMF, REMM & EPBC COMPLIANCE MATRICES	141
APPENDIX D	PROJECT RISK ASSESSMENT	285
APPENDIX E	SM-WSA OUT OF HOURS WORK PROTOCOL	298
APPENDIX F	STOCKPILE MANAGEMENT PROTOCOL	339
APPENDIX G	UNEXPECTED FINDS SOIL CONTAMINATION AND ASBESTOS PROCEDURE	345
APPENDIX H	ENVIRONMENTAL CONTROL MAP	359
APPENDIX I	ENVIRONMENTAL SITE INSPECTION CHECKLIST	361
APPENDIX J	WASTE AND MATERIAL TRACKING LOG	363

APPENDIX K	SM-WSA UNEXPECTED HERITAGE FINDS PROCEDURE	365
APPENDIX L	SM-WSA EMAIL – M12 SALVAGE WORKS.....	398
APPENDIX M	SM-WSA ACHMP	402
APPENDIX N	SM-WSA ENVIRONMENTAL INCIDENT AND NON-COMPLIANCE REPORTING PROCEDURE.....	528
APPENDIX O	SM-WSA PRE-CLEARING INSPECTION FOR NATIVE VEGETATION REMOVAL APPROVAL FORM.....	549
APPENDIX P	DETAILED NOISE AND VIBRATION IMPACT STATEMENT	554

Tables

TABLE 1 CEMP STAGING REPORT (TABLE 4-1 SM-WSA CSSI STAGING REPORT) MATRIX.....	11
TABLE 2 CEMP ENVIRONMENTAL MANAGEMENT CATEGORIES.....	13
TABLE 3 RELEVANT CEMF OBJECTIVES	13
TABLE 4 ENVIRONMENT PERFORMANCE OBJECTIVE AND TARGETS.....	15
TABLE 5 ELIZABETH DRIVE ROUNDABOUT INDICATIVE CONSTRUCTION PROGRAM WITH PLANT	26
TABLE 6 NSW LEGISLATIVE REQUIREMENTS.....	28
TABLE 7 COMMONWEALTH LEGISLATIVE REQUIREMENTS	30
TABLE 8 ABERGELDIE ENVIRONMENT, SUSTAINABILITY AND APPROVALS MANAGER	34
TABLE 9 ABERGELDIE ENVIRONMENTAL SITE REPRESENTATIVE (ESR) (ENVIRONMENT COORDINATOR)	35
TABLE 10 ROLES AND RESPONSIBILITIES OF OTHER KEY ABERGELDIE PROJECT PERSONNEL.....	35
TABLE 11 TfNSW ROLES AND RESPONSIBILITIES	37
TABLE 12 KEY INDEPENDENT ROLES AND RESPONSIBILITIES	38
TABLE 13 REGISTER OF HOLD POINTS	42
TABLE 14 TRAINING NEEDS ANALYSIS	45
TABLE 15 CLASSIFICATION SYSTEM FOR ENVIRONMENTAL INCIDENTS	49
TABLE 16 ABERGELDIE EMERGENCY CONTACTS	52
TABLE 17 TfNSW & SM-WSA EMERGENCY CONTACTS	52
TABLE 18 EMERGENCY SERVICES CONTACTS	52
TABLE 19 ENVIRONMENTAL INSPECTIONS.....	54
TABLE 20 SUMMARY OF MONITORING REQUIRED BY THE PLANNING APPROVAL	56
TABLE 21 COMMUNITY ENGAGEMENT STRATEGIES.....	62
TABLE 22 CEMF COMMUNICATIONS MEASURES	67
TABLE 23 A17 ANCILLARY FACILITY CRITERIA	71
TABLE 24 RELEVANT TRAFFIC COA.....	73
TABLE 25 RELEVANT TRAFFIC REMM.....	74
TABLE 26 CEMF TRAFFIC MANAGEMENT REQUIREMENTS.....	75
TABLE 27 MITIGATION MEASURES TRAFFIC.....	76
TABLE 28 RELEVANT NOISE AND VIBRATION COA	78
TABLE 29 RELEVANT NOISE REMM	81
TABLE 30 CEMF NOISE AND VIBRATION MANAGEMENT REQUIREMENTS.....	81
TABLE 31 MEASURED BACKGROUND NOISE LEVELS AND NML FROM SM-WSA EIS	83
TABLE 32 NOISE AT RESIDENTS USING QUANTITATIVE ASSESSMENT (DECC 2009).....	84
TABLE 33 NOISE AT SENSITIVE LAND USES (NON-RESIDENTS) USING QUANTITATIVE ASSESSMENT (DECC, 2009).....	85
TABLE 34 HUMAN COMFORT VIBRATION DOSE VALUES FOR INTERMITTENT VIBRATION	86
TABLE 35 VIBRATION LIMITS FOR COSMETIC DAMAGE DIN 4150	86
TABLE 36 NOISE AND VIBRATION MITIGATION MEASURES	87
TABLE 37 STANDARD MITIGATION MEASURES FROM TABLE 11 FROM SM CNVS	88
TABLE 38 ADDITIONAL MANAGEMENT MEASURES FROM TABLE 15 SM CNVS	90
TABLE 39 APPLICATION OF ADDITIONAL MITIGATION MEASURES – AIRBORNE CONSTRUCTION NOISE (TABLE 16 SM CNVS).....	91
TABLE 40 RELEVANT HERITAGE COA COMMITMENTS	95
TABLE 41 RELEVANT HERITAGE REMM AS IDENTIFIED IN THE STAGING REPORT	96
TABLE 42 ACHMP MANAGEMENT REQUIREMENTS.....	98
TABLE 43 CEMF HERITAGE MANAGEMENT REQUIREMENTS	98
TABLE 44 HERITAGE MITIGATION MEASURES	102
TABLE 45 RELEVANT FLORA AND FAUNA COA COMMITMENTS.....	104
TABLE 46 RELEVANT FLORA AND FAUNA REMM AS IDENTIFIED IN THE STAGING REPORT	106

TABLE 47 CEMF FLORA AND FAUNA MANAGEMENT REQUIREMENTS.....	107
TABLE 48 EPBC APPROVAL CONDITIONS AND THE BIODIVERSITY MANAGEMENT PLAN	107
TABLE 49 FLORA AND FAUNA MITIGATION MEASURES.....	112
TABLE 50 RELEVANT VISUAL AMENITY CONTROLS	113
TABLE 51 RELEVANT VISUAL AMENITY CONTROLS	114
TABLE 52 RELEVANT SOIL AND WATER COA.....	116
TABLE 53 RELEVANT SOIL AND WATER REMM	117
TABLE 54 RELEVANT CEMF CONTROL MEASURES	119
TABLE 55 SOIL AND WATER MITIGATION MEASURES	122
TABLE 56 RELEVANT AIR QUALITY COA.....	126
TABLE 57 RELEVANT AIR QUALITY REMM.....	126
TABLE 58 RELEVANT CEMF AIR QUALITY CONTROL MEASURES.....	126
TABLE 59 AIR QUALITY MONITORING	131
TABLE 60 AIR QUALITY MITIGATION MEASURES	132
TABLE 61 RELEVANT WASTE MANAGEMENT COA.....	133
TABLE 62 RELEVANT WASTE REMM	134
TABLE 63 RELEVANT WASTE CEMF CONTROL MEASURES	134
TABLE 64 WASTE MITIGATION MEASURES.....	135
TABLE 65 COA MATRIX.....	142
TABLE 66 CEMF MATRIX.....	208
TABLE 67 REMM MATRIX.....	246
TABLE 68 EBPC MATRIX.....	277

Figures

FIGURE 1 PROJECT SITE BOUNDARY.....	25
FIGURE 2 ORGANISATIONAL CHART	40
FIGURE 3 TRAFFIC STAGING & CONSTRUCTION VEHICLE MOVEMENT	76
FIGURE 4 NOISE SENSITIVE RECEIVERS NEAR THE PROPOSAL AREA.....	83
FIGURE 5 SM-WSA OOH WORK APPROVAL PROCESS (FIGURE 1 FROM SM-WSA OOHW PROTOCOL)	92
FIGURE 6 EXTRACT FOR FIGURE 5-5C FROM TECHNICAL REPORT 5.....	100
FIGURE 7 HERITAGE AREAS	101
FIGURE 8 LOCATION OF MCGARVIE SMITH FARM IN RELATION TO THE PROJECT CONSTRUCTION FOOTPRINT (FIGURE 27 OF EIS TECH PAPER 4).....	101
FIGURE 9 EXTRACT FROM M12 PHOTOGRAPHIC ARCHIVAL RECORDING.....	103
FIGURE 10 MAPPED PCT 835 FOREST RED GUM - ROUGH-BARKED APPLE GRASSY WOODLAND ON ALLUVIAL FLATS OF THE CUMBERLAND PLAIN, SYDNEY BASIN BIOREGION	111
FIGURE 11 APPROXIMATE EXTENT OF DISTURBANCE.....	112
FIGURE 12 INDICATIVE LOCATION OF WORK AREA IN RELATION TO FARM DAMS WITHIN AEC 44	122
FIGURE 13 POTENTIAL IMPACTED AIR QUALITY PROPERTIES (SHOWN IN BLUE).....	129
FIGURE 14 TABLES 22-1 AND 22-2 FROM EIS CHAPTER 22	130
FIGURE 15 TABLES 22-3 AND 22-4 FROM EIS CHAPTER 22	130



1 DOCUMENT CONTROL

1.1 APPROVAL

FUNCTION	POSITION	NAME	SIGNATURE	DATE
Revised by	Environment Sustainability and Approvals Manager			16/05/2022
Reviewed by	Project Director Manager			16/05/2022
Approved by	Project Director Manager			16/05/2022

1.2 DOCUMENT REVISION STATUS

Each page of this document bears a document number and revision date. When revisions to the document are issued, the following table will be updated to show the most recent revision level. The revised document will be forwarded to the holders of controlled copies. Recipients are responsible for destroying or marking "superseded" on the previous revision.

REVISION DATE	AMENDMENT DESCRIPTION
23/12/2021	Issued to TfNSW
18/03/2022	Reissue to TfNSW following TfNSW review
29/04/2022	Update following Metro comments
11/05/2022	Update following further Metro comments & TfNSW Review
16/05/2022	Update following further Metro comments & TfNSW Review

1.3 DISTRIBUTION (CONTROLLED COPIES)

COPY #	ISSUED TO	COMPANY / POSITION	DATE
Rev3.1-001		TfNSW / Principals' Authorised Delegate	11/05/2022
Rev3.2-001		TfNSW / Principals' Authorised Delegate	16/05/2022

**1.4 LIST OF EMERGENCY AND KEY CONTACTS**

Position	Name	Phone
EPA pollution hotline	Not Applicable	131 555
Fire and Rescue NSW	Not Applicable	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
The Ministry of Health	Not Applicable	Phone: (02) 9391 9000 Phone: (02) 9881 8000 (Blacktown Hospital) - ask for Public Health Officer on call
SafeWork NSW	Not Applicable	131 050
Sydney Water	Not Applicable	132 092
24 hour community information line	Not Applicable	1800 684 490 projects@transport.nsw.gov.au
NSW General Manager - Construction	[REDACTED]	[REDACTED]
Environment and Sustainability and Approvals Manager	[REDACTED]	[REDACTED]
Project Director	[REDACTED]	[REDACTED]
Superintendent	[REDACTED]	[REDACTED]
TfNSW Environment Officer	[REDACTED]	[REDACTED]

1.5 GLOSSARY/ABBREVIATIONS

Abbreviation	Expanded text
ACHMP	Aboriginal Cultural Heritage Management Plan
AEW	Advanced Enabling Works
AIMS	Abergeldie's Integrated Management System
BMP	Biodiversity Management Plan
COA	Minister's Conditions of Approval
CEMP	Construction Environmental Management Plan
CEMF	Construction Environmental Management Framework
CNVS	Construction Noise and Vibration Standard
Commonwealth	Commonwealth Government and Agencies; Federal or National Government Bodies
CCA	Construction Community Advisor
CCS	Construction Community Strategy
CCLMP	Construction Community Liaison Management Plan
CSSI	Critical State Significant Infrastructure
DNVIS	Detailed Noise and Vibration Impact Statement
DPE	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment (legacy department)
DPI	Department of Primary Industries
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EMS	Environmental Management System
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Environmental incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.



Abbreviation	Expanded text
Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met to achieve those objectives.
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPL	Environment Protection Licence
ESCP	Erosion and sediment control plan
Hold point	A verification point that prevents work from commencing before approval from TfNSW
IERP	Incident and Emergency Response Plan
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable licence, permit or legal requirements.
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.
OEHS	Office of Environment and Heritage
OCCS	Overarching Community Communication Strategy
PCB	Polychlorinated Biphenyls
PCT	Plant Community Type
PESCP	Progressive Erosion and Sediment Control Plan
Principal, the	Transport for New South Wales (TfNSW)
POEO Act	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
RAP	Registered Aboriginal Parties
REMM	Revised Environment Mitigation Measures
ROL	Road occupancy licence
SHEWMS	Safety Health Environmental work methods statements
SM-WSA	Sydney Metro – Western Sydney Airport
SVOC	Semi-volatile Organic Compounds
TfNSW	Transport for New South Wales (TfNSW) (formally RMS)
TRH	Total Recoverable Hydrocarbons
WRAPP	Waste Reduction and Purchasing Policy

2 CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN COMPLIANCE MATRIX

This Construction Environment Management Plan has been developed to address the relevant Minister's Conditions of Approval (COA), the Revised Environmental Mitigation Measures (REMM) from the EIS and the Sydney Metro – Western Sydney Airport (SM-WSA) Construction Environment Management Framework.

The SM-WSA staging report prescribes the applicable conditions to be addressed by the CEMP for AEW Roadworks. It also prescribes the relevant sub-planes required to be developed and included. This CEMP has no subplans. Table 1 below detailed the requires to the plan.

Compliance Matrices for COA, CEMP and REMM hare included as APPENDIX C. These matrices detail the applicable conditions/requirements from the staging report and relevant conditions to the scope of works.

Table 1 CEMP Staging Report (Table 4-1 SM-WSA CSSI Staging Report) Matrix

CEMF Topic	Requirement	Document Reference
SM-WSA CSSI Staging Report (Table 4-1 AEW Roadworks only)		
Spoil	N/A	N/A
Groundwater	N/A	N/A
Noise & V bration	CEMP*	Section 13.3 & 14
Non-Aboriginal Heritage	CEMP	Section 15.1
Aboriginal Cultural Heritage Management Plan	Implement approved / updated ACHMP in accordance with COA	Section 15.1
Flora and Fauna / Biodiversity	CEMP	Section 16
Visual Amenity	CEMP	Section 17
Carbon and Energy	N/A	Not required in accordance with Staging Report
Materials	N/A	Not required in accordance with Staging Report
Soil & Water	CEMP*	Section 18
Air Quality	CEMP*	Section 19
Waste (and recycling)	CEMP	Section 20
Bushfire Management Plan	N/A	Not required in accordance with Staging Report
Cumulative Construction Impacts Plan	N/A	Not required in accordance with Staging Report
Workforce Development	WFDIP Plan	Not required under AEW Roadworks agreement

* CEMP / procedure will include monitoring requirements as relevant and proportionate to the potential risk posed by the activities within that sub-stage.

3 INTRODUCTION

3.1 PURPOSE OF THIS PLAN

This Construction Environment Management Plan (CEMP) details environmental management measures, controls, resources and responsibilities required during the Elizabeth Drive Enabling Works as part of the Advanced and Enabling Works (AEW) for the Sydney Metro – Western Sydney Airport (SM – WSA) to comply with all the requirements of relevant legislation, conditions of applicable licences, approvals and permits.

The SM-WSA was deemed as Critical State Significant Infrastructure and was approved for construction on 23 July 2021 by the Minister for Planning and Public Spaces (Application no: CSSI 10051). The Project is undertaken in accordance with this Approval.

The Construction Environment Management Plan has been developed in conjunction with the Abergeldie Environmental Management System (EMS) to be consistent with the elements of AS/NZS ISO 14001.

The purpose of this CEMP is:

- To provide a framework demonstrating and describing how Abergeldie intends to undertake all Project construction activities in an environmentally sustainable manner that minimises impacts to the physical, biological, cultural and social environment.
- To evaluate Environmental aspects and potential environmental impacts at the planning stage and to ensure such impacts are minimised or avoided during the construction phase.
- To comply with relevant legislative requirements and any licences, permits or other approvals applicable to the Project.
- To ensure appropriate environmental management measures and controls are implemented during the construction phase.
- To ensure that all Project personnel and sub-contractors involved in the Project are aware of their environmental responsibilities and are proactive in their approach to environmental management.

The CEMP applies to all works and activities to be undertaken by the Abergeldie Project Team including sub-contractors. It is a requirement, therefore, that all Project personnel including sub-contractors comply with the Construction Environment Management Plan and its requirements.

The CEMP has been developed to meet the requirements of the following documents:

- Project Conditions of Approval (Sydney Metro Western Sydney Airport – CSSI 10051 Conditions of Approval).
- SM - WSA's Construction Environmental Management Framework (CEMF).
- SM – WSA's Construction Traffic Management Framework.
- SM – WSA's Construction Noise and Vibration Standard.
- SM – WSA's Overarching Community Communications Strategy.
- SM – WSA's Staging Report (Table 4-1 – Applicability of requirements relating to CEMP environmental management categories – AEW).
- Revised Environmental Mitigation Measures (REMM).
- Environmental Performance Outcome (EPO).
- Contract requirements.

In accordance with the Staging Plan, this management plan will be submitted and reviewed by:

- TfNSW.
- Sydney Metro – Western Sydney Airport.

- Project Environmental Representative (ER) (Condition of Approval - C2).

In accordance with the CEMF, this CEMP will be reviewed by SM-WSA.

This plan is to be submitted to the ER for endorsement no later than one (1) month before the commencement of construction. Construction cannot commence until the CEMP has been endorsed and approved by the ER.

3.2 OBJECTIVES OF THIS PLAN

The objectives of this Construction Environment Management Plan are to:

- Provide an over-arching methodology to manage and mitigate potential environmental impacts during construction of this Project at Elizabeth Drive Roundabout at Badgerys Creek Road.
- Provide specific guidance on how to manage specific environmental issues whilst undertaking construction activities.

Section 4.3.3 and Table 4-1 of the SMWSA Staging Report (Ver 4.0) describes the applicability of CEMP Sub-plans for different risk categories of works. As the AEW – Roadworks package has been assessed as having a residual Low Risk in Appendix F of the Staging Report, no Sub-plans are listed as required for the package and management of all environmental aspects is able to be incorporated into the CEMP main document. The required subplans for the relevant environment management categories are detailed in Table 2.

Table 2 CEMP Environmental Management Categories

Environmental Category	Applicability / Document name	Location
Noise and Vibration	CEMP	Section 14
Non-Aboriginal Heritage	CEMP	Section 15
Aboriginal Cultural Heritage	Yes – Implement approved/updated ACHMP in accordance with COA	Section 15 Approved / Updated ACHMP - APPENDIX M
Flora and Fauna / Biodiversity	CEMP	Section 16
Visual Amenity	CEMP	Section 17
Soil and Water	CEMP	Section 18
Air Quality	CEMP	Section 19
Waste (and recycling)	CEMP	Section 20
Construction Traffic, Transport and Access Management Plan	CTMP	Stand-alone document And Section 13

The CEMF objectives and the revised Environment Performance Objective from the Staging Report have been considered in the development of the CEMP. These objectives are presented in Table 3 Relevant CEMF Objectives and Table 4 Environment Performance Objective and Targets.

Table 3 Relevant CEMF Objectives

Environmental Category	CEMF Objective	Location
Noise and Vibration	<ul style="list-style-type: none"> ▪ Minimise unreasonable noise and vibration impacts on residents and businesses; ▪ Avoid structural damage to buildings or heritage items as a result of construction vibration; ▪ Undertake active community consultation; ▪ Maintain positive, cooperative relationships with schools, childcare centres, local residents and building owners. 	Section 14
Non-Aboriginal	<ul style="list-style-type: none"> ▪ Avoid accidental impacts on heritage items; ▪ Maximise worker's awareness of indigenous and non- 	Section 15



Environmental Category	CEMF Objective	Location
Heritage	indigenous heritage.	
Aboriginal Cultural Heritage	<ul style="list-style-type: none">▪ Avoid accidental impacts on heritage items;▪ Maximise worker's awareness of indigenous and non-indigenous heritage.	Section 15 Approved / Updated ACHMP - APPENDIX M Heritage Unexpected Finds Procedure
Flora and Fauna / Biodiversity	<ul style="list-style-type: none">▪ Minimise impacts on flora and fauna;▪ Design waterway modifications and crossings to incorporate best practice principles;▪ Retain and enhance existing flora and fauna habitat wherever possible;▪ Appropriately manage the spread of weeds and plant pathogens.	Section 16
Visual Amenity	<ul style="list-style-type: none">▪ Minimise impacts on existing landscape features as far as feasible and reasonable;▪ Ensure the successful implementation of the Landscape Design;▪ Reduce visual impact of construction to surrounding community.	Section 17
Soil and Water	<ul style="list-style-type: none">▪ Minimise pollution of surface water through appropriate erosion and sediment control;▪ Minimise leaks and spills from construction activities;▪ Maintain existing water quality of surrounding surface watercourses;▪ Source construction water from non-potable sources, where feasible and reasonable	Section 18
Air Quality	<ul style="list-style-type: none">▪ Minimise gaseous and particulate pollutant emissions from construction activities as far as feasible and reasonable;▪ Identify and control potential dust and air pollutant sources.	Section 19
Waste (and recycling)	<ul style="list-style-type: none">▪ Minimise waste throughout the project life-cycle;▪ Waste management strategies for off-airport works will be implemented in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> management hierarchy as follows:▪ Avoidance of unnecessary resource consumption;▪ Resource recovery (including reuse, reprocessing, recycling and energy recovery); and▪ Disposal.	Section 20

Table 4 Environment Performance Objective and Targets

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
Supporting the provision of successful places -the project is integrated with and enhances the environment where it is located, including improved accessibility and connectivity for communities	The SM – Western Sydney Airport Design Guidelines and Design Quality Framework are implemented to deliver a rail corridor, stations and ancillary facilities that achieve the project vision and design objectives	Yes	Operation	The Project will be built in accordance with the design prepared by SM-WSA/TfNSW that is consistent with the appropriate design guidelines. The Project is a temporary infrastructure solution to allow the permanent construction of the SM – WSA Metro which will be designed by SM-WSA to meet the applicable design guidelines.	Any proposed changes to the design of the Project facility during construction will be referred to SM-WSA for review to ensure it meets the applicable design guidelines.
	Design excellence is exhibited in the project to complement the anticipated character of the precincts in which the project is located	Yes	Operation	The works to be constructed in consistency with the current and anticipated character of the precinct.	The works will be delivered as per the design.
	Accessibility and connectivity between future communities is supported by the project through opportunities to integrate with key project components such as stations	Yes	Operation	The project is designed to maintain access to along Elizabeth Drive and Badgerys Creek Road.	The works will be delivered as per the design.
The project contributes to greener places through supporting the enhancement and provision of green infrastructure	The number of trees within the project area is increased at a ratio of 2:1 (for vegetation removal not subject to biodiversity offset); and tree canopy coverage is increased, using a range of local species, subject to the constraints on tree planting associated with safe airport operations	Yes	Operation	Ensure that tree information is provided to SM-WSA to ensure tree-replacement numbers are correct	Trees to be removed will be surveyed, with information provided to SM-WSA to ensure impacts to on threatened ecological communities and threatened species from construction will be offset. SM WSA will retire biodiversity offsets. SM-WSA Pre-clearing inspection for native vegetation removal approval form to be completed and approved prior to clearing.
Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts The safety of	Safe and efficient routes are provided for pedestrians, cyclists and road users at/near construction sites	Yes	Construction	Impacts to traffic and transport are minimised. Motorist, pedestrian and cyclist safety will be maintained or improved during construction. Safe access to properties is maintained.	Management will be undertaken in accordance with the CTMP, REMM and COA.

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
transport system customers is maintained Impacts on network capacity and the level of service are effectively managed	Safe access to properties and businesses is maintained during construction, unless alternatives are agreed with property owners and businesses	Yes	Construction	Impacts to traffic and transport are minimised. Motorist, pedestrian and cyclist safety will be maintained or improved. Safe access to properties is maintained.	Management will be undertaken in accordance with the CTMP, REMM and COA.
	Heavy vehicles access the arterial network as soon as practicable on route to, and immediately after leaving, a construction site	Yes	Construction		
	The local community and relevant authorities are informed of transport, access and parking changes/impacts to minimise inconvenience to the public	Yes	Construction		
	Safe and efficient interchanges are provided between transport modes	Yes	Operation		
Construction noise and vibration (including airborne noise, ground-borne noise and blasting) is effectively managed to minimise adverse impacts on acoustic amenity Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage	Construction noise and vibration impacts on local communities (including airborne noise and ground-borne noise and vibration) are managed in accordance with the Construction Noise and Vibration Standard, the Interim Construction Noise Guideline, and the Airports (Environment Protection) Regulations 1997	Yes	Construction	The project will minimise impacts to the local community by controlling noise and vibration at the source to receiver, including practicable and reasonable measures to minimise the noise and vibration impacts of construction activities on local sensitive receivers.	Management of noise and impacts will be undertaken throughout delivery of the project in accordance with the mitigation measures in Section 14 and detailed noise and vibration impact statement for out of hours works that exceed the NML's.
	Structural damage to buildings, heritage items and public utilities and infrastructure, including the Warragamba to Prospect Water Supply Pipelines, from construction vibration to be avoided	Yes	Construction		

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity	Minimise or where possible avoid impacts on threatened flora and fauna species, and ecological communities listed under the <i>Biodiversity Conservation Act 2016 (NSW)</i> and <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>	Yes	Construction	The Project will minimise the impacts to protects flora and fauna	Minimise the extent of construction boundary.
Offsets and/or supplementary measures are assured which are equivalent to any residual impacts of project construction and operation	Impacts on threatened ecological communities and threatened species are offset in accordance with the requirements of the NSW Biodiversity Assessment Method (OEH, 2017)	Yes	Construction	Impacts on threatened ecological communities and threatened species are offset in accordance with the requirements of the NSW Biodiversity Assessment Method (OEH, 2017)	Impacts to on threatened ecological communities and threatened species from construction will be offset. SM WSA will retire biodiversity offsets. SM-WSA Pre-clearing inspection for native vegetation removal approval form to be completed and approved prior to clearing.
The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of items of environmental heritage The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage	Impacts on non-Aboriginal heritage items and archaeology are minimised or where possible avoided	Yes	Construction	Impacts on heritage are managed in accordance with relevant legislation, including the <i>EP&A Act</i> , the <i>Heritage Act 1977</i> , and relevant guidelines. The potential impacts identified are mitigated by the mitigation measures provided.	Management of non-Aboriginal heritage will be undertaken throughout the delivery of the Project in accordance with identified management measures
	The design of the project incorporates non-Aboriginal heritage interpretation	Yes	Operation	The works are temporary in nature, therefore a heritage interpretation in the design is not required for these works.	Not Applicable

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of items of Aboriginal objects and places. The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of Aboriginal objects and places.	The heritage significance of Aboriginal objects and places are protected, conserved and/or managed in order to ensure the project does not diminish the story and cultural understanding associated with the objects and places of Aboriginal people in New South Wales	Yes	Construction	Impacts on heritage are managed in accordance with relevant legislation, including the <i>EP&A Act</i> , the <i>Heritage Act 1977</i> , and relevant guidelines. The potential impacts identified are mitigated by the mitigation measures provided.	Management of non-Aboriginal heritage will be undertaken throughout the delivery of the Project in accordance with identified management measures
	Impacts on areas of archaeological sensitivity and significance are avoided or minimised, where practical	Yes	Construction		
	The design of the project incorporates Aboriginal heritage interpretation and Aboriginal cultural design principles in consultation with Aboriginal knowledge holders	Yes	Operation		
The project minimises adverse impacts on flooding characteristics. Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure. Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised. The	Land and property beyond the construction footprint would not be impacted by construction for the 0.5 Exceedances per Year (EY) storm event	Yes	Construction	Design considers this requirement.	Project to be constructed as per design.
	No aspect of construction to materially adversely affect existing water quality in receiving waters to a minimum 0.5 EY storm event, or in line with the 'Blue Book' (Managing Urban Stormwater: Soils & Construction Volume 1 (Landcom, 2004))	Yes	Construction	The project would protect or contribute to achieving the Water Quality Objectives, during Construction. Construction water quality discharge (if required) would comply with the requirements of the COA. Management of water within the construction works area would be completed in accordance with the Blue Book Vol 2.	Management of soil and surface water will be undertaken throughout the delivery of the Project in accordance with the mitigation measures

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
environmental values of nearby, connected and affected water sources, groundwater and dependent ecological systems including estuarine and marine water (if Applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved) Sustainable use of water resources The Project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time where they are currently not being achieved, including downstream of the project to the extent of the project impact including estuarine and marine waters (if Applicable)	No material change to channel shape within the construction footprint for the 0.5 EY storm event for streams classified first order and higher	Yes	Construction	Design considers this requirement.	Project to be constructed as per design.
	Water discharged from the project, including runoff from hardstand areas, surface and ground water storages would: contribute towards achieving ANZECC guideline water quality trigger values for physical and chemical stressors for slightly disturbed ecosystems in lowland rivers in southeast NSW, or meet any water quality criteria determined in consultation with the NSW Environment Protection Authority (off-airport) where an EPL is required or in consultation with Western Sydney Airport in accordance with the Airports (Environmental Protection) Regulations 1997 (on-airport)	Yes	Construction and Operation	The project would protect or contribute to achieving the Water Quality Objectives, during Construction. Construction water quality discharge (if required) would comply with the requirements of the COA. Management of water within the construction works area would be completed in accordance with the Blue Book Vol 2.	Management of soil and surface water will be undertaken throughout the delivery of the Project in accordance with the mitigation measures
	Drainage from the project (including the stabling and maintenance facility, service facilities and stations) designed in accordance with local council requirements for managing urban stormwater quality and quantity	Yes	Operation		

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
	<p>For all land currently flooded up to the one per cent annual exceedance probability event, no change to peak flood levels up to the following limits, unless otherwise agreed with the affected property owner:</p> <p>residential, commercial, critical infrastructure</p> <p>no new above floor flooding, maximum change of 10 millimetres for existing flooded buildings and maximum of 50 millimetres for properties where flooding is below floor level roads</p> <p>maximum change of 50 millimetres</p> <p>Crown land open space, farming, grazing and cropping land</p> <p>maximum change of 200 millimetres</p>	Yes	Operation	Design considers this requirement.	Project to be constructed as per design.
	<p>Where flood water velocities are currently below one metre per second (m/s), the project is designed and operated to ensure they remain below one metre per second. Where velocities are above one m/s, an increase of no more than 20 per cent is permitted</p>	Yes	Operation	Design considers this requirement.	Project to be constructed as per design.
	<p>No change to flood hazard vulnerability classification limits for residential and commercial buildings or road</p>	Yes	Operation	Design considers this requirement.	Project to be constructed as per design.

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
	No change to the one per cent annual exceedance probability duration of inundation up to the following limits: <ul style="list-style-type: none"> • residential, commercial, critical infrastructure – no increase for above floor flooding • roads – maximum change of 10 per cent increase in duration • agricultural land for cropping – dependant on cropping type 	Yes	Operation	Design considers this requirement.	Project to be constructed as per design.
Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised	Structural damage to buildings, heritage items and public utilities and infrastructure, including the Warragamba to Prospect Water Supply Pipelines, from ground movement to be avoided	Yes	Construction	Design considers this requirement.	Management of groundwater will be undertaken throughout the delivery of the Project in accordance with the mitigation measures
The environmental values of land, including soils, subsoils and landforms, are protected Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination	Contamination risks to human health and ecological receivers are minimised through effective management of existing contaminated land	Yes	Construction	Any unexpected contaminated finds would be managed in accordance with the SM-WSA Unexpected Finds Procedure and WHS guidelines.	Management of soil and surface water will be undertaken throughout the delivery of the Project in accordance with the mitigation measures
	Contaminated land and soil within the footprint of the project is remediated where required, to ensure the land is suitable for the intended future land use	Yes	Operation		

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources Conservation of natural resources is maximised	The project achieves a minimum 'Design' and 'As built' rating score of Leading +75, using the Infrastructure Sustainability Council of Australia Infrastructure Sustainability Rating Scheme Version 1.2 or equivalent	Yes	Operation	The works are temporary in nature to allow for the construction of permanent infrastructure. Sustainability considerations are integrated throughout design, construction, and operation A minimum 95 per cent recycling target is achieved for construction and demolition waste Products made from recycled content are prioritised	Management of natural resources will be managed throughout delivery in accordance with the mitigation measures Electricity will not be connected for this scope of works
	Sustainability initiatives are incorporated into the planning, design and construction of the project	Yes	Construction and operation	The use of potable water for non-potable purposes is avoided if non-potable water is available	
	100 per cent of the greenhouse gas emissions associated with consumption of electricity during operation are offset	Yes	Operation	The reuse of water is maximised, either on-site or off-site	
	25 per cent of the greenhouse gas emissions associated with consumption of electricity during construction are offset	Yes	Construction		
The project is designed, constructed and operated to be resilient to the future impacts of climate change	The project is designed to withstand known impacts associated with climate change to year 2100	Yes	Construction and operation	The works are temporary in nature to allow for the construction of permanent infrastructure. Sustainability considerations are integrated throughout design, Construction, and operation	Project will be delivered as per design
Conservation of natural resources is maximised	100 per cent of useable spoil is reused in accordance with the spoil reuse hierarchy	Yes	Construction	Spoil to be re-used where it complies with the re-use hierarchy	Management in accordance with the mitigation measures in for spoil
	A minimum 95 per cent recycling target is achieved for construction and demolition waste	Yes	Construction	Sustainability considerations are integrated throughout design, Construction, and operation A minimum 95 per cent recycling target is achieved for construction and demolition waste	Management of natural resources will be managed throughout delivery in accordance with the mitigation measures
	Products made from recycled content are prioritised	Yes	Construction		

Environmental Performance Objective Topic	Environmental Performance Objective	Triggered in Staging Report	Stage	Target	Management Measure
	The use of potable water for non-potable purposes is avoided if non-potable water is available	Yes	Construction and operation	Products made from recycled content are prioritised	
	The reuse of water is maximised, either on-site or off-site	Yes	Construction and operation	The use of potable water for non-potable purposes is avoided if non-potable water is available The reuse of water is maximised, either on-site or off-site	
Cumulative Impacts	Cumulative impacts are managed through coordination of construction activities and communication processes with nearby projects (Western Sydney International, M12 Motorway, The Northern Road, St Marys Intermodal and St Marys Commuter Car Park Expansion)	Yes	Construction	Works undertaken in coordination with other projects to minimise impacts on surrounding receivers	Cumulative impacts would be managed by TfNSW and SM-WSA. Abergeldie will liaise with TfNSW and SM-WSA to ensure that the construction program is clearly communicated to TfNSW and SM-WSA and will participate as required.

4 PROJECT OVERVIEW

4.1 PROJECT CONTEXT

The Elizabeth Drive Enabling Work is a Project undertaken by Abergeldie for Transport for New South Wales (TfNSW) on behalf of Sydney Metro – Western Sydney Airport. This package of work forms part of the Advance Enabling Works for Sydney Metro – Western Sydney Airport.

The Sydney Metro – Western Sydney Airport involves a new metro railway line around 23 kilometres in length between St Marys in the north and the Aerotropolis Core precinct in the south (the area to be called Bradfield). This will include a section of the alignment which passes through and provides access to Western Sydney International (Nancy-Bird Walton) Airport (Western Sydney International), currently under construction. Key operational features of the project include:

- around 4.3 kilometres of twin rail tunnels (generally located side by side) between St Marys (the northern extent of the project) and Orchard Hills
- a cut-and-cover tunnel around 350 metres long (including tunnel portal), transitioning to an in-cutting rail alignment south of the M4 Western Motorway at Orchard Hills
- around 10 kilometres of rail alignment between Orchard Hills and Western Sydney International, consisting of a combination of viaduct and surface rail alignment
- around two kilometres of surface rail alignment within Western Sydney International
- around 3.3 kilometres of twin rail tunnels (including tunnel portal) within Western Sydney International
- around three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Core six new metro stations:
 - St Marys (providing interchange with the existing Sydney Trains suburban rail network)
 - Orchard Hills
 - Luddenham Road
 - Aerotropolis Core
 - Airport Business Park
 - Airport Terminal
- grade separation of the track alignment at key locations including:
 - where the alignment interfaces with existing infrastructure such as the Great Western Highway, M4 Western Motorway, Lansdowne Road, Patons Lane, the Warragamba to Prospect Water Supply Pipelines, Luddenham Road, the future M12 Motorway, Elizabeth Drive, Derwent Road and Badgerys Creek Road
 - crossings of Blaxland Creek, Cosgroves Creek, Badgerys Creek and other small waterways to provide flood immunity for the project
- modifications to the existing Sydney Trains station and rail infrastructure at St Marys (where required) to support interchange and customer transfer between the new metro station and the existing Sydney Trains suburban rail network
- a stabling and maintenance facility and operational control centre located to the south of Blaxland Creek and east of the proposed metro track
- new pedestrian, cycle, park-and-ride and kiss-and-ride facilities, public transport interchange infrastructure, road infrastructure and landscaping as part of the station precincts.

4.1.1 Advanced and Enabling Works (AEW) – Roadworks

Enabling works for the SM-WSA are required to establish key construction sites and facilitate construction activities. Activities within the AEW stage includes construction of enabling works such as site investigation, clearance, demolition and modifications to the existing transport network (such as roads, bus interchanges, lift shaft relocation).

4.2 PROJECT DESCRIPTION

The proposed works are the upgrade of the Elizabeth Drive and Badgerys Creek Road intersection to provide a northbound leg on the existing roundabout to facilitate construction access to the north. Both Elizabeth Drive and Badgerys Creek Road are State Roads and the works area is located within the Special Purpose Infrastructure land use zone. To the south of the works area is the construction area of Western Sydney Airport and to the north is predominantly rural land uses zoned Environment and Recreation, and Enterprise under the *State Environmental Planning Policy (Western Sydney Aerotropolis) 2020 (SEPP WSA)*.

The project scope includes the following:

- Construction of a 4th leg of the Elizabeth Drive and Badgerys Creek Road roundabout to the north with 2 travel lanes 3.5m wide, with a 1m shoulder and 3m verge on either side. This will be established as a 'stub road' which extends for approximately 32 metres from the road reserve.
- A new raised median at the entry to the new road access.
- Construction of stormwater drainage – adjustment/modification of 2 drainage pits, installation of 1 new stormwater pit, new open channel and pipe beneath new road access.
- Installation of a chain wire fence 1.8m in height and a 9m wide gate across new access to Transport for NSW standard specification.
- Installation of new road signage.
- Temporary exclusion fencing and signage will be established around the project boundary.



Figure 1 Project site boundary

4.3 WORK ACTIVITIES

The works that will be carried out for the Project includes the following activities:

- Site establishment – site induction for all personnel, establish boundary with security fencing, set up environmental controls, temporary traffic management signage, tree/shrub clearing.
- Strip topsoil and windrow or stockpile for future use. Excavate existing material to subgrade, dispose or stockpile material for reuse.
- Existing kerb and gutter to be demolished
- Stormwater drainage to be installed after earthworks cut to fill completed
- Asphalt pavement construction with proposed pavement to tie into the existing pavement.
- Installation of road signage
- Site rehabilitation – complete stabilisation of disturbed soils, then remove environmental controls, site fencing.

4.4 PROJECT DURATION

Works are anticipated to start in May 2022 for an anticipated duration of approximately 2 months. Works would be undertaken predominantly during standard working hours, with some out of hours works to minimise disruption on Elizabeth Road and Badgerys Creek Road and provide safe working conditions for construction. Table 5 provides the details of the indicative construction program.

Table 5 Elizabeth Drive Roundabout Indicative Construction Program with Plant

Description	Plant and quantity	Start	Finish
Utilities Telstra			
Concrete cap protection	Fanner, 8 t excavator, tipper, light vehicles x2	9-May-22	13-May-22
Earthworks			
Demolition	30 t Trucks x2, 13 T Excavator (with hammer), Light Vehicles x3	8-May-22	8-May-22
Topsoil Strip	30 t Trucks x2, 13 T Excavator, Light Vehicles x3	14-May-22	14-May-22
Formation treatments	30 t Trucks x2, 13 T Excavator, Light Vehicles x3	15-May-22	15-May-22
Cut/fill	Posi track, 30 t Trucks x2, 13 T Excavator - Light Vehicles x3, Compactors x2, Light vehicles x2, Water Cart x1	16-May-22	16-May-22
Verge fill stage 1	Excavator x1, Posi-Track x1, Truck x1, Compactors x2, Light vehicles x2, Water Cart x1	19-May-22	19-May-22
Subsoils	Excavator x1, Posi-Track x1, Truck x1, Compactors x2, Light vehicles x2, Water Cart x1	5-Jun-22	10-Jun-22
Stormwater drainage			
Pipes	Excavator x1, Posi-Track x1, Truck x1, Compactors x2, Light vehicles x2, Water Cart x1, tipper	15-May-22	28-May-22

Pits	Excavator x1, Posi-Track x1, Truck x1, Compactors x2, Light vehicles x2, Water Cart x1, tipper	16-May-22	28-May-22
Pavements			
HBB	Excavator x1, Posi-Track x1, Truck x1, Compactors x1, Vibratory roller x1, Light vehicles x2, Water Cart x1, Grader x1	29-May-22	3-Jun-22
Seal	Excavator x1, Posi-Track x1, Truck x1, Compactors x1, Vibratory roller x1, Light vehicles x2, Water Cart x1, Grader x1	4-Jun-22	4-Jun-22
AC20	Excavator x1, Posi-Track x1, Truck x1, Compactors x1, Vibratory roller x1, Light vehicles x2, Water Cart x1, Grader x1	19-Jun-22	19-Jun-22
	Asphalt paving machine x1, Concrete trucks x1, Slip-forming machines x1, Truck x1, Light vehicles x2		
AC W/C	Asphalt paving machine x1, Concrete trucks x1, Slip-forming machines x1, Truck x1, Light vehicles x2	20-Jun-22	20-Jun-22
Heavy patching	Asphalt paving machine x1, Concrete trucks x1, Slip-forming machines x1, Truck x1, Light vehicles x2	20-Jun-22	20-Jun-22
Linemarking	Generators x2, Compressors x1, Hand held tools, Light vehicles.	23-Jun-22	23-Jun-22
Kerb & Gutter			
No fines pad	Generators x2, Compressors x1, Hand held tools, Light vehicles.	11-Jun-22	13-Jun-22
SA kerb	Generators x2, Compressors x1, Hand held tools, Light vehicles.- tool truck – tipper	16-Jun-22	18-Jun-22
Road Furniture			
Signs	Tipper – tool truck- Hand held tools,	24-Jun-22	24-Jun-22
Fencing	Tipper – tool truck- Hand held tools,	24-Jun-22	24-Jun-22
Vegetation			
Verge fill stage 2	Generators x2, Compressors x1, Hand held tools, Light vehicles.	19-Jun-22	19-Jun-22
Topsoiling	Generators x2, Compressors x1, Hand held tools, Light vehicles.	20-Jun-22	20-Jun-22
Turf	Generators x2, Compressors x1, Hand held tools, Light vehicles.	23-Jun-22	23-Jun-22
Total Project Duration		8-May-22	23-Jun-22

Out of hour works are proposed to undertake tie in works at the roundabout and where lane closure using a ROL is required to make a safe work environment. This works will include but not limited to Installation and removal of barriers (undertaken through Low Impact Work Application, paving, concreting for kerb and gutter, and road furniture.

The out of hour process is included in Section 14, this section also details assessment of noise and vibration impacts through a DNVIS and the mitigation measures

5 LEGISLATIVE REQUIREMENTS

5.1 STATUTORY CONTEXT

The two principal statutory schemes that govern the planning and assessment process for the SM-WSA specific to this Project are:

- The *Environmental Planning and Assessment Act 1979 (NSW) (EP&A Act)* - applies to works located on State land outside the boundary of Western Sydney International (off airport)
- The *Environmental Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)*:
 - For works located north of Western Sydney International (off-airport), assessment and approval is required under Part 8 and 9 of the *EPBC Act* to address impacts on listed threatened species and communities and Commonwealth land.

Detailed environmental impact assessments have been carried out and approved by the Minister for Planning (Instrument of Approval: SSI 10051), namely:

- Sydney Metro – Western Sydney Airport Environmental Impact Statement dated 21 October 2020;
- Sydney Metro – Western Sydney Airport Submissions Report submitted April 2021; and
- Assessment and approval under the EPBC Act has been provided by Approval Decision EPBC 2020/8687, approved on 3 June 2021.

5.2 LEGISLATIVE REQUIREMENTS

The following table identifies key NSW environmental legislative requirements and their application to this Project.

Table 6 NSW Legislative Requirements

Legislation and Administering Authority	Requirements	Application and Relevance to project
<i>Biodiversity Conservation Act 2016 DPE</i>	The relevant purpose of the Act is to conserve biodiversity and maintain the diversity and quality of ecosystems.	<p>Projects assessed under Part 5, Division 5.2 of the <i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i> are exempt from an order or direction under Part 11 of the Act.</p> <p>The Act also established that other permits and approvals are not required for projects assessed and determined under Part 5, Division 5.2 of the EP&A Act.</p> <p>Medium Relevance</p> <p>SSI projects are exempt for regulatory compliance mechanisms set out under Part 11 of the <i>Biodiversity Conservation Act</i>. Species listed within the act are recognised and are to be protected.</p>
<i>Biosecurity Act 2015 DPI</i>	Under this Act, all plants are regulated with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Any person who deals with any plant, who knows (or ought to know) of any biosecurity risk, has a duty to ensure the risk is prevented, eliminated or minimised, so far as is reasonably practicable.	<p>Control weeds as required on land under the management of the Contractor.</p> <p>Low Relevance: A review of the area has been undertaken by an ecologist. No weeds have been identified within the Project area.</p>
<i>Contaminated Land Management Act 1997 NSW Environment Protection Authority (EPA)</i>	The Act provides a process for the investigation and remediation of land where contamination presents a significant risk of harm to human health or some other aspect of the environment.	<p>Follow the legislative process where contaminated land is identified.</p> <p>Medium Relevance</p>

Legislation and Administering Authority	Requirements	Application and Relevance to project
	The Act also outlines the circumstances in which notification to the Environment Protection Authority is required in relation to the contamination of land.	The relevance of this Act to the Principal Contractor will be in the event suspected or potentially contaminated ground is found during Construction activities.
<i>Dangerous Goods (Road and Rail Transport) Act 2008 EPA / SafeWork NSW</i>	A licence is required for the storage (SafeWork NSW) and /or transport (EPA) of prescribed quantities of dangerous goods.	<p>Obtain a licence where storage of dangerous goods would exceed licensable quantities.</p> <p>High Relevance</p> <p>The relevance of the Act is in respect to the transport of dangerous good to & from the site. The project will require the use of a variety of dangerous goods. The Principal Contractor will need to review and ensure Dangerous Goods requirements are addressed where transported by its vehicles, plant and equipment.</p>
<i>Environmental Planning and Assessment Act 1979 DPE</i>	Encourages proper environmental impact assessment and management of development areas for the purpose of promoting the social and economic welfare of the community and a better environment.	<p>Adhere to performance outcomes, mitigation measures and Conditions of Approval within the planning approval documentation. Sydney Metro and their contractors must endeavour to deliver in a consistent manner within the assessed scope of works.</p> <p>High Relevance</p> <p>The Project has been declared Critical State Significant Infrastructure (CSSI) by virtue of Schedule 5, clause 4 of <i>State Environmental Planning Policy (State and Regional Development) 2011</i>.</p> <p>The development consent conditions and obligations are incorporated into the CEMP.</p>
<i>Heritage Act 1977 NSW Department of Premier and Cabinet</i>	<p>The Act aims to encourage the conservation of the State's heritage and provides for the identification and registration of items of State heritage significance.</p> <p>The Heritage Council must be notified 'of the location of the relic, unless they believe on reasonable grounds that the Heritage Council is aware of the location of the relic'.</p>	<p>Projects assessed under Division 5.2 of the <i>EP&A Act</i> are exempt from approvals required under Part 4 and permits required under section 139 of the <i>Heritage Act</i>.</p> <p>Medium Relevance</p> <p>Works will occur within the McGarvie Smith Farm site which is listed as local significance under the Penrith LEP 2010 I857.</p>
<i>National Parks and Wildlife Act 1974 DPE</i>	The objectives of the Act are for the conservation of nature and the conservation of objects, places or features (including biological diversity) of cultural value within the landscape.	<p>Projects assessed under Part 5, Division 5.2 of the <i>Environmental Planning and Assessment Act 1979 (EP&A Act)</i> are exempt from obtaining an Aboriginal Heritage Impact Permit required under section 90.</p> <p>Low Relevance</p> <p>No identified Aboriginal artefacts have been identified within the Project's Construction area. Projects assessed under Division 5.2 of the <i>EP&A Act</i> are exempt from obtaining an Aboriginal Heritage Impact Permit required under section 90.</p>
<i>Protection of the Environment Operations Act 1997 EPA</i>	The relevant objective of the Act is to prevent environmental pollution.	<p>Where Sydney Metro projects are scheduled activities under Schedule 1 of the Act an Environment Protection Licence (EPL) must be obtained. Further details on the requirements to obtain an EPL are provided in Section 2.3 of the CEMP.</p> <p>High Relevance</p> <p>The <i>POEO Act</i> provides for the issuing of environmental protection notices to control</p>

Legislation and Administering Authority	Requirements	Application and Relevance to project
		<p>work and activities not covered by licences. An EPL is not required for this scope of works</p> <p>Section 148 of the Act requires a pollution incident causing or threatening material harm to the environment to be notified to the EPA and other authorities immediately.</p> <p>The POEO Act stipulates the requirements for the movement of waste</p>
Roads Act 1993 Transport for NSW	The relevant objective of the Act is to regulate the carrying out of various activities on public roads.	<p>Obtain consent under Section 138 for carrying out work in, on or over a public road, or digging up or disturbance of the surface of the road. Under Section 38N of the <i>Transport Administration Act 1988</i>, Section 138 of the <i>Roads Act 1993</i> does not apply to Sydney Metro activities in relation to classified roads for which a council is the roads authority. However, consent from Transport for New South Wales is still required under Section 38N(2) of the <i>Transport Administration Act 1988</i> for those activities described in Section 138(1) of the <i>Roads Act 1993</i>, when carried out in relation to a classified road.</p> <p>Medium Relevance</p> <p>This act governs Road Occupancy Licences (ROL) that will be required for works on and around roads. An ROL cannot be refused to carry out works required under an SSI approval as per Section 115ZH of the <i>EP&A Act</i>.</p>
Waste Avoidance and Resource Recovery Act 2001 EPA	The objectives of the Act are to reduce environmental harm, provide for the reduction in waste generation and the efficient use of resources.	<p>Implement strategies to reduce waste volumes and report on waste generated.</p> <p>High Relevance</p> <p>The relevance of the Act to this project is to implement the strategies by adopting the hierarchy of avoidance; avoidance of unnecessary resource consumption; resource recovery (including reuse, reprocessing, recycling and energy recovery), disposal (as a last resort).</p>
Water Management Act 2000 DPE	The relevant objective of the Act is to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality.	<p>Sydney Metro projects assessed under Part 5, Division 5.2 of the <i>EP&A Act</i> are exempt from obtaining water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91.</p> <p>No Relevance</p> <p>Projects assessed under Division 5.2 of the <i>EP&A Act</i> are exempt from obtaining water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91.</p>

The following Table 7 identifies key Commonwealth environmental legislative requirements and their application to this Project.

Table 7 Commonwealth Legislative Requirements

Legislation and Administering Authority	Requirements	Application to the project
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<i>Airports Act 1996</i> Department of Infrastructure, Transport, Regional Development and Communications	The Act regulates federally leased airports and includes provision for planning and building activities on the airport site as well as environmental management for activities undertaken on airports.	Compliance with regulatory requirements and standards as required for on-airport works No relevance: No works undertaken on airport
<i>Airports (Environment Protection) Regulations 1997</i>	Establishes a framework for the regulation and management of activities at airports that could have potential to cause environmental harm.	Compliance with requirements for on-airport works that may generate pollution, duties to avoid pollution and preserve habitat and heritage. Improving environmental management practices. Management processes for minimising environmental impacts, monitoring and incident response processes for on-airport works. No relevance: No works undertaken on airport
<i>Airports (Building Control) Regulations 1996 WSA</i>	Following variation of the Airport Plan and prior to construction, the <i>Airports Act</i> provides a regime requiring building approvals to be obtained from the Airport Building Controller (ABC) in respect of building activities on the airport site. WSA required to provide its consent to any applications for building approvals. Applications for building approvals must satisfy the requirements of the <i>Airports (Building Control) Regulations 1996</i> .	On-airport works to be undertaken in accordance with relevant building approvals. No relevance: No works undertaken on airport
<i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)</i> Department of Agriculture, Water and the Environment	The relevant objective of the Act is to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance.	A referral was made under Part 7 of the <i>EPBC Act</i> for the off-airport works to the north of Western Sydney International. The Project has been deemed to be a controlled action by the Commonwealth Environment Minister and an assessment of impacts is required to be undertaken in accordance with the assessment requirements issued by the Minister, which is to be in the form of preliminary documentation. Part 13 of the <i>EPBC Act</i> requires a permit to be obtained for activities that may kill, injure, take, trade, keep or move a member of a listed threatened species or ecological community, a member of a list migratory species, or a member of a list marine species in or on a Commonwealth area. No Relevance The Project would not impact on any matters of national environmental significance or Commonwealth land
<i>National Greenhouse and Energy Reporting Act 2007</i> Department of Climate Change and Energy Efficiency	The Act established a framework for reporting of greenhouse gas emissions, abatement actions, energy consumption and production data.	Report on greenhouse gas and energy usage data as required by the Act for both on and off airport works. In accordance with the staging report, greenhouse gas reporting is not required for this scope of works. Abergeldie will undertake reporting on greenhouse gas reporting for emissions with the Abergeldie's Operational Control.

5.3 PERMITS AND LICENCES

The following permits and/or licences are required on the Project:

Road Occupancy Licences. Required prior to the commencement of traffic related works that require access to the roads. This process is managed through the Construction Traffic Management Plan (CTMP).

5.4 GUIDELINES AND STANDARDS

Other guidelines, specifications and policy documents relevant to this Plan include:

- Sydney Metro Environmental Incident and Non-compliance Reporting Procedure (February 2019)
- Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects (Revision 0/September 2011)
- Code of Practice for Water Management (RTA April 1999)
- Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2018)
- Environmental Procedure: Management of Wastes on Roads and Maritime Services Land (RMS August 2014)
- Environment Incident Classification and Reporting Procedure (Roads and Maritime Services | November 2018)
- Waste Classification Guidelines (EPA NSW, 2014)
- Guideline for the Management of Contamination (RMS September 2013)
- Technical Guide: Management of road construction and maintenance wastes (RMS June 2016)
- Managing Urban Stormwater: Soils and Construction, Volume 1 and Volume 2 (DEC 2004) (the "Blue Book"),
- Environmental Noise Management Manual, Practice Note vii – Road Work outside Normal Working Hours. (Roads and Traffic Authority, 2001)
- Interim Construction Noise Guidelines (OEH 2010)
- Code of Practice for Water Management - Road Development and Management (RTA April 1999)
- Erosion and Sedimentation Management Procedure – RTA Procedure PN143
- TfNSW Technical Guideline - Environmental Management of Construction Site Dewatering - EMS-TG-011 (RMS April 2011)
- Technical Guideline - Temporary stormwater drainage for road construction (RMS December 2011)
- Environmental Direction- Management of Tannins from Vegetation Mulch (January 2012)
- Technical Direction – Coal Tar Asphalt handling and disposal – (RMS ETD 2015/021)
- Code Of Practice How To Manage And Control Asbestos In The Workplace (SafeWork NSW, August 2019)
- Code Of Practice How To Safely Remove Asbestos (SafeWork NSW, August 2019) AS 1742.3 Manual of uniform traffic control devices Part 3: Traffic control for works on roads
- AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting
- SM-WSA Out Of Hours Work Protocol (Nov 2021)
- SM-WSA Unexpected Heritage Finds Procedure (May 2021)

6 ENVIRONMENTAL MANAGEMENT PLAN IMPLEMENTATION

6.1 INTEGRATED MANAGEMENT SYSTEM

In accordance with the Contract, Abergeldie must implement and maintain an effective Management System, which addresses all its obligations under the Contract. This management system and the

CEMP are updated and developed to address the requirements of the Sydney Metro Construction Environment Management Framework.

The Management Systems must seamlessly integrate all Abergeldie's systems and processes, including those related to environmental, sustainability, health and safety and they must accommodate, coordinate and give effect to the Project Plans.

Details of Abergeldie's Integrated management System (AIMS) including the integrated relationship of the CEMP with the other Project Plans and with the delivery Core Processes are contained in the Project Management Plan. As improvements are made to the processes and systems, these will be reflected in updates to the relevant Project Plans. All elements of the Integrated Management System will reside on AIMS as controlled copies.

6.2 ENVIRONMENTAL MANAGEMENT SYSTEM

Abergeldie utilise a comprehensive Integrated Management System (AIMS), comprising of company operating procedures, processes, safe and environmental work practices and supporting documentation which form the basis and minimum criteria by which Abergeldie operate. It is not intended for this CEMP to encompass all of the Abergeldie environmental processes, however this document does draw upon corporate guidance to ensure the highest project environmental standards are implemented.

There are no departures from these environmental policies and procedures as stated herein by the Company unless to adopt a higher standard.

Working to ensure environmental and sustainability standards is the responsibility of all employees, whether they are employed by Abergeldie Complex Infrastructure, or employed by our sub-contractors.

6.3 ENVIRONMENTAL POLICY

The Abergeldie Environment Policy is the primary governance document of the EMS for the Project. The Policy is attached in Appendix B2 of this CEMP.

6.4 CONSTRUCTION ENVIRONMENTAL MANAGEMENT FRAMEWORK

This CEMP provides the system to manage and control the environmental aspects of the Project during construction. It identifies all requirements applicable to activities described in Section 4.3. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled. The CEMP has been developed based on the Abergeldie Environmental Management Systems.

The strategies defined in this CEMP have been developed in accordance with the Conditions of Approval (COA) within CSSI (Instrument of Approval: SSI 10051), Revised Environmental Mitigation Measures (REMM) included within the Submissions Report, and SM-WSA Construction Environmental Management Framework (CEMF). This CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

This CEMP, in accordance with Condition of Approval C2 and the Staging Report (SM-WSA CSSI Staging Report) is required to be Endorsed by the ER.

6.5 ROLES AND RESPONSIBILITIES

During construction, primary responsibility for environment and sustainability performance will sit with the Environment, Sustainability and Approvals Manager (ESAM) who will be supported by an Environmental Site Representative across the work areas.

Appropriate responsibilities are provided to all personnel and the wider project team to ensure effective environmental management for the duration of the Project. Achievement of identified environmental objectives and targets relies on all site personnel to diligently carry out their duties and to report all

environmental incidents and hazards immediately to the Environment, Sustainability and Approvals Manager.

Each member of the project team and sub-contractors will be site inducted and made aware of their responsibilities during site inductions. Sub-contractors will be made aware of CEMP requirements during tendering and will be expected to demonstrate as part of their tender response how they intend to meet the Project's CEMP and sustainability requirements. The responsibilities of all Project staff are summarised in the tables below.

Table 8 Abergeldie Environment, Sustainability and Approvals Manager

Environment, Sustainability and Approvals Manager (ESAM)	
Role	Accountable for managing all aspects of environment and sustainability management across the Project
Location	Hybrid working, with at least one day onsite.
Responsibility	<p>Liaise with the TfNSW Environmental Officer and the SM-WSA Environmental Manager in relation to environmental management aspects related to the Project.</p> <p>Ensure that the CEMP is effectively established, implemented and maintained at the project level</p> <p>Assist the TfNSW Environmental Officer and SM-WSA Environmental Manager in developing and submitting environmental documentation to the independent environmental representative (ER).</p> <p>Advise the Project team on environmental matters specified in the SW-WSA CEMF, Instrument of Approval SSI 10051, Revised Environmental Mitigation Measures, Low Impact Minor Works Approvals, Out of Hours Approvals, unexpected finds procedures and compliance with all other relevant statutory approvals, licences, permits, guidelines and authorisations;</p> <p>Oversees and advises the onsite Environmental Site Representative in the establishment, implementation, maintenance and compliance with Instrument of Approval SSI 10051, CEMF, REMM, and SM-WSA approval documents including all procedures and upgrades to these documents (as needed) to remain current with the progress of the Works.</p> <p>Ensure all personnel are aware of their roles and responsibilities in accordance with the CEMP to ensure the CEMP is fully implemented.</p> <p>Carrying out regular (weekly) inspections and auditing of the works to ensure that environmental safeguards are being followed.</p> <p>Identifying where the mitigation measures identified in the CEMP and relevant sub-plans are not meeting the targets set and identifying areas where improvements can be achieved.</p> <p>Stop activities where there is an actual or immediate risk of harm to the environment or to prevent environmental non-conformities until deficiencies are rectified and advise the Project Manager and the General Superintendent.</p> <p>Assess any changes to the Project scope and activities against approvals and licences.</p> <p>Ensure environmental actions raised by Sydney Metro, TfNSW and the ER are closed out and reported by the project team.</p> <p>Develop progressive sediment and erosion plans (PESCPs) for works (included within the ECM).</p>
Authority	Appointed by the Project Director.
Lines of Communication	<p>Reports to Project Director.</p> <p>Primary government agency contact for planning approvals and environmental management.</p>
Minimum Skill Levels	<p>The ESAM must have tertiary qualification in Environmental Science, Environmental Engineering or equivalent, and a minimum of three (3) years' experience in environmental management on road construction or other equivalent works.</p> <p>Previous experience in managing planning and assessment, environmental performance, sustainability and regulatory liaison and consultation for projects.</p> <p>In depth knowledge of current and emerging environmental issues contemporary environmental management practices and processes.</p> <p>Understand whole-of-business issues as they apply to environmental and sustainability systems at all levels.</p>
Interface with Project Organisation Structure	Situated in the delivery phase organisational structure and a member of the Senior Management Team.

Table 9 Abergeldie Environmental Site Representative (ESR) (Environment Coordinator)

Environmental Site Representative (ESR)	
Role	Accountable for implementation of all aspects of environmental management across the Project.
Location	Based onsite
Responsibility	<p>Day-to-day management of all on-site environmental aspects including field testing, site inspections, and any monitoring requirements within their designated areas;</p> <p>Function as a key role as part of the construction team;</p> <p>Practical implementation of on-site environmental controls (e.g. erosion and sedimentation controls, incident response (including spills) and waste/spoil tracking;</p> <p>Participate in environmental inspections conducted by the Principal;</p> <p>The ESR is a full time onsite to oversee the implementation of the environmental aspects of the project;</p> <p>Must have completed a training course in Blue Books 1 and 2D and Erosion and Sedimentation Control (with a certificate as proof of training);</p> <p>Maintain a register of all environmental management documents for the Contract;</p> <p>Ensuring that the CEMP is established, implemented and maintained in compliance, SW-WSA CEMP, Instrument of Approval SSI 10051, Revised Environmental Mitigation Measures, Low Impact Minor Works Approvals, unexpected finds procedures including, procedures and upgrades to these documents (as needed) to remain current with the progress of the Works;</p> <p>Overall responsibility for the establishment, management, monitoring and maintenance of erosion and sediment controls within the Site;</p> <p>Carry out regular inspections and auditing of the works to ensure that environmental safeguards are being followed;</p> <p>Facilitate environmental induction and toolbox talks for all site personnel;</p> <p>Specific authority to stop work on any activity where the ESR deems it necessary to prevent environmental non-conformities;</p> <p>Notify relevant parties of any environmental incidents;</p> <p>Undertake relevant environmental monitoring, such as noise monitoring; and</p> <p>Assist the communications representative with the management and close out of complaints.</p>
Authority	Appointed by the Abergeldie Project Director
Lines of Communication	Reports to Environment, Sustainability and Approvals Manager.
Minimum Skill Levels	<p>University qualification in environmental discipline.</p> <p>Previous experience in managing environment for projects.</p> <p>Knowledge of current and emerging environment issues, practices and processes.</p> <p>5 years professional experience working on infrastructure projects.</p>
Interface with Project Organisation Structure	Attends environment, sustainability, design and construction meetings as required.

Table 10 Roles and Responsibilities of other Key Abergeldie Project Personnel

Role	Responsibility
Project Director	<p>Be accountable for the implementation of the CEMP;</p> <p>Be aware of their environmental responsibilities as detailed in the management plans;</p> <p>Actively ensure that subcontractors and suppliers are complying with environmental requirements; and</p> <p>Liaise with Sydney Metro, TfNSW and other government authorities as required.</p>
Safety Manager	Support the delivery of the Environment and Sustainability Management Plans through consideration of environment and sustainability aspects and impacts which may be influenced by the implementation of the safety requirements for the project.

Role	Responsibility
Stakeholder and Community Engagement Manager	<p>Gain support from key stakeholders;</p> <p>Assist in implementing initiatives where necessary;</p> <p>Develop the Community Liaison Implementation Plan and monitor community input;</p> <p>Promote and influence environment and sustainability targets/initiatives within the Project team and among the public;</p> <p>Ensure policies and objectives are adhered to in daily activities;</p> <p>Manage processes of consultation and notification with the community (construction updates, notifications); and</p> <p>Report enquiries and complaints and determine mitigations, corrective actions and preventative actions in consultation with Environment, Sustainability and Approvals Manager.</p>
Construction and Project Managers	<p>Engage with the Environment and Sustainability Manager to ensure environment and sustainability requirements are embedded in construction plans and processes.</p> <p>Ensure the selected subcontractors meet project environment and sustainability requirements.</p> <p>Ensure all subcontractors achieve environment and sustainability objectives in the Delivery Phase and direct/oversee corrective actions where appropriate (including instigation of disciplinary action where required).</p>
Superintendent	<p>Engage with the Environment and Sustainability Manager to ensure sustainability requirements are embedded in construction plans and processes;</p> <p>Ensure the selected subcontractors meet project environment and sustainability requirements;</p> <p>Ensure the Delivery team (staff and subcontractors) achieve environment and sustainability objectives in the Delivery Phase and direct/oversee corrective actions where appropriate (including instigation of disciplinary action where required);</p> <p>Participate in environmental inspections conducted by the Principal;</p> <p>The Superintendent reports to the Project Director and is responsible for the onsite implementation of the environmental requirements;</p> <p>Authority to direct personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts;</p> <p>Superintendent must have at least 15 years of working experience in construction with a minimum of 5 years' experience in roadworks construction and at least 5 years' experience as a Project Supervisor in similar works;</p> <p>Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues;</p> <p>Be responsible for checking the site on a regular basis and ensuring that regular maintenance is undertaken to minimise environmental impacts and that personnel are provided with appropriate environmental "toolbox" training;</p> <p>Have a direct role in the compliance with identified environmental procedures and controls;</p> <p>Identify resources required for implementation of the CEMP;</p> <p>Assist with and participate in environmental inspections;</p> <p>Co-ordinate action in emergency situations and allocate required resources; and</p> <p>Be contactable 24hrs to shut down construction work in the event of an emergency.</p>
Supervisors	<p>Engage with the Environment and Sustainability Manager and Environmental Site Representative to ensure sustainability requirements are embedded in construction plans and processes;</p> <p>Ensure the selected subcontractors meet project environment and sustainability requirements;</p> <p>Ensure the Delivery team (staff and subcontractors) achieve environment and sustainability objectives in the Delivery Phase and direct/oversee corrective actions where appropriate (including instigation of disciplinary action where required);</p> <p>The Supervisors reports to the Superintendent and is responsible for the onsite implementation of the environmental requirements;</p> <p>Authority to direct personnel and/or subcontractors to carry out actions to avoid or minimise unintended environmental impacts;</p> <p>Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues;</p> <p>Be responsible for checking the site on a regular basis and ensuring that regular maintenance is undertaken to minimise environmental impacts and that personnel are provided with appropriate environmental "toolbox" training;</p> <p>Have a direct role in the compliance with identified environmental procedures and controls;</p> <p>Identify resources required for implementation of the CEMP;</p> <p>Assist with and participate in environmental inspections;</p> <p>Co-ordinate action in emergency situations and allocate required resources; and</p>

Role	Responsibility
Project Manager/ Engineers	<p>Reports to the Project Director;</p> <p>Authority to stop work immediately if an unacceptable impact on the environment is likely to occur;</p> <p>Must have a tertiary degree in civil / environmental engineering with a minimum of three (3) years of construction experience;</p> <p>Provide input into the preparation of the environmental planning documents as required;</p> <p>Ensure that environmental considerations are integral to the decision making for all construction activities;</p> <p>Liaise closely with the Environmental Site Representative to ensure that the environmental controls and procedures contained in the CEMP are implemented;</p> <p>Conduct regular checks of the site to ensure environmental controls such as sediment controls and dust suppression are functioning effectively;</p> <p>Ensure that any work performed by external parties meets with the requirements of the CEMP and Sub-plans, including and documenting the environmental risks of the proposed works;</p> <p>Ensure that any Safety Health Environmental Work Methods Statements (SHEWMS) from external parties have been reviewed with the form W-RC-FM-15 SHEWMS Review Checklist.</p> <p>Identify any environmental risks;</p> <p>Report and activity that resulted, or has the potential to result in an environmental incident immediately to the General Supervisor and Environmental Site Representative; and</p> <p>Assist in the close out of actions identified in environmental inspections/audits.</p>
Site Staff, Subcontractors and Visitors	<p>Engage with the Environment and Sustainability team to ensure environment and sustainability requirements are embedded in plans and processes;</p> <p>Reports to the Project Manager;</p> <p>Comply with the relevant Acts, Regulations and Standards;</p> <p>Comply with the Company's environmental policy and procedures;</p> <p>Promptly report to management on any non-conformances, non-compliances environmental incidents and/or breaches of the system;</p> <p>Undergo induction and training in environmental awareness as directed by management;</p> <p>Report all incidents;</p> <p>Act in an environmentally responsible manner;</p> <p>Must complete corporate and project induction covering environmental responsibilities and Principal Contractor's environmental management system; and</p> <p>Provide information to the Independent Environment Representative as requested and where appropriate, via the ESAM.</p>

It is noted that;

"Subcontractors" and "All personnel" are categorised as "Operational Personnel". All other roles as listed above are categorised as "Management". Refer to Section 3.11 for training requirements for each category.

Minimum skill requirements are described with the individual role and responsibility tables.

It is the responsibility of Sydney Metro to engage an appropriate ER and seek approval from DPE.

6.5.1 KEY TfNSW ROLES AND RESPONSIBILITIES

The key TfNSW environmental role and responsibilities are presented in Table 11.

Table 11 TfNSW Roles and Responsibilities

Role	Responsibility
TfNSW Project Manager	<p>TfNSW is the Delivery Partner of this AEW Roadworks and the TfNSW Project Manager works in partnership with the SM-WSA Project Manager</p> <p>Support the Project in environmental matters as required</p> <p>Oversight of environmental requirements for design and Construction</p> <p>Supervise all site Construction activities and personnel by ensuring that they meet environmental and other requirements</p> <p>Ensure that site environmental controls are properly maintained and provide support for the Environmental Officer</p> <p>Take action to resolve non-conformances, non-compliances and incidents</p> <p>Provide information to the Independent Environment Representative as requested and where appropriate, via the ESAM.</p>
TfNSW Environmental	<p>Reports to the TfNSW Project Manager</p> <p>Ensure that the CEMP is effectively established, implemented and maintained at the project level</p>

Role	Responsibility
Officer	<p>Ensure relevant licences, approvals and permits are obtained</p> <p>Ensure compliance with all relevant statutes, regulations, rules, procedures, standards and policies</p> <p>Carry out six monthly reviews of the CEMP and Sub-plans</p> <p>Liaise with the SM-WSA, ER and Abergeldie ESAM on environmental issues, including the written notification of non-conformances (incidents, emergencies or deviations from the CEMP) and non-compliances</p> <p>Provide support to the project team to enable them to meet their environmental commitments</p> <p>Regular compliance checking as required by this CEMP</p> <p>Ensure that non-conformances, non-compliances and environmental incidents are recorded and written reports provided to the Client's Representative within 48-hours. Liaise with the required stakeholders to confirm the nature of the corrective action required and comply with the timeframe within which corrective actions must occur.</p> <p>Ensure that environmental controls, materials and equipment are maintained</p> <p>Conduct six monthly review of the CEMP</p> <p>Liaise directly with the Independent Environment Representative (ER) as required and where appropriate to facilitate any environmental management requirements, including those identified within the Planning Approvals. The ESAM will be the primary contractor contact for the Independent Environmental Representative</p> <p>Must have tertiary qualifications in environmental engineering / science along with relevant experience working in environmental management roles in Australia. Infrastructure Sustainability Accredited Professional preferred</p> <p>Must complete corporate and project induction covering environmental responsibilities and Principal Contractor's environmental management system</p> <p>Minimum skill levels:</p> <p>Minimum 10 years' experience post qualification, with extensive experience in the preparation and implementation of environmental management systems and plans</p> <p>Tertiary qualification in environmental science or engineering discipline or equivalent</p> <p>Recent relevant experience in environmental management on major infrastructure projects.</p>
TfNSW Communications Manager	<p>Leadership and management of the Communications, Stakeholder and Community Relations Team</p> <p>Build and maintain effective working relationship with SM-WSA representative and Stakeholder and Community Liaison team</p> <p>Approves the Communications, Stakeholder and Community Relations team roles, role descriptions and responsibilities</p> <p>Liaising with the Community Complaints Mediator, where required</p> <p>Ensures the Community Communications Strategy and key activities are integrated into the project schedule</p> <p>Attends the Sydney Metro led Communications Management Control Group and reports on activities, strategies and issues</p> <p>Attends the monthly Project Management Review Group meeting to discuss project status and issues</p> <p>Issues and crisis management</p> <p>Manages media issues and acts as media spokesperson for the Principal Contractor (subject to media protocols)</p> <p>Liaise directly with the Independent Environment Representative as required and where appropriate to facilitate any environmental management requirements, including those identified within the Planning Approvals.</p>

6.5.2 INDEPENDENT ROLES AND RESPONSIBILITIES

Table 12 describes the key roles and responsibilities for key independent parties.

Table 12 Key Independent Roles and Responsibilities

Role	Responsibility
Independent Environment Representative (ER)	<p>(a) receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI;</p> <p>(b) consider and inform the Planning Secretary on matters specified in the terms of this approval;</p> <p>(c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community;</p> <p>(d) review documents identified in Conditions A10, A18, A20, C1, C5 and C13 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so:</p>

Role	Responsibility
	<p>(i) endorse the documents before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or</p> <p>(ii) endorse the documents before the implementation of such documents (if those documents are only required to be submitted to the Planning Secretary / Department for information or are not required to be submitted to the Planning Secretary / Department);</p> <p>(iii) provide a written statement to the Planning Secretary advising the documents have been endorsed.</p> <p>(e) for documents that are required to be submitted to the Planning Secretary / Department for information under (d) (ii) above, the documents must be submitted as soon as practicable to the Planning Secretary / Department after endorsement by the ER, unless otherwise agreed by the Planning Secretary; regularly monitor the implementation of the documents listed in Conditions A10, A18, A20, C1, C5 and C13 to ensure implementation is being carried out in accordance with the document and the terms of this approval;</p> <p>(g) as may be requested by the Planning Secretary, help plan or attend audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36;</p> <p>(h) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints received directly by the Department;</p> <p>(i) consider or assess the impacts of minor ancillary facilities as required by Condition A22; and</p> <p>(j) consider any minor amendments to be made to the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs without increasing impacts to nearby sensitive land use(s), and are consistent with the terms of this approval and the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs approved by the Planning Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval;</p> <p>(k) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading "Environmental Representative Monthly Reports". The Environmental Representative Monthly Report must be submitted within seven (7) days following the end of each month for the duration of the ER's engagement for the CSSI or as otherwise agreed by the Planning Secretary; and</p> <p>(l) assess the impacts of activities as required by the Low Impact Work definition. With respect to (d) above, the ER is not required to endorse the specialist content in documents requiring specialist review and / or endorsement.</p>
Independent Auditor	An Auditor that undertakes an independent and objective assessment of the environmental performance and compliance status of a project. This is carried out in accordance with the Independent Audit Post Approval Requirements (DPIE, 2020).

A number of additional roles are required by the Project COA and Abergeldie's commitment to continuous improvement. The Abergeldie will work closely with these people to identify and minimise environmental risk and associated impacts.

These roles are detailed below.

- Sydney Metro is the "Proponent" under the COA with ultimate responsibility to DPE for compliance with the Planning Approval.
- TfNSW is the Delivery Partner for Sydney Metro.
- Abergeldie Complex Infrastructure are constructing the Elizabeth Drive round about on behalf of TfNSW.

COA A28 to A32 requires a suitably qualified and experienced Environmental Representative (ER) to be engaged for the Project. The nominated and approved ER is independent of the design and construction personnel. The ER for the SM-WSA has been engaged by SM-WSA.

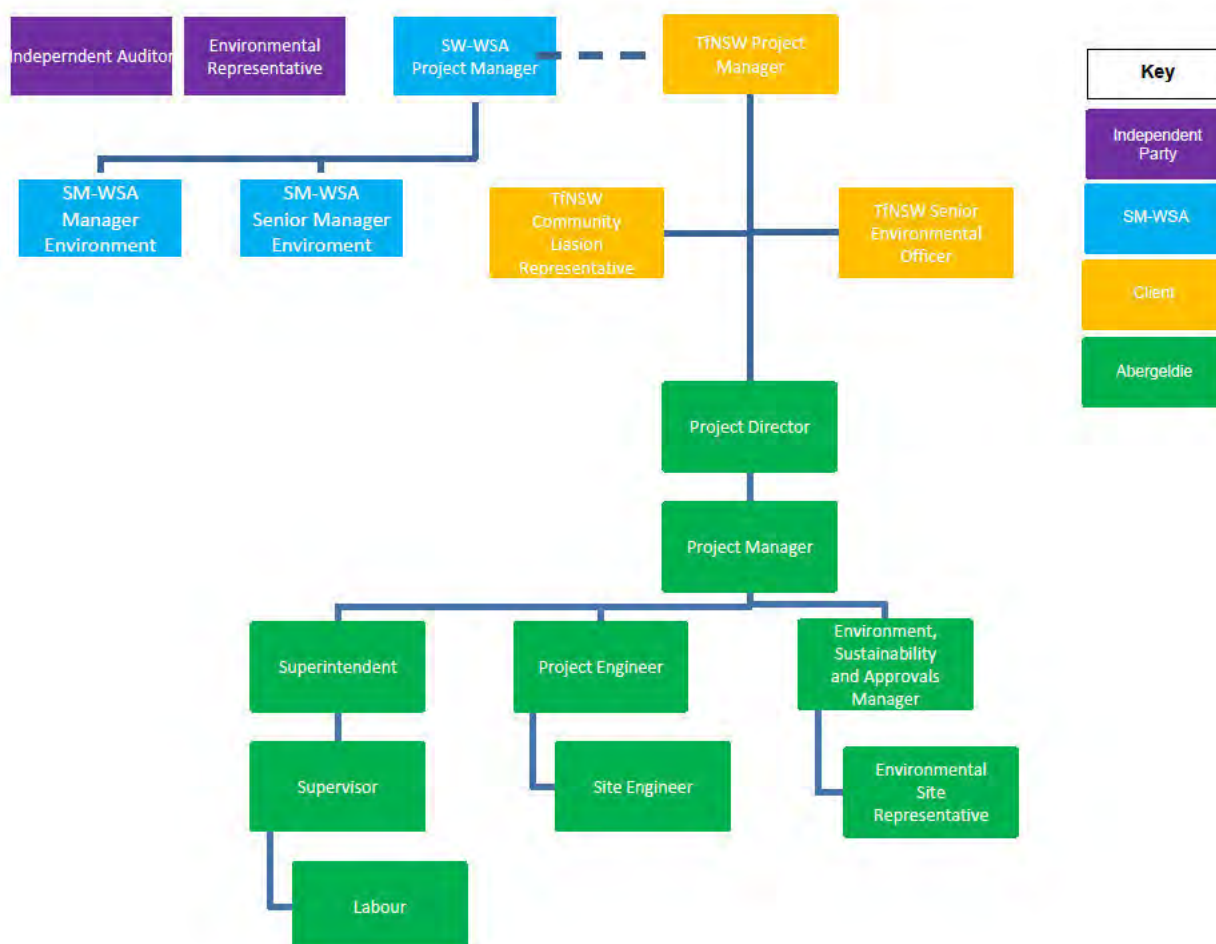


Figure 2 Organisational Chart

In addition to the conditions set out in the Planning Approval, Abergeldie Complex Infrastructure personnel will work with the ER and comply with the reporting, review and inspection requirements. The Abergeldie Complex Infrastructure ESAM will be the primary contact for the ER on behalf of the project.

6.6 ENVIRONMENTAL MANAGEMENT FRAMEWORK

In accordance with the Staging Plan, Environmental Management Sub-Plans are **not** required to be developed for this scope requiring submission and Approval to the Secretary.

The location of the relevant environmental management categories, as defined in Table 4-1 of the Staging Report are presented below.

In accordance with the CEMF, Environmental Management Procedures are to include:

- A breakdown of the work tasks relevant to the specific activity and indicate responsibility for each task;
- Potential impacts associated with each task;
- A risk rating for each of the identified potential impacts;
- Mitigation measures relevant to each of the work tasks; and
- Responsibility to ensure the implementation of the mitigation measures.

Where a corresponding systems document exists within the *Sydney Metro Integrated Management System*, the Abergeldie's procedures will be updated to be consistent with any requirements in those documents or the SM-WSA documentation will be adopted for use.

6.6.1 RISK ASSESSMENT

A risk assessment has been undertaken to assist in streamlining the CEMP in accordance with Section 3.4, Part (c) and Part (d) of the SM-WSA CEMF. The risk assessment is presented in APPENDIX D. The controls identified in the risk assessment have been incorporated as mitigation measures for each environment management category.

The risk assessment was completed through consultation between the ESAM and TfNSW Environment Officer during the development of this CEMP.

6.6.2 ENVIRONMENTAL CONTROL MAPS

Environmental Control Maps (ECM) are live documents prepared to assist in the planning and delivery of the Project. The Project traverses a range of environmental and socially sensitive areas/sites. To assist construction planning and management, these site constraints are consolidated on series of map-based sheets that extend the length of the Project.

ECM will be prepared in accordance with Section 3.6 of the CEMF and include:

Depicting the current representation of the site:

- a) Indicate which environmental procedures, environmental approvals, or licences are applicable;
- b) Illustrate the site, showing significant structures, work areas and boundaries;
- c) Illustrate the environmental control measures and environmentally sensitive receivers;
- d) Is endorsed by the Principal Contractors ESAM or delegate;
- e) Include all the training and competency requirements for relevant workers; and
- f) Be communicated to relevant workers, including sign off the appropriate procedures prior to commencing works on the specific site and / or activity.

The ECM will be prepared prior to the commencement of relevant construction activities and will incorporate relevant sensitive areas, mitigation measures and controls. They also identify key procedures to be used concurrently with the ECM. ECM are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

The ECM are a live document encompassing the whole Project. They will be further developed as construction progresses and input is provided from the Project management team, Sydney Metro, the ER and TfNSW. They will also be more focused when individual construction sites are identified.

All construction personnel and Subcontractors undertaking a task governed by an ECM must participate in training on relevant ECM and acknowledge that they have read and understood their obligations by signing an attendance record prior to commencing work.

The implementation of the ECM, including regular monitoring, inspections and auditing of compliance with the ECM will be undertaken by project management and environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded, and corrective actions implemented. Further detail on inspections and monitoring is provided in Section 8.2, 8.3 and 8.6.

The ECM will be prepared and maintained by the ESAM or delegate with input from specialists as required. The current version of the ECM are included as APPENDIX H. An update to the ECM will not necessarily require the CEMP to be updated. Each document will be controlled separately to the CEMP. The current version will be available to all construction personnel and Subcontractors undertaking a task governed by an ECM.

6.7 CHANGES TO THE PROJECT

Refinements to the Project may result from detailed design refinements or changed circumstances throughout construction.

As the Proponent, Sydney Metro are required to seek formal approval from the Minister for any Project modifications and for documenting refinements that are consistent with the approved Project.

Changes to the project may require an assessment to determine consistency with the Project Approval and Environmental Documents. This assessment would be carried out in accordance with the CEMP, Section 3.7.

The assessment will include:

- A description of the existing surrounding environment;
- Details of the ancillary works and Construction activities required to be carried out including the hours of works;
- An assessment of the environmental impacts of the works, including, but not necessarily limited to traffic, noise and vibration, air quality, soil and water, ecology and heritage;
- Details of mitigation measures and monitoring specific to the works that would be implemented to minimise environmental impacts; and
- Identification of the timing for completion of the Construction works, and how the sites would be reinstated (including any necessary rehabilitation).

Any design changes, changes in scope of works, changes to methodologies, facilities or processes must be communicated to the Project Manager and the ESAM. The ESAM will then consult with TfNSW To determine if an additional consistency assessment or environmental review is required.

Should the consistency assessment determine that a project modification may be required i.e. the impacts are of a nature and scale that it is not considered consistent with the Planning Approval, the ER will be informed and modification will be prepared by TfNSW / SW-WSA.

6.8 CUMULATIVE IMPACTS

In accordance with the Staging Report (Table 4), a cumulative construction impacts management plan is not required for this Project. The potential for cumulative impacts will be continually monitored by Sydney Metro and the ER during construction, and appropriate mitigation measures will be considered and implemented if required.

Cumulative impacts would be managed by TfNSW and SM-WSA. Abergeldie will liaise with TfNSW and SM-WSA to ensure that the construction program is clearly communicated to TfNSW and SM-WSA and will participate as required.

6.9 REGISTER OF HOLD POINTS

For this Scope of works the following hold points will be implemented:

Table 13 Register of Hold Points

Item	Process Held	Planning approval reference	Acceptance Criteria	Approval Authority
Notification of Commencement	Commencement of construction activities under the CEMP	A34/A35	The Department, and relevant Councils must be notified in writing of the date of commencement of construction at least seven (7) days before the commencement of construction.	SM-WSA Environment Manager
Construction Environmental Management Plan	Site activities	C3	Site specific Construction Environmental Management Plan have been developed, reviewed and approved.	ER Endorsement
Publish CEMP	Commencement of work	B11	CEMP is published on the project website within one (1) week of its approval or before the commencement of any work to which they relate or before their implementation	TfNSW Environmental Officer
CTMP	Commencement of	E103	A copy of the CTMPs must be submitted to the	TfNSW

Item	Process Held	Planning approval reference	Acceptance Criteria	Approval Authority
	work		Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP.	Environmental Officer
Contamination Site investigation	Commencement of activities that disturb land	E92	Site investigation in the form of in-situ waste classification must be undertaken prior to works. Should contamination be detected a detailed site investigation will be required as per condition E92.	TNSW Environmental Officer
DNVIS	Site activities (Prior to Construction commencement)	E47	DNVIS to be prepared to meet requirements of SM-WSA Construction Noise and Vibration Standard.	ER Endorsement
Specific Environmental Control Maps (ECM)/ progressive ESCPS	Site activities. Specifically: Tree removal Pavement removal / excavation	CEMF	ECM/PESCPs are developed with site specific environmental controls/mitigation measures with site supervisor/engineers for work activities and are to be implemented prior to works commencing (or a new work stage as appropriate). Preparation and approval of PESCP for the area proposed for vegetation clearing / pavement removal	TNSW Environmental Officer
Reuse or Discharge of water	Dewatering activities required discharge offsite (During Construction)	E130	Water Pollution Impact Assessment must be prepared in consultation with the EPA and be consistent with the National Water Quality Guidelines, with a level of detail commensurate with the potential water pollution risk. Water tested to verify compliance and approval to discharge (Note. Water is not going to be discharged.)	ESAM or Coordinator
Vegetation removal / Ground disturbance	Commencement of site clearing or vegetation removal.	E3 E4 E5 E6 E7	Pre-clearing surveys and inspections for endangered and threatened flora and fauna species have been undertaken by qualified ecologists. SM-WSA Pre-clearing inspection for native vegetation removal approval form to be completed and approved prior to clearing. Clearing limits have been verified against the project approval environmental assessment, limits have been set-out and vegetation to be retained has been delineated and or protected. Tree Report has been completed and submitted to SM-WSA for reporting. Preparation and approval of erosion and sediment controls and plan for the area proposed for clearing / ground disturbance Trained ecologist to be present during the clearing of native vegetation or removal of potential fauna habitat.	TNSW Environmental Officer SM-WSA ESP to approve pre-clearance checklist
Vegetation	Removal of tree material i.e. mulch and hollows as waste.	E12	If unable to re-use material within the Project then must have consulted with the groups detailed in MCOA E12 regarding re-use for habitat enhancement.	ESAM / Project Manager.
OOHW Applications – individual works scenarios	Works to be performed outside of approved Construction hours (Pre-Construction and during Construction)	E38 E43	OOHW Protocol and Application Form and Community Notification Noise Assessment	ER Endorsement and Approval SM-WSA endorsement
OOHW Respite	Works to be performed outside of approved Construction hours	E57	If respite is provided, consultation must be undertaken and outcomes provided to ER, EPA and Planning Secretary, prior to out of hours works requiring the respite.	TNSW Environmental Officer

Item	Process Held	Planning approval reference	Acceptance Criteria	Approval Authority
	requiring respite.			
Encounter of Unexpected Heritage Item	Commencement of works in the affected area	E19 E33 E34 E35 AH8	The Unexpected Finds Process as outlined in the Sydney Metro Unexpected Finds Procedure must be applied in the event of encountering unexpected/potential heritage items.	TfNSW Environmental Officer
Encounter of unexpected soil / water contamination	Recommencement of works following unexpected contamination	E93	Remediation Action Plan must be developed, review and endorsed by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme.	TfNSW Environmental Officer
Ancillary Facilities	Establishment of new ancillary facilities not identified in the planning approval documents	A17	Demonstration that the ancillary facility meets the requirements of COA A17.	ER Endorsement

6.10 TRAINING, AWARENESS AND COMPETENCE

6.10.1 Inductions

Prior to the commencement of construction, Abergeldie and all other Project permanent and temporary site staff including sub-contractors, plant operators and truck drivers will be required to undertake a Abergeldie issued site induction, which includes an environmental component to achieve a suitable level of training to complete their assigned task. Workers are not to commence their assigned task without having a suitable level of environmental training.

The site induction will include the following:

- The purpose and objectives of the CEMP
- Abergeldie's environmental and sustainability policy (s) and key performance indicators
- Requirements of due diligence and duty of care
- Approval / licence conditions
- Site specific issues and controls including those described in the environmental procedures and Environmental Control Maps.
- Potential environmental emergencies on the site and emergency response procedures (including locations and training in the use of spill kits)
- Reporting, notification and management requirements
- Communication protocols for interactions with community and stakeholders
- High risk issues and sensitive areas, including traffic impacts, noise and vibration impacts
- Site specific issues including the following:
 - Access requirements
 - Transport to and from site and parking
 - Flora and fauna management
 - Noise and vibration
 - Air quality
 - Weed management
 - Sediment and Erosion Management

- o Waste Management
- o Concrete management
- o Heritage management
- o Incident response and reporting
- o Unexpected finds Soil Contamination and Asbestos Procedure
- o SM-WSA Unexpected Heritage Finds Procedure

Additional specific targeted training workshops may be held on a case-by-case basis and will identify any sensitive receivers, cover all relevant environmental issues/risks identified within the Project's environmental risk assessment to minimise potential environmental impacts (for e.g. noise, air pollution, water pollution, waste and contamination and heritage) and provide direction on the proper implementation and maintenance of environmental controls etc. These workshops (if required) will include representatives from Abergeldie project team, TfNSW Project team (including the TfNSW Environmental Officer), relevant sub-contractors. These workshops will be coordinated by the Abergeldie EMR.

The ESR may authorise amendments to the induction at any time. Amendments may be required due to project modifications, legislative changes or amendments to this CEMP or related documentation.

6.11 ENVIRONMENTAL TRAINING REQUIREMENTS

A training needs analysis has been undertaken which identifies the competency requirements of staff that hold environmental roles and responsibilities as outlined in Table 14.

The Training Needs Analysis considered the following:

- a) Identifies that all staff are to receive an environmental training;
- b) Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans;
- c) Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements; and
- d) Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events, provides mechanisms to notify staff of their training requirements, and identifies staff who do not attend scheduled training events or who have overdue training requirements.

Table 14 Training Needs Analysis

Training	Project Manager	Supervisor	Engineers	ESAM	ESR	Community Staff	Labourers and sub-contractors
Project Induction	✓	✓	✓	✓	✓	✓	✓
Environmental Induction	✓	✓	✓	✓	✓	✓	✓
Tertiary qualifications in Environmental Science or Engineering and 5 years experience				✓			
Blue Book Training (4 day course) Note: Refresher not required				✓			
Blue Book Training (2 day course) Note: Refresher not required					✓		

Environmental Control Maps / Erosion and sediment controls	✓	✓	✓	✓	✓		✓
Emergency response, reporting and spill response*	✓	✓	✓	✓	✓		✓
SM-WSA Unexpected Heritage Finds Procedure	✓	✓	✓	✓	✓		✓
Unexpected Find Soil Contamination and Asbestos Procedure	✓	✓	✓	✓	✓		✓

6.11.1 Continual Improvement - Environmental Awareness

Environmental awareness training will be provided within the project induction and to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk or environmental impact.

Abergeldie will conduct environmental awareness training before commencing construction and when new personnel commence work on the Construction Site as part of the Contractor's Site Induction. Abergeldie will undertake refresher environmental awareness training as required, but not less than 6 monthly intervals, based on environmental risk assessment and turnover of project personnel. Include refresher environmental awareness training on the register of environmental training

To promote environmental awareness amongst the construction team, environmental toolboxes will be implemented. The EMR will also review and approve the training program and monitor implementation as required.

6.11.2 Training Records

A register of personnel who have attended site inductions will be maintained by the Abergeldie Safety Team. In addition, an environmental training plan that describes the minimum level and type of training, experience and qualifications required for employees (including subcontractors), scheduled dates for training, procedures for training and details of the trainer shall be developed for the Project. The Environmental Training Plan and records will be maintained by the ESAM.

6.11.3 Toolbox Talks

Toolbox talks will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Prior to commencing works in a new area of the site or activity, a toolbox include but not limited to:

- A description of the activity and the area;
- Identification of the environmental issues and risks for the area (including fauna or flora); and
- Outline the mitigations measures for the works and the area.

Weekly Toolbox talks will also be tailored to specific environmental issues relevant to upcoming works. Relevant environmental issues may include (but are not limited to):

- Noise Management.
- Vibration management.
- Emergency and spill response.

- Dust Control.
- Unexpected finds, including potential contamination.
- Erosion and sedimentation control.
- Flora and Fauna Management, including staged vegetation process (if required) and stop work procedures.
- Heritage management.

Toolbox attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained in the Project sharepoint. Toolboxes will typically delivered by the Supervisor or the ESAM, however, any team member can deliver a toolbox prepared by the ESAM or ESR.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. Topics covered may include those detailed above, or others deemed necessary during construction.

6.11.4 Daily Pre-Start Meetings

The pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Abergeldie Supervisor will conduct a daily pre-start meeting with the site workforce before the commencement of work each day (or shift) or where changes occur during a shift. The environmental component of pre-starts will be determined by relevant Supervisor with supplier from the ESR and will include any environmental issues that could potentially be impacted by, or impact on, the day's activities. All attendees will be required to sign on to the pre-start sheet and acknowledge their understanding of the issues explained. Pre-start topics, dates delivered, and a register of attendees will be recorded and managed

6.12 SELECTION AND MANAGEMENT OF SUB CONTRACTORS

Abergeldie will ensure subcontractor compliance with duties including planning, implementing and monitoring environmental protection measures and for keeping environmental records by developing and maintaining a training plan that describes the minimum level and type of training, experience and qualifications required for all employees and subcontractors. Abergeldie will retain the environmental protection responsibilities for the implementation of the contracted works.

All sub-contractors will work on the Project in accordance with the CEMP. This requirement is included within all subcontractors. All sub-contractors will be inducted and provided with additional environmental training where required based on the environmental risk of their activities.

Abergeldie is responsible for the surveillance of all Abergeldie subcontractors' environmental protection measures to monitor the effectiveness of these measures. The surveillance program includes monitoring the following measures:

- Site activities and approvals
- Air quality, including dust
- Noise and vibration
- Waste management and disposal (using designated bins, concrete wash outs)
- Storage and use of hazardous materials and spill kits
- Erosion and sediment controls

Abergeldie will ensure sub-contractor compliance with duties through the surveillance of the subcontractors works and implementation of environmental protection measures to ensure that works

are being undertaken in accordance with the CEMP and sub-plans. The surveillance program includes weekly environmental inspections by the ESAM or suitably trained Project personnel to ensure environmental control measures are implemented and are effective. An Environmental Inspection Checklist (Appendix C) will be completed upon site inspection. Environmental observations from other site inspections (for e.g. safety inspections) may also be recorded in site diaries and notified to the ESAM.

Environmental Checklists have been updated with checks to be made on Subcontractor's activities. The ESAM will report on compliance of construction activities with appropriate approvals and licences and identifies corrective actions/non-conformances to be addressed appropriately by the Project Team.

Inspection reports and findings will be circulated typically to the Project Manager, Project Engineer and Supervisor. Actions will be managed and tracked for close out in the Corrective Actions Register and depending on the nature of actions (high, medium or low priority), close out will be within appropriate timeframes or as agreed with the ESAM.

All environmental documentation submitted by subcontractors will be subject to review and approval by Abergeldie staff to ensure compliance with TfNSW contract requirements, before works may begin.

7 INCIDENTS AND EMERGENCY MANAGEMENT

The following section details the management and reporting of environmental incidents and non-compliances for the Project.

The following section details the management and reporting of environmental incidents and non-compliances for the Project.

Potential events on the Project that will trigger an Emergency Response and Incident Reporting:

- Spills of fuels, oils, chemicals and other hazardous materials
- Unauthorised discharge from containment devices
- Unauthorised clearing or clearing beyond the extent of the Project boundary or premises
- Inadequate installation and subsequent failure of temporary erosion and sediment controls
- Unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places
- Unauthorised damage or destruction to any State or locally significant relic or Heritage item
- Potential contamination of waterways or land
- Accidental starting of a fire or a fire breaking out of containment
- Any potential breach of legislation, including a potential breach of a condition of an COA; or any agency permit condition
- Works undertaken without appropriate approval or assessment under the *EP&A Act 1979*
- Works undertaken without appropriate approval or assessment under the *EPBC Act 1999*
- Unauthorised dumping of waste

All environmental incidents, reportable events and regulatory action would be reported to TfNSW as outlined in the SM-WSA Environmental Incident and Non-compliance Reporting Procedure.

Where environmental non-compliance or incidents arise during the Project, they will be classified and reported in accordance with the SM-WSA Environmental Incident and Non-compliance Reporting Procedure.

TfNSW hold the primary responsibility for fulfilling the obligations detailed in COA A41 to A45 with respect to incident notification and reporting to SM-WSA. Abergeldie will assist and cooperate with TfNSW and SM-WSA to fulfil these obligations.

All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident and reduce the likelihood of a similar incident reoccurring. The Project Manager, Construction Manager and the ESAM are 24 hour contacts. They have the authority to halt the progress of the works if necessary. They are the key emergency response personnel during an environmental site emergency or incident.

The Abergeldie ESAM or delegate will maintain all records relating to environmental incidents and regulatory action and provide them to TfNSW as soon as practicable.

7.1 ENVIRONMENTAL INCIDENT CLASSIFICATION

Incidents will be reported and classified in accordance with the Sydney Metro – Western Sydney Airport Environmental Incident and Non-Compliance Reporting Procedure (SM-17-00000096), refer APPENDIX N).

An Environmental Incident as defined by the Conditions of Approval is:

An occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non compliance with the terms of this approval.

Note Material Harm: Is harm that:

(a) involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or

(b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good the harm to the environment).

An Environmental non-compliance is: An occurrence or set of circumstances or development that is a breach of this approval.

When an Environmental Event (as defined by the Sydney Metro Environmental Incident and Non-compliance Reporting Procedure) occurs that causes Environmental Harm and also breaches one or more Environmental Requirements, then an Incident Notification Report will be created which records what requirements were breached.

SM-WSA has defined an Environmental Incident as:

An occurrence or set of circumstances, as a consequence of which pollution (air, water, noise, and land) or an adverse environmental impact has occurred or is likely to have occurred.

Adverse environmental impact includes contamination, harm to flora and fauna (either individual species or communities), damage to heritage items, or adverse community impacts.

If a Non-compliance is identified, then it must be raised using the Environmental Incident and Non-compliance Report Form within 48 hours by the party responsible for the breach.

Environmental incidents are classified into three classes that are based upon the consequence descriptors for environmental risks in the Sydney Metro Risk Matrix (refer to Sydney Metro Risk Management Standard). These classifications trigger a variety of management actions and/or legislative requirements depending on the severity of the consequence described where Class 3 represents minor consequences and Class 1 represents major consequences.

This matrix is further sub-divided into consequence ratings ranging from C6 (low impact) to C1 (high impact). An incident transitions between a Class 3 to a Class 2 incident once material harm has been caused, and transitions into a Class 1 incident once it is determined that the Environmental Harm caused is large-scale and cannot be remediated (see Table 15).

Table 15 Classification System for Environmental Incidents

Class 3			Class 2	Class 1	
C6	C5	C4	C3	C2	C1

No appreciable changes to environment and/or highly localised event	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries	Short-term and/or well-contained environmental effects. Minor remedial actions probably required	Impacts external ecosystem and considerable remediation is required	Long-term environmental impairment in neighbouring or valued ecosystems Extensive remediation required	Irreversible large-scale environmental impact with loss of valued ecosystems
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All incidents and complaints (including potential incidents) must be reported so that they can be investigated and prevented from recurring. Incidents, non-conformances and non-compliances are to be recorded using the Environmental Incident and Non-compliance Report Form (SM ES-FT-403), by the Principal Contractor (TfNSW). It is expected that the person responsible for completing the Environmental Incident and Non-compliance Report Form makes appropriate enquiries to determine the likely causal factors involved and assigns effective corrective actions. Corrective actions are to be raised, addressed and closed-out in accordance with the Principal Contractors own internal relevant management system procedure.

When an environmental incident occurs which causes environmental harm, in all cases both verbal and written communication of the incident must be carried out immediately and within 48 hours respectively. Incident Notification Reports must satisfy the requirement for written communication to SM-WSA and are to be completed using the Environmental Incident and Non-compliance Notification Report (SM ES-FT-403) or a similar and consistent form approved by SM-WSA.

7.2 ER AND SECRETARY NOTIFICATION (COA A41-A43)

In Accordance with COA A41 the Planning Secretary will be notified via phone or in writing via the Major Projects website immediately after the Proponent becomes aware of an incident. Any notification via phone must be followed up by a notification in writing via the Major Projects website within 24 hours of the initial phone call. Note that Abergeldie will notify Metro who will then notify the ER and the Secretary.

The written notification must identify the CSSI (including the application number and the name of the CSSI if it has one) and set out the location and general nature of the incident.

Any incident within or potentially affecting the Controlled Areas of the WaterNSW Pipelines corridor must also be reported to WaterNSW on the WaterNSW 24 hour Incident Notification Number 1800 061 069.

Subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix A of the COA.

The written notification and reporting requirements, as shown in Appendix A of the Instrument of Approval are as follows:

A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website within seven (7) days after the Proponent becomes aware of an incident. Notification is required to be given under this condition even if the Proponent fails to give the notification required under Condition A41 or, having given such notification, subsequently forms the view that an incident has not occurred.

Written notification of an incident must:

- identify the CSSI and application number;
- provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
- identify how the incident was detected;
- identify when the Proponent became aware of the incident;
- identify any actual or potential non-compliance with conditions of approval;
- describe what immediate steps were taken in relation to the incident;
- identify further action(s) that will be taken in relation to the incident; and
- identify a project contact for further communication regarding the incident.

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Proponent must provide the Planning Secretary and any relevant public authorities (as

determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.

The Incident Report must include:

- a) a summary of the incident;
- b) outcomes of an incident investigation, including identification of the cause of the incident;
- c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
- d) details of any communication with other stakeholders regarding the incident.

7.3 INTERNAL INCIDENT AND EMERGENCY NOTIFICATION PROCESS

The procedure for notification in the event of an incident is as follow:

1. Control the incident and make area safe (i.e. stop works, control the spill)
2. Immediately notify the Abergeldie supervisor of the incident
3. The supervisor is to notify (verbally) the Environment, Sustainability and Approvals Manager (ESAM) and the Project Manager
4. The ESAM is to notify (verbally) the TfNSW Environmental Officer who will notify Sydney Metro. Should Abergeldie be unable to contact TfNSW, Abergeldie will notify Sydney Metro directly
5. Sydney Metro will subsequently notify the Planning Secretary in accordance with COA A41-A45

7.4 EXTERNAL INCIDENT AND EMERGENCY NOTIFICATION PROCESS (CLASS 1)

The procedure for notification in the event of a major incident or emergency is to call 000 in the first instance if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police, and the NSW Ambulance Service are the first responders, as they responsible for controlling and containing incidents. If the incident does not require an initial combat agency, or once the 000 call has been made, notify the relevant authorities in the following order (where relevant):

- Notify TfNSW verbally immediately and SM-WSA (SM-WSA will subsequently notify the Planning Secretary in accordance with COA (A41-A45);
- The Environment Protection Authority (EPA) on 131 555;
- The Department of Health (via the local Public Health Unit – 02 9391 9000);
- Fire and Rescue NSW (000);
- Penrith City Council ([02 4732 7777](tel:0247327777));
- The WorkCover Authority (131 050).

7.5 ENVIRONMENTAL EMERGENCY PREPAREDNESS

The key to effective prevention of environmental incidents/non-compliances is monitoring, surveillance and training. During construction activities, inspections and preventative actions will include:

- Regular inspections of construction areas and the surrounding environment;
- Identification of potential and actual environmental issues / non-compliances; and
- On-going environmental training.

Environmental and safety information on hazardous materials (for e.g. Safety Data Sheets (SDSs)) will be available at the site compound/designated chemical storage areas. Spill kits and other emergency supplies (i.e. sand bags and silt fence equipment) will also be made available.

An Emergency Response Process has been developed as a part of the Incident Management Plan. This process addresses all identified potential high risk environmental emergencies. The Incident

Management Plan will be updated in response to audit finding and reviews or when there are significant changes to activities or in response to revised and new risk assessments.

The Project will use the definition of “Material Harm” (including potential) as an environmental emergency situation trigger. Material Harm is defined as the *Protection of the Environment Operations Act 1997*:

a) *harm to the environment is material if—*

(i) *it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*

(ii) *it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and*

(b) *loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.*

7.6 EMERGENCY CONTACTS

An updated list of emergency response personnel and organisations will always be maintained at the Project site and compounds, including a 24 hour contact number. The relevant emergency contact details are set out in Table 16 to Table 18 below.

Table 16 Abergeldie emergency contacts

Name	Role	Organisation	Contact number
	Project Manager	Abergeldie	
	Environment, Sustainability and Approvals Manager	Abergeldie	
	NSW General Manager – Construction	Abergeldie	
	Construction Superintendent	Abergeldie	

Table 17 TfNSW & SM-WSA emergency contacts

Name	Role	Organisation	Contact number
	Principals Authorised Delegate	TfNSW	
	Project Delivery Manager	TfNSW	
	Project Manager	TfNSW	
	Senior Environmental Officer	TfNSW	
	Project Engineer	TfNSW	
	Senior Manager Environment	Sydney Metro – WSA	
	Environmental Manager	Sydney Metro – WSA	
	Environmental Representative	Independent	

Table 18 Emergency services contacts

Organisation	Contact number
EPA Pollution hotline	131 555
Fire and Rescue NSW	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
The Ministry of Health	(02) 9395 2111
SafeWork NSW	131 050

Organisation	Contact number
Sydney Water	132 092
Penrith City Council	02 4732 7777

7.7 EMERGENCY CONSTRUCTION WORKS

On becoming aware of the need for emergency construction works, the Abergeldie will notify the TfNSW Environmental Officer of the need for those activities or works. Abergeldie will also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

The TfNSW Environmental Officer will notify the Sydney Metro Environmental Manager of the requirement.

7.8 HAZARDOUS MATERIALS

The following section outlines the process to be followed for managing spills and refuelling and maintaining construction vehicles/equipment and to minimise potential for groundwater quality impacts due to chemical spills.

This section provides management measures for the storage of hazardous materials, refuelling/maintenance of construction plant and spill response. These management measures include:

- The storage of hazardous materials, and refuelling/maintenance of construction plant and equipment would be carried out in clearly marked and bunded areas within the construction site that are designed to contain spills and leaks in accordance with Australian Standards and DECCW guidelines.
- Chemical spill kits would be readily available and accessible to construction workers. Kits would be kept at site compounds and on specific construction vehicles, and all hazardous materials spills and leaks would be reported to site managers and actions would be immediately taken to remedy spills and leaks.
- Hazardous materials spills and leaks would be reported to site managers and actions would be immediately taken to remedy spills and leaks.
- Employees would be trained in the correct use of spill kits.

7.9 ENVIRONMENTAL EMERGENCY PREPAREDNESS

The key to effective prevention of environmental incidents/non-compliances is monitoring, surveillance and training. During construction activities, inspections and preventative actions will include:

- Regular inspections of construction areas and the surrounding environment;
- Identification of potential and actual environmental issues / non-compliances; and
- On-going environmental training.

An Emergency Response Process has been developed as a part of the Incident Management Plan. This process addresses all identified potential high risk environmental emergencies. The Incident Management Plan will be updated in response to audit finding and reviews or when there are significant changes to activities or in response to revised and new risk assessments.

8 ENVIRONMENTAL MONITORING AND REVIEW

This section outlines the processes and procedures that will be implemented to monitor and review environmental performance and compliance with environmental requirements.

8.1 CONTINUOUS IMPROVEMENT

Opportunities and methods for continual improvement will be promoted through the processes of monitoring and inspections and ongoing communications between the environmental team and construction personnel.

More formal continuous improvement will be driven through the Auditing and Management review process where corrective actions and recommendations will provide a closed loop into the parent CEMP.

8.2 ENVIRONMENTAL INSPECTIONS

Environmental inspections will include (in accordance with Section 3.16 of the CEMP):

6. Surveillance of environmental mitigation measures by the Site Supervisor; and
7. Periodic inspections by the Principal Contractor's ESAM (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record.

The ESAM and/or delegate will undertake pre-work inspections, weekly and pre and post-rainfall inspections of the work sites to evaluate the effectiveness of environmental controls and to ensure controls are in place in accordance with the ECM and CEMP.

The environmental inspection checklist will be used to ensure that all environmental aspects are reviewed during inspection. Positive compliance and actions arising from the inspections will be recorded on the actions register and each action will be allocated to the supervisor for the work area for close-out. The environmental inspection checklist is a live document and will focus on high risk environmental areas. It will be updated regularly based on the progress of the Project and the outcomes of the quarterly Risk Assessment review.

The environmental inspections will cover high risk activities and processes, works in environmentally sensitive areas and site preparedness for adverse weather conditions. The ESAM or delegate will record inspection findings on an inspection checklist form. Actions from the inspection will then be issued to the relevant supervisor for actioning. Actions will be assigned an implementation priority in a collaborative way based on environmental risk.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on an environmental action list. The environmental action list will then be issued to the relevant Supervisor and the Superintendent for actioning. Actions will be assigned an implementation priority by the Environmental Team based on environmental risk.

Environmental inspections will be undertaken regularly throughout delivery of the Project and where safe and feasible the inspections will be scheduled whilst work is occurring. Table 19 details the various inspections which will occur, their frequency and who within Abergeldie will attend or arrange.

Records of monitoring and inspection will be documented and will be used to:

- Evaluate performance against legal, regulatory, contract, permit, licence and other commitments
- Identify required corrective actions
- Provide input into the process of review and improvement of environmental
- Track and trend progress against objective and targets
- Inform compliance requirements for environmental reporting.
- Additional inspections that will be undertaken are described in the following sections
- Where relevant, members of the wider Project team will participate in environmental inspections.

Table 19 Environmental inspections

Activity	Type of Inspection	Frequency	Responsibility
Site inspection Quality, Safety & Environment	Visual	Daily	Site Supervisor

Activity	Type of Inspection	Frequency	Responsibility
Environmental inspection	Visual	Weekly or prior to and following significant rainfall, 10mm in 24hrs (80% chance in forecast)	ESAM or site environmental delegate
Environmental Representative / Sydney Metro / TfNSW Representative inspection	Visual	As requested	ESAM to accompany third party
EPA or stakeholder inspection	Visual	As requested	ESAM / Project Manager to accompany third party

8.3 SITE INSPECTIONS

Site Supervisors will complete a visual inspection of works each day. The inspection will identify any potential or actual environmental impacts associated with construction activities and inform housekeeping requirements. Any potential environmental hazards or risks identified during the inspection will be reviewed by the ESAM or their delegate and included in the environment action register as appropriate.

8.4 ENVIRONMENTAL REPRESENTATIVE, TfNSW AND INDEPENDENT AUDITOR INSPECTIONS

The ER will complete regular site inspections (initially fortnightly) to review environmental aspects. The ER will report on areas visited, performance of mitigation / controls and any issues and actions for improvement. Close-out of actions will be tracked.

The SM-WSA and TfNSW will complete site inspections as required. The frequency of site inspections will be determined by the nature of activities being undertaken and their associated environmental risks.

The ESAM or delegate will accompany the ER, SM-WSA, TfNSW Representatives on inspections. If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on an environmental action list. The environmental action list will then be issued to the relevant Foreman for actioning. Actions will be assigned an implementation priority in a collaborative way by the inspection team based on environmental risk.

Actions arising from the inspections will be recorded on the actions register. Each action will be agreed at the end of the inspection and allocated to the appropriate member of the Project team for close-out.

The Independent Auditor will undertake a Site Inspections in accordance for the Independent Audit Post Approvals Requirements (DPIE 2020).

8.5 AGENCY INSPECTIONS

If an inspection by a representative of Regulatory Authority or Agency is requested, Abergeldie will notify TfNSW of the request. TfNSW will subsequently notify Sydney Metro.

Abergeldie will provide access to any work area and facilitate the inspection. The ESAM will accompany any regulatory representative during the inspection. Other relevant site staff or team members will be made available if required.

Outcomes from the inspection will be documented and communicated to TfNSW.

8.6 ENVIRONMENTAL MONITORING

Environmental monitoring will be undertaken for the duration of the Project. Table 20 provides the general environmental monitoring required to be addressed by the CEMP as identified in the Staging Report. Monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address Planning

Approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management section/procedure and summarised in the table below.

All environmental monitoring equipment shall be maintained and calibrated according to manufacturer's specifications and appropriate records kept.

Table 20 Summary of monitoring required by the Planning Approval

CEMF Topic	Relevant Sub-Plan or CEMP Chapter	Summary of Monitoring and Inspections
Noise and Vibration	CEMP Section 14	<p>Weekly Inspections undertaken in relation to noise and vibration management measures.</p> <p>Noise monitoring of Sound Power Levels of plant to confirm compliance with level in the SM-WSA CNVS.</p> <p>Noise monitoring of out of hours works as detailed in Detailed Noise and Vibration Impact Statement.</p> <p>Vibration monitoring is not proposed due to the distance to closest residential premise or other structures of McGarvie-Smith Farm are far greater than the minimum working distances identified in the TfNSW Construction Noise and Vibration Strategy. The greatest minimum distance is 100m for a 18t vibratory roller for human response criteria versus the closest receiver at 460m.</p>
Soil and Water	CEMP Section 0	<p>Surface water quality is not proposed to be monitored due to minimal risk of impacts for the works and other sources are impacting the waterways. Further detail is provided in Section 8.7.</p> <p>Weekly Inspections undertaken in relation to soil and water management measures.</p>
Air Quality	CEMP Section 19.3	<p>Visual observations of air quality in active work areas will be undertaken on a daily basis by the site supervisor to identify construction activities, vehicles or equipment that are generating excessive air emissions.</p> <p>Weekly Inspections undertaken in relation to air quality management measures.</p> <p>Weather will be reviewed on a daily basis using the Australian Government Bureau of Meteorology and local observations. Windy weather (>30kmh) would trigger the implementation of mitigation strategies to prevent dust aerosolization issues.</p> <p>Real-time as required following visual dust leaving work area or a complaint received</p>

8.7 SURFACE WATER QUALITY MONITORING PROGRAM

Abergeldie is proposing not to implement a broad scale Surface Water Quality Monitoring program, in accordance with COA C13 based on the following:

- Badgerys Creek is located 300m to the north and east of the works area and there are 3 farm dams/ponds to the north and west of the works area.
- The 1 in 100-year flood extent of Badgerys Creek does not extend into the works area but is located to the north and east of the works area. Stormwater drainage infrastructure from the existing roundabout is captured in drainage pits and conveyed in pipes to grassed roadside drains east of the intersection.
- There are developments throughout the catchment that also have overland flows that contribute to water to Badgerys Creek.
- The size of the respective work area in comparison to the overall catchment size is comparatively small and any run off would have a negligible impact on the water quality of south creek. The calculation for Revised Universal Soil Loss Equation support this statement.

- The Revised Universal Soil Loss Equation (as referenced in Blue Book Vol 1) is calculated to be:

$$A = R K L S P C \dots\dots\dots \text{Equation (1)}$$

where, A = computed soil loss (tonnes/ha/yr)[1]

R = rainfall erosivity factor - 2500

K = soil erodibility factor – 0.05

LS = slope length/gradient factor – 0.17

P = erosion control practice factor – 1.3

C = ground cover and management factor- 1 = 27.6 tonnes/ha/yr

Since the project site will only be open and distributed for maximum of 8 weeks the and the disturbed area is approximately 0.21 ha.

Total erosion to be managed on site is

$$= 27.6 \times 8/52 \times 0.21$$

$$= 0.89$$

- Water is not proposed to be discharged from the site. Based on the scope of the Project it would be unlikely to have measurable impacts on Badgerys Creek. Furthermore, any measured changes within the river would be difficult to directly attribute to the Project in isolation from other contributors to the catchment flow. Therefore, monitoring of surface water is not proposed as part of delivery of this Project.

8.8 GROUNDWATER MONITORING PROGRAM

Abergeldie is not proposing to implement a Groundwater Monitoring program, in accordance with COA C13, this can be endorsed by the ER.

- Groundwater is unlikely to be encountered during the project. The EIS has identified that groundwater is expected to be encountered between 0 m – 6.0 m below the existing surface (Table 15-4, Hydrogeological Conditions at Project elements – off airport). Excavation for the project is very minor with the deep excavation required for drainage of approximately 1.5 metres from surface.
- Typically, soils are removed from site, and select materials are imported for pavement construction, subsequently, contaminated soils are not anticipated to impact groundwater
- No groundwater dewatering is anticipated to be required as part of this scope of works.

As a result, groundwater monitoring is not proposed as part of delivery of this Project.

8.9 ENVIRONMENTAL AUDITING

Audits will be completed at regular intervals in accordance with all Project environmental obligations, including the CEMP, COA, REMM and CEMF.

Independent Audits of the CSSI will be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (DPIE, 2020). Whether an internal audit of the Temporary Bus Interchange will be conducted will be dependent on timing and stage of the works.

Abergeldie will participate as required with Independent Audits of the Project in accordance with COA A36. These audits will be instigated and coordinated by Sydney Metro as the Proponent of the project.

Abergeldie will participate as required in accordance with Sydney Metro's audit program in accordance with COA A37.

8.10 INTERNAL CEMP AUDITS

Based on the duration of the Project (it is envisaged that the works will go for approximately 2 months) an internal audit will be undertaken within 20 working days of commencing construction. Subsequent audits will be undertaken quarterly.

The purpose of audit is to verify compliance with:

- Compliance with any approval, permit or licence conditions;
- Compliance with the CEMP, sub-plans and procedures;

- Community consultation and complaint response;
- Environmental training records; and
- Environmental monitoring and inspection results

The internal audit scope will focus on activities of high environmental risk. An audit checklist will be developed and amended as necessary to reflect changes to this CEMP, subsequent approvals and changes to Acts, regulations or guidelines.

In addition, SM-WSA will undertake periodic audits of the CEMP and compliance with the environmental aspects of contract documentation, including this CEMP. An audit schedule from SM-WSA has not been set.

8.11 SUB-CONTRACTOR AUDITS

Where they are required by risk assessment, sub-contractor will be audited as determined by the ESAM using a risk based approach and/or in response to repeat incidents.

The ESAM may initiate audits at a greater frequency. Sub-contractor audits will be undertaken by the ESAM or delegate.

Based on the scope of works, subcontractors internal subcontractor audits will be undertaken at a minimum quarterly.

9 ENVIRONMENTAL NON-COMPLIANCES AND NON-CONFORMANCES

All environmental incidents, non-conformances and non-compliances must be reported to the ER and Sydney Metro in accordance with Sydney Metro Environmental Incident and Non-compliance Reporting Procedure.

9.1 ENVIRONMENTAL NON-COMPLIANCE

In accordance with the Conditions of Approval, a non-compliance is defined as:

An occurrence or set of circumstances or development that is a breach of this approval.

Where an environmental non-compliance is identified and is substantiated, a Non-compliance and Corrective Action report will be issued in accordance with Sydney Metro – Western Sydney Airport Environmental Incident and Non-Compliance Reporting Procedure (SM-17-00000096), refer to APPENDIX N.

If a non-compliance is identified then it must be raised using the Environmental Incident and Non-Compliance Report Form within 48 hours by the party responsible for the breach.

9.2 NON-COMPLIANCE NOTIFICATION (A44-A45)

The Planning Secretary must be notified in writing via the Major Projects website within seven (7) days after the Proponent becomes aware of any non-compliance with the terms of this approval. This notification will be undertaken by SM-WSA.

A non-compliance notification must identify the CSSI (including the application number for it), set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be undertaken to address the non-compliance.

Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

9.3 NON-COMPLIANCE NOTIFICATION PROCESS

The procedure for notification in becoming aware of a non-compliance is as follow:

1. Relevant personal is to notify the Abergeldie environmental officer.
Note: The project manager is responsible for ensuring that the environmental officer is notified of a non-compliance.
2. The ESAM is to notify (verbally) the TfNSW Environmental Officer who will notify Sydney Metro using the Environmental Incident and Non-Compliance Report Form within 48 hours. Should Abergeldie be unable to contact TfNSW, Abergeldie will notify Sydney Metro directly.
3. Sydney Metro will subsequently notify the Planning Secretary in accordance with COA A41-A45.

Sydney Metro may raise non-compliances against environmental requirements. The ER also has the authority to raise a non-compliance for their respective areas of work.

9.4 CORRECTIVE AND PREVENTATIVE ACTIONS

Corrective actions will be identified as follows:

- Where an issue is identified and raised, the ESAM or delegate will liaise with the appropriate project personnel or qualified person(s) or seek advice from TfNSW or the ER to determine the most appropriate corrective action to implement.
- Where assessed by the ESAM to be appropriate, the corrective action will be actioned through the Corrective Action Request (CAR) to prevent a re-occurrence of the non-compliance. A register of non-compliances, corrective actions and preventative actions will be maintained by the construction team.

9.5 PREVENTATIVE ACTIONS WILL BE IDENTIFIED AS FOLLOWS:

- Relevant incidents, complaints and non-conformances are discussed at relevant meetings.
- Trends relating to environmental incidents and non-compliance findings are reviewed at these meetings to identify any reoccurring issues that are indicative of the need to take preventative action.
- Any member of the Abergeldie project team, including subcontractors as well as the ER and TfNSW can contribute and provide suggestion to any required or appropriate preventative action.
- Where assessed by the ESAM as necessary, a preventive action will be raised and action undertaken through a Corrective Action Request (CAR).

9.6 NON-COMPLIANCE REPORTS AND CLOSE-OUT

Where a non-compliance is detected a Non-Compliance Report (NCR) will be raised using the Environmental Incident and Non-compliance Notification Report (SM ES-FT-403) or a similar and consistent form approved by Sydney Metro.

The Abergeldie, ER, and TfNSW representatives will determine if issues identified during an environment inspection or audit will be closed out as part of the inspection or audit reporting process or via the issue of an NCR based on the severity of the issue and its potential to impact sensitive receivers or the environment.

Where a non-compliance is a result of non-compliance with the requirements of any law or COA regarding the Environment, Abergeldie will immediately notify TfNSW in writing.

If repetitive observations are made i.e. if non-corrected low risk site improvement actions are not corrected within the agreed timing for actions (for more than a month in most cases) the ESAM will request that an NCR be raised.

Environmental related non-compliances are raised with the ESAM to determine appropriate actions and dates. On completion of agreed actions, the ESAM shall sign-off the NCR to signify close-out and provide a copy to TfNSW. Any changes to operations or practices resulting from actions are to be communicated to employees and sub-constructors as required. A register of all NCRs raised on the Project will maintained on the Abergeldie system.

9.7 ENVIRONMENTAL REPORTING

Project specific environmental compliance and verification records will be accessible onsite for the duration of works.

Records to be maintained shall include:

- a. All environmental monitoring, inspection and compliance reports/records (including but not limited to):
 - i. Copies of current ESCPs for all active construction sites;
 - ii. Records of soil and water inspections undertaken;
 - iii. Records of testing of any water prior to discharge;
 - iv. Records of the release of the hold point to discharge water from the construction site to the receiving environment;
 - v. Records of any meteorological condition monitoring;
 - vi. Records of any management measures implemented because of adverse, windy weather conditions;
 - vii. Records of air quality and dust inspections undertaken; and
 - viii. Records of inspections and waste dockets for all waste removed from the site.
- b. Environmental monitoring data;
- c. Documentation as required by performance conditions, approvals, licences and legislation;
- d. Reports on environmental incidents, other environmental non-compliances or non-conformances and follow-up action;
- e. Results of internal and external audits;
- f. Minutes of CEMP and Construction environmental management system review meetings and evidence of any action taken;
- g. Modifications to site environmental documentation;
- h. Induction and training records;
- i. Procedures and protocols;
- j. Checklists, forms and templates;
- k. Correspondence with public authorities;
- l. Complaints and enquiries received, and follow-up action;
- m. Notifications received by regulators;
- n. Community engagement information;
- o. CEMP and Sub-plans; and
- p. Additional documents and requirements as identified in the CEMF, COA and REMM.

10 CEMP REVIEW AND COMPLIANCE

In accordance with Section 3.19 of the CEMF, management reviews will be undertaken as part of the continual improvement process. The ESR will review the CEMP, Environmental Procedures and mitigation measures, and implementation within 20 days of the commencement of construction. Between the scheduled reviews, a register of issues will be maintained to ensure that any issue raised by internal and external personnel associated with the Project is recorded.

The purpose of the review is to ensure that the system is meeting the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance.

The review will be held more frequently if:

- Issues arise during environmental surveillance and monitoring
- Response to environmental incidents and non-compliances
- There is a change in scope/program
- If a series of community complaints are received
- Unexpected finds are encountered

The review will consider:

- Client comments.

- Agency comments.
- Complaints.
- New environmental assessments or updated risk assessments.
- Effectiveness of environmental management documentation implementation.
- Potential improvements to the environmental management documentation.
- Adequacy of resources.
- Findings of audits.
- Environmental objectives and targets.
- Environmental performance.
- Compliance with legal and other requirements.
- Critical non-conformance or repeated non-conformances.
- Organisation changes.
- Effectiveness of training and inductions.

The outcomes of the review could include amendments to this CEMP and related documentation, revision to the Project's environmental management system, risk assessment review, re-evaluation of the Project objectives and targets as well as feeding into other Project documents.

A formal review of the management systems by the Abergeldie's Senior Management Team will also occur on a bi-annual basis. This review shall generate actions for the continual improvement of the systems.

10.1 CEMP REVISION

Continual improvement is achieved through regular measurement, evaluation, audit and review of the effectiveness of the CEMP, Project environmental outcomes and the Principal Contractor's EMS. A review process ensures that environmental documentation is updated as appropriate for the specific works that are occurring on site. Reviews undertaken as described in Section 10 provide specific opportunities to identify improvements in the environmental management system and/or this CEMP.

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the Principal Contractor's ESAM or Environmental Coordinators to prepare the revised documents.

This CEMP, and subsequent revisions, must be authorised by the Principal Contractor's ESAM and approved by the ER.

The ER can approve minor amendments to the CEMP and construction monitoring programs, where the ER is satisfied that the amendment to the CEMP is necessary.

Where the ER deems it necessary, the amended CEMP will be forwarded to relevant stakeholders for review and comment if required and forwarded to the Planning Secretary for information. All updates to the CEMP are to be communicated to Sydney Metro prior to finalisation and/or update of document.

10.2 DOCUMENT CONTROL

The Abergeldie, TfNSW the ER, and SM-WSA where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents and records listed the above in Section. During the Project, the environmental documents and records will be stored at the site compound.

Abergeldie will implement a Project document control management system to control the flow of documents within and between the Abergeldie, TfNSW, Sydney Metro, stakeholders and subcontractors.

The process will also ensure that documentation is:

- Developed, reviewed and approved prior to issue;
- Issued for use;
- Controlled and stored for the legally required timeframe;
- Removed from use when superseded or obsolete; and
- Archived.

A register and distribution list will identify the current revision of particular documents, records or data.

11 STAKEHOLDER AND COMMUNITY INVOLVEMENT

11.1 OVERVIEW

A range of mitigation measures will be employed to mitigate community impacts. The stakeholder and community interaction will be undertaken in accordance with the Sydney Metro Airport Overarching Community Communication Strategy (OCCS), Section 4 of the Construction Environmental Management Framework (CEMF), the Construction Noise and Vibration Standard (CNVS) and Part B of the Instrument of Approval (CSSI 10051).

Stakeholders and the community will be kept up to date with construction update notifications detailing specific milestones, plus specific notifications for highly impactful activity such as night works, or major traffic changes. Notification for planned utility outages will be managed by the relevant utility service providers or design changes which affect the receiver.

11.2 COMMUNITY COMMUNICATION STRATEGY

This Construction Community Strategy (CCS) will support the Overarching Community Construction Strategy for SM-WSA. This strategy meets the conditions of approval B1 to B10 of CSSI 10051. Note that this CCS will comply with the OCCS, which will be in place for the duration of the work, per CSSI 10051 Part B, B1.

Table 21 outlines the engagement tools to be utilised on the Project.

Table 21 Community Engagement Strategies

Tools	Method
Notification for any works that may disturb local residents and businesses (such as noisy activities and night works) at least seven days prior to those works commencing	Delivery of letters or emails to resident and business addresses within the area (according to the NVMP), and/or per the OOH application Door knocks Face-to-face information for severely impacted members of the community/for start of works (subject to adherence to COVID-19 requirements)
Notification (including targeted letterbox drops and email) of works that may affect transport (such as road closures, changes to pedestrian routes and changes to bus stops)	Delivery of letters or emails to resident and business addresses within the area
Traffic alerts (to all key traffic and transport stakeholders advising of any changes to access and local traffic arrangements)	Delivery of letters or emails to resident and business addresses within the area at least seven days prior to significant events Print and radio advertisements regarding major traffic changes
1800 project line (24 hour)	A 24 hour hotline open to the general public. This will be managed by TfNSW.
Complaints Management process	See section 11.4
Stakeholder Meetings (as required)	Meetings with key stakeholders, providing them with an opportunity to stay involved with the project
Website Updates (managed by TfNSW) including uploading of all relevant documents, and contact details for the stakeholder and community relations team	The TfNSW projects website will be updated to reflect progress and/or changes or events that occur throughout construction.
Sydney Metro Community Information Centre (Managed by TfNSW)	Provision of information to the Sydney Metro Community Information Centre including community newsletters, information brochures and fact sheets and

Tools	Method
	interactive web-based activities
General Project Information Distribution	Clear signage at the construction sites Regular newspaper advertisements in local and metropolitan papers (managed by TfNSW) Community, business and stakeholder satisfaction surveys and feedback forms (managed by TfNSW) Translator and interpreter services (managed by TfNSW)
Regular Inter Agency Meetings (Managed by TfNSW)	Regular participation in meetings as required
Email Blasts	Important project information will be distributed to those who have indicated their desire to receive email updates.
Email Address (Inbound)	A public email address that will be managed TfNSW.
Social Media Posts	i.e., Facebook, Twitter (if required by TfNSW)

Community and Stakeholder Engagement for this project will be led by TfNSW, supported by Abergeldie. The TfNSW Community and Stakeholder team will be the primary point of contact for the SM-WSA Communications team as the point of contact for the community. The project team will assist TfNSW to inform stakeholders about construction activities. We will do this by:

- Providing timely and accurate information to TfNSW for use in notifications
- Gaining internal alignment on key messages and management of community risks
- Supporting Door knocking and stakeholder meetings as required (noting adherence to COVID-19 requirements)
- All community and stakeholder interactions will be recorded in Consultation Manager by Transport for NSW. For a detailed analysis for each stakeholder communication, please refer to the stakeholder analysis in Construction Community Liaison Management Plan Appendix 1
- Wider community engagement to provide further information regarding timing and local changes regarding the proposed works by community updates, webpage construction updates and social media posts as required
- Construction updates on the TfNSW website and distributed via letterbox drop
- Email notifications to stakeholders who have indicated they wish to receive information electronically project updates

11.3 BUSINESS COMMUNICATION STRATEGY

As part of the CCS businesses impacted by the proposed works would be proactively consulted with and kept up to date with the works schedule and progress. This will include:

- Notifications of start of works and regular updates on progress
 - Information to be included in the notification will be consistent with those outlined in section 4.5 of the CEMF
 - Initial contact for the works will include face-to-face meeting (door knocking, where viable due to COVID restrictions) and will include provision of a contact number should the business have any concerns throughout construction
- Notifications of any works that may disturb local businesses
- Notifications around any works that may impact traffic movements, parking availability or access to properties
- Website updates and a 24 hour Project Line

All formal communications with businesses will be managed by SM-WSA Communications Team with input from Abergeldie around the status of construction works and activities.

11.4 COMPLAINTS HANDLING PROCEDURE

Complaints handling is described below and is undertaken in accordance with Section 4.3 of the CEMF and COA B3-B10. The complaints management system is managed by TfNSW, in which Abergeldie will support the TfNSW team.

The project complaints handling procedure is outlined below, which says:

Members of the community will raise complaints and enquiries over the course of the project. Abergeldie will assist TfNSW in managing these complaints and enquiries. Stakeholders such as business owners and elected officials may also request site meetings to discuss issues. Contact may occur via:

- A 24 hour telephone number - 1800 684 490
- Written correspondence including letters, emails and Facebook comments
- Emails to projects@transport.nsw.gov.au
- Direct engagement – face-to-face interactions including meetings or site visits
- A mediation system for complaints unable to be resolved (complaints mediator)

11.5 COMPLAINTS MANAGEMENT

Phone call complaints will be acknowledged within two (2) hours of receipt. When a complaint or enquiry cannot be resolved immediately, a follow-up verbal response on proposed action(s) to within 24 hours of a complaint being received. This will be undertaken by the TfNSW Communications Manager.

Email complaints will be responded to within two (2) hours of receipt. However, if an email complaint is received between 10pm and 5am, it will be acknowledged and/or responded to by 9am on the same day.

The TfNSW Communications Manager will advise the Abergeldie of any complaints received and the actions to be taken to resolve the issue. For complaints and/or enquiries which require escalation, TfNSW Communications Manager will respond accordingly.

Sydney Metro's OCCS details the Complaints Management System, which includes a Complaints Register, which has been developed for the Project.

In accordance with COA B4, the complaint register will record:

- a) number of complaints received;
- b) date and time of the complaint;
- c) number of people (in the household) affected in relation to a complaint, if relevant;
- d) method by which the complaint was made;
- e) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- f) issue of the complaint;
- g) means by which the complaint was addressed and whether resolution was reached, with or without mediation; and
- h) if no action was taken, the reason(s) why no action was taken.

In accordance with COA B5, Complainants must be advised of the following information before, or as soon as practicable after, providing personal information:

- a) the Complaints Register may be forwarded to government agencies, including the Department (Department of Planning Industry and Environment, 4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150), to allow them to undertake their regulatory duties;
- b) by providing personal information, the complainant authorises the Proponent to provide that information to government agencies;
- c) the supply of personal information by the complainant is voluntary; and
- d) the complainant has the right to contact government agencies to access personal information held about them and to correct or amend that information (Collection Statement).

The Collection Statement must be included on the Proponent or development website to make prospective complainants aware of their rights under the *Privacy and Personal Information Protection Act 1998 (NSW)*. For any complaints made in person, the complainant must be made aware of the Collection Statement.

In accordance with COA B7, the Complaints Register must be provided to the Planning Secretary upon request, within the timeframe stated in the request. This process will be managed by SM-WSA Communications Team.

11.6 COMPLAINTS MEDIATOR

Should a complaint be unable to be resolved, a Community Complaints Mediator will be engaged and managed by SM-WSA. A complaint will be referred by the ER in accordance with the OCCS.

The role of the Community Complaints Mediator is to provide independent mediation services for any reasonable and unresolved complaint referred by the ER where a member of the public is not satisfied by the Proponent's response. Where a Community Complaints Mediator is required, a mediator accredited under the National Mediator Accreditation System (NMAS), administered by the Mediator Standards Board must be appointed.

The Community Complaints Mediator will:

- review any unresolved disputes, referred by the ER in accordance with the Overarching Community Communication Strategy;
- make recommendations to the Proponent to satisfactorily address complaints, resolve disputes or mitigate against the occurrence of future complaints or disputes;
- provide a copy of the recommendations, and the Proponent's response to the recommendations, to the Planning Secretary within one month of the recommendations being made; and

Community Complaints Mediation will not be enacted before the Complaints Management System required by Condition B2 has been executed for a complaint and will not consider issues such as property acquisition, where other dispute processes are provided for in this approval, statute or clear government policy and resolution processes are available, or matters which are not within the scope of this CSSI.

11.7 COMMUNITY INTERACTION ROLES AND RESPONSIBILITIES

11.7.1 Project Manager

Project Manager will have the overall accountability for the implementation, maintenance, and evaluation of this Plan. The functional responsibilities will be delegated to the nominated Construction Community Advisor (CCA).

11.7.2 Management Team

The community relations responsibilities of the Project Manager, as well as all senior managers, are as follows:

- Ensure they, and staff reporting to them, are familiar with the requirements of this plan and they receive the appropriate induction
- Ensure all subcontractors have been inducted and comply with the community relations policies and procedures
- Identify potential community issues at the detailed design phase for early resolution
- Identify potential construction impacts on the community
- Incorporate practical stakeholder suggestions into designs and project plans
- Ensure relevant impact mitigation, consultation, complaint and communication requirements of the plans they manage are satisfied

- Attend stakeholder and community meetings as required to report on construction progress, issues of concern or interest to the community
- Respond to community feedback and resolve or alleviate the root cause of complaints, as required

11.7.3 Transport for NSW Communications Manager

The TfNSW Communications Manager will be responsible for managing community and stakeholder engagement for the project. The TfNSW Communications Manager will undertake the following tasks as required:

- Respond to community and/or stakeholder complaints
- Attend stakeholder meetings to provide Senior TfNSW representation
- Manage internal approvals of public communications materials, including newspaper adverts, social media, community updates, website content and stakeholder letters and emails
- Ensure relevant project updates are provided to the Minister's office
- Input all interactions into Consultation Manager
- Media liaison
- Review and approve all communications, including written responses to enquiries and complaints
- Responsible for interactions with businesses and monitoring for business disturbance

11.7.4 Construction Community Advisor

The role of the Construction Community Advisor (CCA) is to support the Transport Communications Manager with the implementation of communications tools and management of community and stakeholder relationships.

The CCA will provide input and details for project notifications and reactionary responses to complaints and enquiries, as well as enquiries from the SM-WSA communications team.

11.8 URBAN DESIGN OF TEMPORARY WORKS

TfNSW will supply branded shade cloth to be placed temporary fencing surrounding the construction site. Once on the fencing, if required, neat slashes will be cut into the shade cloth to allow for wind to pass through. The shade cloth will be visually inspected for damage and dirt and replaced where required as part of the weekly environment inspection.

TfNSW will design the shade cloth in accordance with Sydney Metro branding requirements. The design of the branding will consider:

- Artwork, graphics and images to enhance the visual appearance of temporary works in high visibility locations;
- Project information to raise awareness on benefits, explain the proposed works at each site and provide updates on construction progress;
- Community information, including contact numbers for enquiries / complaints;
- Signage and information to mitigate impacts on local businesses which may be obscured by the construction site;
- Sydney Metro advertising / public awareness campaigns; and
- Logos / branding, including Sydney Metro, NSW and Commonwealth Government, and Contractor branding.

All community-facing site signage is to be graphically designed by TfNSW design consultant and will be reviewed by SM-WSA for approval.

It is noted that construction hoardings, scaffolding and shade clothe etc will be regularly inspected and kept clean and free of dust build up. Graffiti will be removed or painted over promptly.

The principles of Crime Prevention through Environmental Design (CPTED) will be applied to all works, including temporary works that have a public interface.

11.9 BUSINESS AND PROPERTY IMPACTS

TfNSW and Abergeldie will work proactively with business to minimise impacts to business during construction.

Construction works will be undertaken to:

- Minimise the potential impact of the project to businesses affected by construction works;
- Ensure businesses are kept informed of the project and consulted in advance of major works or factors that are likely to have a direct impact;
- Consult with all business directly affected by changes to access arrangements regarding specific requirements at least two weeks prior to those changes coming into effect; and
- Ensure that business stakeholder enquiries and complaints regarding the project are managed and resolved effectively.

The following interactions with business owners have occurred prior to the start of works:

- Community updates were sent out by TfNSW prior to start of project and most recent notifications for 1 April to 31 May 2022 were distributed on 25 March 2022.

A detailed stakeholder scan is provided in Appendix 1 of the Construction Community Liaison Management Plan (CCLMP). The stakeholder scan documents the contact details, key issues and proposed approach to managing each relationship.

The project will be delivered in accordance with section 4.5- A, B & C of the CEMF, as outlined below in Table 22.

Table 22 CEMF Communications Measures

CEMF reference	Details	Implementation on the project
4.5a	Principal Contractors will proactively work with potentially affected stakeholders to identify the likely impacts and put in place measures to minimise impacts.	Stakeholder identification process through stakeholder scan and DNVIS process. Door knock prior to work starting to discuss impacts. Seek feedback from sensitive receivers on noise mitigation measures. This doorknock has initially been undertaken by SM-WSA and TfNSW. Abergeldie will continue to liaise with stakeholders as necessary.
4.5b (i)	Minimise the potential impact of the project to businesses affected by construction works	The project team will implement mitigation measures such as completing noisier tasks prior to midnight, using noise blankets where feasible, using the hand tools where possible and coordinating deliveries of plant and materials outside of peak business hours.
4.5b (ii)	Ensure businesses are kept informed of the project and consulted in advance of major works or factors that are likely to have a direct impact	Regular construction updates will be provided to all residents surrounding the works. Note there are no businesses in the local area.
4.5b (iii)	Consult with all business directly affected by changes to access arrangements regarding specific requirements at least two weeks prior to those changes coming into effect	Prior to the start of the main works, Specific Notification (door knock) will be undertaken with identified sensitive receivers No known business in the immediate vicinity.
4.5b (iv)	Ensure that business stakeholder enquiries and complaints regarding the project are managed and resolved effectively.	All complaints and enquiries will be managed in accordance with the Section 11.4 Complaints Handling Procedure and 11.5 Complaints Management
4.5c	The Community Communication Strategy (Section 4.2) will document key issues relating to business impacts by locality with a particular focus on proactive consultation with affected businesses.	See section 11.3

CEMF reference	Details	Implementation on the project
4.5c (i)	Identification of specific businesses which are sensitive to construction activity disturbances	A stakeholder scan featuring details impacted businesses sensitive to the construction activity has been completed for the project.
4.5c (ii)	Summary of the commercial character of the locality, its general trading profile (daily and annually) and information gained from the business profiling such as: <ul style="list-style-type: none"> ▪ Operating hours; ▪ Main delivery times ▪ Reliance on foot traffic ▪ Any signage or advertising that may be impacted ▪ Customer origin; and ▪ Other information specific to the business that will need to be considered in construction planning. 	No business within the near vicinity of the works. Interfaces with several construction sites including WSA & M12.
4.5c (iii)	Define the roles and responsibilities in relation to the control and monitoring of business disturbances	Refer Section 6.5 roles and responsibilities which applies to overall community and stakeholder engagement for the project. Note there are no businesses in the local area.
4.5c (iv)	Identification of locality specific standard business mitigation measures which would be implemented	No business within the near vicinity of the works. Interfaces with several construction sites including WSA & M12.
4.5c (v)	Maps and diagrams to illustrate the information for easy identification of measures which would be implemented	Project notifications feature maps and diagrams to elucidate key information about planned work activities and likely impacts.
4.5c (vi)	Description of the monitoring, auditing, and reporting procedures	Monitoring and evaluation activities will include: <ul style="list-style-type: none"> ▪ Delivery of communications material on time and within budget ▪ Evaluating the cohesiveness of stakeholder relationships ▪ Recording the number and nature of comments received by the community at all stages of the program ▪ Monitoring, analysing, and reporting of stakeholder contacts/enquiries, including complaints ▪ Responding to community enquiries and concerns in a timely manner
4.5c (vii)	Procedure for reviewing performance and implementing corrective actions	Effectiveness of the consultation process can be measured by considering: <ul style="list-style-type: none"> ▪ The number of individual enquiries/complaints over the duration of the project and/or in comparison to similar projects ▪ Whether complaints/enquiries increased over the period of the project ▪ The tone of feedback and media coverage ▪ Whether the project was refined through community engagement ▪ The absence of construction disruptions due to community unrest and/or escalating complaints.
4.5c (viii)	Description of the complaints handling process	Refer to section 11.5 – Complaints Management Process for a description of the complaints handling procedure.
4.5c (ix)	Procedure for community consultation and liaison	Generally, the overarching procedure for community consultation and liaison: <ul style="list-style-type: none"> ▪ Identify key stakeholders, impacts and influence levels ▪ Provide strategic direction for communications throughout the delivery of the project ▪ Provide a framework for managing and implementing complaints and enquiries ▪ Describe communications tools ▪ Define the communication protocols and procedures to ensure consistency across all projects



12 GENERAL SITE WORKS

12.1 WORKING HOURS

In line with COA E38, standard working hours for the Project are as follows:

- Monday to Friday 7:00am – 6:00pm inclusive
- Saturday 8:00am- 1:00pm
- No works on Sundays or Public Holidays

In accordance with COA 41.

Notwithstanding **Conditions E38** and **E39** work may be undertaken outside the hours specified in the following circumstances:

(a) **Safety and Emergencies**, including:

- (i) **for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or**
- (ii) **where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or**

(b) **Low impact**, including:

(i) construction that causes $L_{Aeq(15\text{ minute})}$ noise levels:

- no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and
- no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s); and

(ii) construction that causes:

- continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of *Assessing Vibration: a technical guideline* (DEC, 2006), or
- intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of *Assessing Vibration: a technical guideline* (DEC, 2006); or

(c) **By Approval**, including:

- (i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or
- (ii) works which are not subject to an EPL that are approved under an **Out-of-Hours Work Protocol** as required by **Condition E42**; or
- (iii) negotiated agreements with directly affected residents and sensitive land user(s); or

(d) **By Prescribed Activity**, including:

- (i) tunnelling and ancillary support activities (excluding cut and cover tunnelling and surface works not directly supporting tunnelling) are permitted 24 hours a day, seven days a week; or
- (ii) grout batching at the Orchard Hills construction site is permitted 24 hours per day, seven days per week; or
- (iii) delivery of material that is required to be delivered outside of standard construction hours in **Condition E38** to directly support tunnelling activities, except between the hours 10:00 pm and 7:00 am to / from the Orchard Hills ancillary facility; or



- (iv) haulage of spoil generated through tunnelling is permitted 24 hours per day, seven days per week except between the hours of 10:00 pm and 7:00 am to / from the Orchard Hills construction site; or
- (v) works within an acoustic enclosure are permitted 24 hours a day, seven days a week where there is no exceedance of noise levels or intermittent vibration levels under **Low impact** circumstances identified in **Condition E41(b)**, unless otherwise agreed with the Planning Secretary; or
- (vi) tunnel and underground station box fit out works are permitted 24 hours per day, seven days per week.

12.2 SITE LAYOUT

Layouts of work areas are presented in the Environmental Control Maps (ECM) see APPENDIX H.

The ancillary facilities to undertake the work are located with the construction boundary of the SSI10051. The facilities will include a lunch shed toilet and site parking. There are no impacts on heritage items, threatened species, populations or ecological communities; and the establishment and use of the facility can be carried out and managed within the outcomes set out in the terms of this approval. A summary of this assessment with the COA A17 Criteria is shown in Table 23.

Table 23 A17 Ancillary Facility Criteria

A17 Criteria	Outcome
(a) they are located within or immediately adjacent to the Construction Boundary of the CSSI; and	Yes – Located within Construction Boundary of the CSSI
(b) they are not located next to sensitive land use(s) (including where an access road is between the facility and the receiver), unless the landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and	Yes – not located next to sensitive land use
(c) they have no impacts on Heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and	Yes –Area for ancillary facilities items, i.e. portaloos site parking, may be located within heritage areas and areas mapped as PCT within the construction footprint that has already been assessed. No further impacts on heritage items or threatened species, populations or ecological communities will occur.
(d) the establishment and use of the facility can be carried out and managed within the outcomes set out in the terms of this approval, including in relation to environmental, social and economic impacts.	Yes

12.2.1 Boundary Screening

Boundary screening will be erected around ancillary facilities that are adjacent to sensitive receivers as required under COA A23 and A24. This will be for the duration of Construction unless otherwise agreed with relevant councils, and affected residents, business operators or landowners. All boundary screening will minimise visual, noise and air quality impacts.

In accordance with A24 boundary screening will minimise visual impacts on adjacent sensitive land uses. This will be achieved by using TfNSW designed / approved banner mesh being erected on the site fences.

12.2.2 Site Identification

As per COA A47 the CSSI name, application number, telephone number, postal address and email address required under Condition B3 must be available on site boundary fencing / hoarding at each ancillary facility before the commencement of construction. This information must also be provided on the website required under Condition B11.

12.3 REINSTATEMENT OF WORK AREAS

On completion of the works, any areas disturbed by Construction activities (such as areas for site compounds, material storage, access and haul roads) will be reinstated and restored in accordance with consultation with Sydney Metro, the community and stakeholders. As a minimum, reinstatement will include the following:

- Abergeldie will clear and clean all working areas and accesses at project completion;
- At the completion of Construction all plant, temporary buildings or vehicles not required for the subsequent stage of Construction will be removed from the site;
- All land occupied that is not part of the roadway will be stabilised with grass and plantings as per the landscape design, noting there are future roadworks planned in this area;
- Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of Construction.

13 TRAFFIC MANAGEMENT

The construction traffic management requirements have been developed in accordance with COA 103 – C119, the CEMF, The Sydney Metro Construction Traffic Management Framework (CTMF) as stated in Appendix F of the Staging Report and TfNSW General Specification G10 in the site-specific Construction Traffic Management Plan. The CTMP is managed as a standalone document.

13.1 TRAFFIC REQUIREMENTS

A Traffic, Transport and Access Management Sub Plan was not identified as required in the Project Staging Report required under COA A13. However, staging report states that construction traffic will be managed by the Construction Traffic Management Framework which is separate to the CEMF and docs required under this framework. A Construction Traffic Management Plans is submitted indent of this plan to address the CTMF requirements.

This section of the CEMP is not intended to fulfil the requirements of the Construction Traffic Management Framework (CTMF), nor fulfil the requirements of COA E103. This section is to highlight the need for these traffic related documents and provide guidance for implementation.

The Project will be undertaken with the following commitments in Table 24, Table 25 and Table 26.

Table 24 Relevant Traffic COA

Reference	COA	How Addressed
E103	Construction Traffic Management Plans (CTMPs) must be prepared in accordance with the Construction Traffic Management Framework. A copy of the CTMPs must be submitted to the Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP.	CTMP
E108	If damage to roads occurs as a result of the construction of the CSSI, the Proponent must either (at the Relevant Road Authority's discretion): (a) compensate the Relevant Road Authority for the damage so caused; or (b) rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report.	CTMP
E109	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: (a) minimise parking on public roads; (b) minimise idling and queueing on state and regional roads; (c) not carry out marshalling of construction vehicles near sensitive user(s); (d) not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided; and (e) ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP.	CTMP
E110	Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier.	CTMP
E111	The Proponent must maintain access to properties during the entirety of works unless an alternative access is agreed in writing with the landowner(s) whose access is impacted by the CSSI works.	CTMP
E112	Where construction of the CSSI restricts a property's access to a public road, the Proponent must, until their primary access is reinstated, provide the property with temporary alternate access to an agreed road decided through consultation with the landowner, at no cost to the property landowner, unless otherwise agreed with the landowner.	CTMP Access will not be impeded.
E113	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier. Property access must be reinstated within one (1) month of the work that physically affected	CTMP Access will not be impeded.

Reference	COA	How Addressed
	the access is completed or in any other timeframe agreed with the landowner or occupier.	
E116	A Traffic and Transport Liaison Group(s) must be established in accordance with the Construction Traffic Management Framework to inform the development of CTMP.	CTMP
E117	<p>Supplementary analysis and modelling as required by TfNSW and / or the Traffic and Transport Liaison Group(s) must be undertaken to demonstrate that construction and operational traffic can be managed to minimise disruption to traffic network operations including changes to and the management of pedestrian, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements.</p> <p>Revised traffic management measures must be incorporated into the CTMP.</p> <p>Permanent road works included in the CSSI must be designed, constructed and operated with the objective of integrating with existing and proposed road and related transport networks and minimising adverse changes to the safety, efficiency and accessibility of the network. Design and assessment of related traffic, parking, pedestrian and cycle accessibility impacts and changes shall be undertaken:</p> <ul style="list-style-type: none"> a) in consultation with, and to the reasonable requirements of the relevant Traffic and Transport Liaison Group; b) in consideration of existing and future demand, connectivity (in relation to permanent changes), performance and safety requirements; c) to minimise and manage local area traffic impacts; d) to, where possible and appropriate, retain or reinstate parking in St Marys; e) to ensure access is maintained to property and infrastructure f) place and movement outcomes from precinct plans and design guidelines; and g) to meet relevant design, engineering and safety guidelines, including Austroads, Australian Standards, Sydney Metro – Western Sydney Airport Submissions Report – Appendix D Design Guidelines and TfNSW requirements. Copies of civil, structural and traffic signal design plans shall be submitted to the Relevant Road Authority for consultation during design development and before completion of construction of the CSSI. 	<p>CTMP</p> <p>Designed by approved by SM-WSA and TfNSW</p> <p>Attend Traffic and Transport Liaison Group.</p>
E119	Permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclists, and public transport users must be subject to safety audits demonstrating consistency with relevant design, engineering and safety standards and guidelines. Safety audits must be prepared in consultation with the relevant Traffic and Transport Liaison Group before the completion and use of the subject infrastructure and must be made available to the Planning Secretary upon request.	<p>CTMP</p> <p>Safety Audits</p>

Table 25 Relevant Traffic REMM

REMM Reference	REMM Requirement	How Implemented
T1	Construction Traffic Management Plans would be prepared in accordance with the Construction Traffic Management Framework	CTMP prepared
T3	Coordination with Western Sydney Airport and Transport for NSW would be undertaken through the Traffic and Transport Liaison Group to manage potential cumulative construction traffic impacts with M12 Motorway and Elizabeth Drive	Detailed within the CTMP
T4	Road Safety Audits would be carried out to address vehicular access and egress, and pedestrian, cyclist and public transport safety. Road Safety Audits would be carried out as per the guidelines outlined in Section 10 of the Construction Traffic Management Framework	Detailed within the CTMP

REMM Reference	REMM Requirement	How Implemented
T5	Maintain access for pedestrians and cyclists around construction sites as per the guidelines outlined in the Construction Traffic Management Framework. Appropriate signage and line marking would be provided to guide pedestrians and cyclists past construction sites and on the surrounding network to allow access to be maintained	Detailed within the CTMP
T6	Access for construction vehicles to be planned as per the guidelines outlined in the Construction Traffic Management Framework. Construction site traffic would be managed to minimise movements during peak periods. Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclist and motorist safety	Detailed within the CTMP

Table 26 CEMF Traffic Management Requirements

CEMF Reference	CEMF Requirement	How Implemented
5.2	a) The management of traffic impacts due to construction is addressed in the Construction Traffic Management Framework (CTMF) which sets out system requirements for management plans and other associated documentation. This document applies to Principal Contractors and forms part of the contract documentation.	CTMP
5.2	b) The Construction Traffic Management Framework (CTMF) sets out the approach to managing traffic impacts during the construction of the Sydney Metro projects. The CTMF also outlines contractor requirements, with reference to third party agreements. Principal Contractors are required to produce these documents in accordance with the CTMF.	CTMP

13.2 EXISTING ENVIRONMENT AND IMPACTS

The works are located on the northern side of the roundabout at the intersection of the Badgerys Creek Road and Elizabeth Drive. The roundabout is a two lane roundabout that has no existing road connection to the north.

No formal pedestrian or cycle ways are present in the area other than the new pedestrian walkway beside the recently upgrade section of Badgerys Creek Road.

The EIS provides detail on the level of service for the intersection as:

- AM Peak 2019 as C
- PM Peak 2019 as B

The large impact to traffic will be the installation of Concrete Barrier and single outside lane closure of the roundabout to create safe working environment for the planned works.

These impacts are further detail in the SMWSA – Enabling Works at Badgerys Creek Road Area and Aerotropolis CONSTRUCTION TRAFFIC MANAGEMENT PLAN Revision: 9 dated 7 JANUARY 2022.

A SIDRA analysis was conducted to verify the potential impacts caused by the closure of the outer lane at the Badgerys Creek Road & Elizabeth Drive intersection. Traffic counts taken in late 2019 were analysed with the conservative assumption of a 5% increase in traffic volumes per year since the data was collected. The SIDRA analysis reveals that with the closure of the auxiliary lane, the roundabout operates at a level of service (LoS) A during both AM & PM peak periods. Therefore, it is anticipated that this long-term lane closure will perform satisfactorily.



Figure 3 Traffic Staging & Construction Vehicle Movement

13.3 TRAFFIC MITIGATION MEASURES

Table 27 Mitigation Measures Traffic

ID	Measure / Requirement	COA / REMM Reference	Responsibility
TT1	Construction Traffic Management Plans would be prepared in accordance with the Construction Traffic Management Framework. A copy of the CTMPs must be submitted to the Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP.	COA E103 REMM T1	Project Manager
TT2	Coordination with Western Sydney Airport and Transport for NSW would be undertaken through the Traffic and Transport Liaison Group (TTLG) to manage potential cumulative construction traffic impacts with M12 Motorway and Elizabeth Drive.	REMM T3 COA 116 COA E117	Sydney Metro Abergeldie will be a part of the TTLG
TT3	Road Safety Audits would be carried out to address vehicular access and egress, and pedestrian, cyclist and public transport safety. Road Safety Audits would be carried out as per the guidelines outlined in Section 10 of the Construction Traffic Management Framework	REMM T4	Manager
TT4	Access for construction vehicles to be planned as per the guidelines outlined in the Construction Traffic Management Framework. Construction site traffic would be managed to minimise movements during peak periods. Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclist and motorist safety	REMM T5, T6	Project Manager
TT6	Before any local road is used by a Heavy Vehicle for the purposes of construction of the Works, a Road Dilapidation Report will be prepared for the road. A copy of the Road Dilapidation Report will be provided to the Relevant Road Authority(s) within three (3) weeks of completion of the survey and at no later than one (1) month before the road being used by Heavy Vehicles associated with the construction of the work.	COA E107	Project Manager

ID	Measure / Requirement	COA / REMM Reference	Responsibility
TT7	If damage to roads occurs as a result of the construction of the CSSI, the Proponent must either (at the Relevant Road Authority's discretion): compensate the Relevant Road Authority for the damage so caused; or rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report.	COA E108	Project Manager
TT8	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: <ul style="list-style-type: none"> ▪ minimise parking on public roads; ▪ minimise idling and queueing on state and regional roads; ▪ not carry out marshalling of construction vehicles near sensitive user(s); ▪ not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided; and ▪ ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP. 	COA E109	Project Manager Site Supervisor(s) Drivers
TT9	Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier.	COA E110 COA E82	Project Manager
TT10	The Proponent must maintain access to properties during the entirety of works unless an alternative access is agreed in writing with the landowner(s) whose access is impacted by the Works.	COA E111 COA E112 COA E82	Project Manager
TT11	Prior to the commencement of construction the Principal Contractor will prepare a Road Dilapidation Report for all local public roads proposed to be used by heavy vehicles. dilapidation reports are to include other road infrastructure such as signs, kerbs, applicable driveways and pedestrian paths.	CEMF 3.9	Project Manager

14 CONSTRUCTION NOISE AND VIBRATION MANAGEMENT

14.1 NOISE AND VIBRATION REQUIREMENTS

Table 28 Relevant Noise and Vibration COA

Reference	COA	How Addressed
E37	A detailed land use survey must be undertaken to confirm sensitive land use(s) (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration and construction ground-borne noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area before the commencement of work which generates construction noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Detailed Noise and Vibration Impact Statements required under Condition E47.	Section 14.2
E38	Work must only be undertaken during the following hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; (b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays.	Section 12.1 and 14
E39	Except as permitted by an EPL or approved in accordance with the Out-of-Hours Works Protocol required by Condition E42, highly noise intensive work that result in an exceedance of the applicable NML at the same receiver must only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one (1) hour. For the purposes of this condition, 'continuously' includes any period during which there is less than one (1) hour between ceasing and recommencing any of the work.	Section 14.3
E41	Notwithstanding Conditions E38 and E39 work may be undertaken outside the hours specified in the following circumstances: (a) Safety and Emergencies, including: (i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or (b) Low impact, including: (i) construction that causes LAeq(15 minute) noise levels: • no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s); and (ii) construction that causes: • continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), or • intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006); or (c) By Approval, including: (i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or (ii) works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E42; or (iii) negotiated agreements with directly affected residents and sensitive land user(s); or (d) By Prescribed Activity, including:	Section 14.3



Reference	COA	How Addressed
	<p>(i) tunnelling and ancillary support activities (excluding cut and cover tunnelling and surface works not directly supporting tunnelling) are permitted 24 hours a day, seven days a week; or</p> <p>(ii) grout batching at the Orchard Hills construction site is permitted 24 hours per day, seven days per week; or</p> <p>(iii) delivery of material that is required to be delivered outside of standard construction hours in Condition E38 to directly support tunnelling activities, except between the hours 10:00 pm and 7:00 am to / from the Orchard Hills ancillary facility; or</p> <p>(iv) haulage of spoil generated through tunnelling is permitted 24 hours per day, seven days per week except between the hours of 10:00 pm and 7:00 am to / from the Orchard Hills construction site; or</p> <p>(v) works within an acoustic enclosure are permitted 24 hours a day, seven days a week where there is no exceedance of noise levels or intermittent vibration levels under Low impact circumstances identified in Condition E41(b), unless otherwise agreed with the Planning Secretary; or</p> <p>(vi) tunnel and underground station box fit out works are permitted 24 hours per day, seven days per week.</p> <p>NSW Government 38 Department of Planning, Industry and Environment Conditions of Approval for Sydney Metro – Western Sydney Airport (SSI 10051)</p> <p>On becoming aware of the need for emergency work in accordance with (a)(ii) above, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. The Proponent must use best endeavours to notify as soon as practicable all noise and/or vibration affected sensitive land user(s) of the likely impact and duration of those work.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Tunnelling does not include station box excavation. 2. Tunnelling ancillary support activities includes logistics support and material handling and delivery 	
E42	<p>An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of work (not subject to an EPL) that is outside the hours defined in Conditions E38 and E39. The Protocol must be approved by the Planning Secretary before commencement of the out-of-hours work. The Protocol must be prepared in consultation with the ER. The Protocol must provide:</p> <p>(a) justification for why out-of-hours work need to occur;</p> <p>(b) identification of low and high-risk activities and an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where:</p> <p>(i) the ER reviews all proposed out-of-hours activities and confirms their risk levels;</p> <p>(ii) low risk activities that can be approved by the ER; and</p> <p>(iii) high risk activities that are approved by the Planning Secretary;</p> <p>(c) a process for the consideration of out-of-hours work against the relevant NML and vibration criteria;</p> <p>(d) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods consistent with the requirements of Condition E56. The measures must take into account the predicted noise levels and the likely frequency and duration of the out-of-hours works that sensitive land user(s) would be exposed to, including the number of noise awakening events;</p> <p>(e) procedures to facilitate the coordination of out-of-hours work including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; and</p> <p>(f) notification arrangements for affected receivers for all approved out-of-hours works and notification to the Planning Secretary of approved low risk out-of-hours works.</p> <p>This condition does not apply if the requirements of Condition E41 are met.</p> <p>Note: Out-of-hours work is any work that occurs outside the construction hours identified in Condition E38 and E39.</p>	<p>SM-WSA Out of Hour Protocol will be implemented.</p> <p>APPENDIX E</p>

Reference	COA	How Addressed
E43	<p>Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria:</p> <p>(a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009);</p> <p>(b) preferred vibration criteria established using the Assessing vibration: a technical guideline (DEC, 2006) (for human exposure);</p> <p>(c) Australian Standard AS 2187.2 - 2006 "Explosives - Storage and Use - Use of Explosives" (for human exposure);</p> <p>(d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions"; and</p> <p>(e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).</p> <p>Any work identified as exceeding the noise management levels and / or vibration criteria must be managed in accordance with the Noise and Vibration CEMP Sub-plan.</p>	Section 14.2
E44	<p>All reasonable and feasible mitigation measures must be applied when the following residential ground-borne noise levels are exceeded:</p> <p>(a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and</p> <p>(b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).</p> <p>The mitigation measures must be outlined in the Noise and Vibration CEMP Sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E42.</p>	Section 14.2
E45	<p>Noise generating work in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.</p>	Section 14.2
E46	<p>Industry best practice construction methods must be implemented where reasonably practicable to ensure that noise and vibration levels are minimised around sensitive land use(s). Practices may include, but are not limited to:</p> <p>(a) use of regularly serviced low sound power equipment;</p> <p>(b) at source control, temporary noise barriers (including the arrangement of plant and equipment) around noisy equipment and activities such as rock hammering and concrete cutting;</p> <p>(c) use of non-tonal reversing alarms; and</p> <p>(d) use of alternative construction and demolition techniques.</p>	Section 14.2
E47	<p>Detailed Noise and Vibration Impact Statements (DNVIS) must be prepared for any work that may exceed the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E43 and E44 at any residence outside construction hours identified in Condition E38, or where receivers will be highly noise affected or subject to vibration levels above those otherwise determined as appropriate by a suitably qualified structural engineer under Condition E87. The DNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the works. A copy of the DNVIS must be provided to the ER before the commencement of the associated works. The Planning Secretary and the EPA may request a copy (ies) of the DNVIS.</p>	Section 14.2 SM-WSA Out of Hour Protocol will be implemented. APPENDIX E
E56	<p>All work undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. The Proponent must:</p> <p>(a) reschedule any work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved in accordance with Condition E57; or</p> <p>(b) consider the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and</p>	<p>Third Parties and sub-contractors will be coordinated.</p> <p>No works that trigger respite are proposed to be undertaken by third parties.</p>

Reference	COA	How Addressed
	(c) provide documentary evidence to the ER in support of any decision made by the Proponent in relation to respite or mitigation. The consideration of respite must also include all other approved Critical SSI, SSI and SSD projects which may cause cumulative and / or consecutive impacts at receivers affected by the delivery of the CSSI.	
E57	In order to undertake out-of-hours work outside the work hours specified under Condition E38, appropriate respite periods for the out-of-hours work must be identified in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with: (a) a progressive schedule for periods no less than three (3) months, of likely out-of-hours work; (b) a description of the potential work, location and duration of the out-of-hours work; (c) the noise characteristics and likely noise levels of the work; and (d) likely mitigation and management measures which aim to achieve the relevant NMLs under Condition E43 (including the circumstances of when respite or relocation offers will be available and details about how the affected community can access these offers). The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour work must be provided to the ER, EPA and the Planning Secretary prior to the out-of-hours work commencing. Note: Respite periods can be any combination of days or hours where out-of-hours work would not be more than 5 dB(A) above the RBL at any residence.	Sydney Metro will provide the Planning Secretary with the outcomes of community engagement, the identified respite periods and the scheduling of the likely out-of-hours works. Respite has not been identified as required due to limited OOHW and distance to noise sensitive receivers. Should respite be required, Abergeldie will provide Sydney Metro with all information and documentation it requires to provide the Planning Secretary with the outcomes of community engagement, the identified respite periods and the scheduling of the likely out-of-hours works.

Table 29 Relevant Noise REMM

REMM Reference	REMM Requirement	How Implemented
None	None Applicable	None

Table 30 CEMF Noise and Vibration Management Requirements

CEMF Reference	CEMF Requirement	How Implemented
8.1	a. The following noise and vibration management objectives will apply to construction: i. Minimise unreasonable noise and vibration impacts on residents and businesses; ii. Avoid structural damage to buildings or heritage items as a result of construction vibration; iii. Undertake active community consultation; iv. Maintain positive cooperative relationships with schools childcare centres local residents and building owners; and v. For on-airport works in the Sydney Metro Western Sydney Airport Noise and Vibration CEMP will detail all the noise and vibration management objectives and will be consistent with the WSA Noise and Vibration CEMP including all appendices to the CEMP.	This section, specifically Section 14.2
8.2	b. detailed Construction Noise and Vibration Impact Statements will be prepared for noise-intensive construction sites and or activities to ensure the adequacy of the noise and vibration mitigation measures. Specifically, Construction Noise and Vibration Impact Statements will be prepared for works proposed to be undertaken outside of standard construction hours and	Section 14.1



CEMF Reference	CEMF Requirement	How Implemented
	to support applications to undertake out of hours works (this includes variations of EPLs and applications to relevant agencies).	
8.2	c. Noise and vibration monitoring would be undertaken for construction as specified in the CNVS.	Section 14.1
8.2	d. The following compliance records would be kept by Principal Contractors: i. Records of noise and vibration monitoring results against appropriate NMLs and vibration criteria; and ii. Records of community enquiries and complaints and the Contractor's response.	Section 14.5 Section 14.6
8.3	a. All feasible and reasonable mitigation measures would be implemented in accordance with the CNVS. The on-airport Noise and Vibration CEMP and the off-airport Noise and Vibration Management Plan will include the following noise and vibration mitigation measures as well as relevant Conditions: i. Construction hours will be in accordance with the working hours specified in Section 5.1; ii. Hoarding and enclosures will be implemented where required to minimise airborne noise impacts; and iii. The layout of construction sites will aim to minimise airborne noise impacts to surrounding receivers iv. Provision of respite periods.	Section 14.2

14.2 EXISTING ENVIRONMENT

The Project site is located within road reserve to the north the new constructed roundabout. The immediate area consists of single dwelling residential land use, vacant land and farmland. The closest residential building to the side is more than 460m north-east of the site.

There no sensitive land uses (such as critical working areas such as operating theatres and precision laboratories) within the 1000m of the site work area. The existing environment and noise sensitive receivers are shown in Figure 4.



Figure 4 Noise sensitive receivers near the proposal area

14.3 BACKGROUND NOISE LEVELS

Noise management levels (NMLs) have been determined for receivers as per the procedures in the ICNG. The ICNG prescribes set noise management levels for non-residential receivers such as commercial, schools and places of worship.

Table 31 Measured background noise levels and NML from SM-WSA EIS

Noise Area Category		SM-WSA NCA10	SM-WSA NCA11
RBL or L_{A90} Background Level (dB(A))	Day	35	38
	Evening	30	35
	Night	30	34
L_{Aeq} (15minute) Noise Management Level (dB(A))	Day	45	49
	Day (OOHW)	40	44
	Evening	35	42
	Night	35	35

Since the noise management levels in NCA10 are the lowest and the closest receiver is in NCA10. The noise level predictions have only been made a the most sensitive receiver.

14.4 CONSTRUCTION NOISE AND ASSESSMENT OBJECTIVES

The ICNG provides guidelines for the assessment and management of construction noise. The ICNG focuses on applying a range of work practices to minimise construction noise impacts rather than focusing on achieving numeric noise levels.

The main objectives of the ICNG are to:

- Identify and minimise noise from construction works
- Focus on applying all 'feasible' and 'reasonable' work practices to minimise construction noise impacts
- Encourage construction during the recommended standard hours only, unless approval is given for works that cannot be undertaken during these hours
- Reduce time spent dealing with complaints at the project implementation stage
- Provide flexibility in selecting site-specific feasible and reasonable work practices to minimise noise impacts.

14.5 QUANTITATIVE NOISE ASSESSMENT CRITERIA

Construction noise assessment goals presented in the ICNG are referenced to noise management levels for residential, sensitive land uses and commercial/industrial premises.

Table 32 sets out management levels for noise at residences and how they are to be applied. The rating background level (RBL) is the overall single-figure background noise level measured in each relevant assessment period (during or outside the recommended standard hours). The term RBL is described in detail in the NSW Industrial Noise Policy (EPA, 2000).

As a guide, the difference between the internal noise level and the external noise level is typically 10dB with windows open for adequate ventilation.

Table 32 Noise at residents using quantitative assessment (DECC 2009)

Time of day	Management Level L _{Aeq} (15min)*	How to apply
Recommended standard hours: Monday to Friday 7 am to 6 pm, Saturday 8 am to 1pm No work on Sundays or public holidays	Noise affected RBL + 10 dB	The noise affected level represents the point above which there may be some community reaction to noise. <ul style="list-style-type: none"> ▪ Where the predicted or measured L_{Aeq} (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. ▪ The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details.
	Highly noise affected 75 dB(A)	The highly noise affected level represents the point above which there may be strong community reaction to noise. <ul style="list-style-type: none"> ▪ Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: <ul style="list-style-type: none"> ○ times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or mid-morning or mid-afternoon for works near residences) ○ if the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours	Noise affected RBL + 5 dB	<ul style="list-style-type: none"> ▪ A strong justification would typically be required for works outside the recommended standard hours. ▪ The proponent should apply all feasible and reasonable work practices to meet the noise affected level. ▪ Where all feasible and reasonable practices have been applied and

Time of day	Management Level L Aeq (15min)*	How to apply
		noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community

* Noise levels apply at the property boundary that is most exposed to construction noise, and at a height of 1.5 m above ground level. If the property boundary is more than 30 m from the residence, the location for measuring or predicting noise levels is at the most noise-affected point within 30 m of the residence. Noise levels may be higher at upper floors of the noise affected residence.

14.6 OTHER LAND USES

Other sensitive land uses, such as schools, typically find noise from construction to be disruptive when the properties are being used (such as during school times). Table 33 presents the noise management level (NML) for sensitive receivers likely to be affected by the Project.

Table 33 Noise at sensitive land uses (non-residents) using quantitative assessment (DECC, 2009)

Land use	Management level, L _{Aeq} (15 min) (applies when properties are being used)
Classrooms at schools and other educational institutions	Internal noise level of 45 dB(A)
Hospital wards and operating theatres	Internal noise level of 45 dB(A)
Places of worship	Internal noise level of 45 dB(A)
Active recreation areas	External noise level of 65 dB(A)
Passive recreation areas	External noise level of 60 dB(A)
Commercial premises (including offices and retail outlets)	External noise level 70 dB(A)
Industrial premises	External noise level 75 dB(A)

Notes:

- Active recreation areas are characterised by sporting activities and activities which generate their own noise or focus for participants, making them less sensitive to external noise intrusion.
- Passive recreation areas are characterised by contemplative activities that generate little noise and where benefits are compromised by external noise intrusion (e.g. reading, meditation).

14.7 TRAFFIC NOISE ASSESSMENT GOALS

When trucks and other vehicles are operating within the boundaries of the various construction sites, road vehicle noise contributions are included in the overall predicted L_{Aeq(15minute)} construction site noise emissions. When construction related traffic moves onto the public road network a different noise assessment methodology is appropriate, as vehicle movements would be regarded as 'additional road traffic' rather than as part of the construction site.

The ICNG does not provide specific guidance in relation to acceptable noise levels associated with construction traffic. For assessment purposes, guidance is taken from the NSW Road Noise Policy (RNP).

One of the objectives of the RNP is to apply relevant permissible noise increase criteria to protect sensitive receivers against excessive decreases in amenity as the result of a proposal. In assessing feasible and reasonable mitigation measures, an increase of up to 2 dB represents a minor impact that is considered barely perceptible to the average person.

On this basis, construction traffic NMLs set at 2 dB above the existing road traffic noise levels during the daytime and night-time periods are considered appropriate to identify the onset of potential noise impacts. Where the road traffic noise levels are predicted to increase by more than 2 dB as a result of construction traffic, consideration would be given to applying feasible and reasonable noise mitigation measures to reduce the potential noise impacts and preserve acoustic amenity.

In considering feasible and reasonable mitigation measures where the relevant noise increase is greater than 2 dB, consideration would also be given to the actual noise levels associated with construction traffic and whether or not these levels comply with the following road traffic noise criteria in the RNP:

- 60 dB $LA_{eq(15\text{hour})}$ day and 55 dB $LA_{eq(9\text{hour})}$ night for existing freeway/ arterial/ sub-arterial roads.
- 55 dB $LA_{eq(1\text{hour})}$ day and 50 dB $LA_{eq(1\text{hour})}$ night for existing local roads.

14.8 SLEEP DISTURBANCE

The ICNG recommends that where construction works are planned to extend over two or more consecutive nights, the assessment should consider maximum noise levels and the extent and frequency of maximum noise level events exceeding the RBL.

The most current method for assessing sleep disturbance from NSW transport infrastructure projects is contained in the EPA's Noise Policy for Industry (NPfI). Although the NPfI sleep disturbance criteria relate to industrial noise, they are considered relevant for reviewing potential impacts from construction noise.

The NPfI defined sleep disturbance criteria is 52 dBA LA_{Fmax} or the prevailing background level plus 15 dB, whichever is the greater.

14.9 VIBRATION CRITERIA

The effects of vibration from construction works can be divided into three categories:

- Those in which the occupants of buildings are disturbed (human comfort). People can sometimes perceive vibration impacts when vibration generating construction works are located close to occupied buildings. Vibration from construction works tends to be intermittent in nature and the EPA's Assessing Vibration: a technical guideline (2006) provides criteria for intermittent vibration based on the Vibration Dose Value (VDV) shown in Table 34.
- Those where building contents may be affected (building contents). People perceive vibration at levels well below those likely to cause damage to building contents. For most receivers, the human comfort vibration criteria are the most stringent and it is generally not necessary to set separate criteria for vibration effects on typical building contents.
- Those where the integrity of the building/structure may be compromised (structural or cosmetic damage). If vibration from construction works is sufficiently high it can cause cosmetic damage to elements of affected buildings. Industry standard cosmetic damage vibration limits are specified in Australian Standard AS 2187-2, British Standard BS 7385 and German Standard DIN 4150, which are referenced in the Sydney Metro CNVS. The limits are shown in Table 35.

Table 34 Human Comfort Vibration Dose Values for Intermittent Vibration

Building Type	Assessment Period	Vibration Dose Value1 (m/s ^{1.75})	
		Preferred	Maximum
Critical Working Areas (e.g. operating theatres or laboratories)	Day or night-time	0.10	0.20
Residential	Daytime	0.20	0.40
	Night-time	0.13	0.26
Offices, schools, educational institutions and places of worship	Day or night-time	0.40	0.80
Workshops	Day or night-time	0.80	1.60

Note: The VDV accumulates vibration energy over the daytime and night-time assessment periods and is dependent on the level of vibration as well as the duration.

Table 35 Vibration Limits for Cosmetic Damage DIN 4150

Type of Structure	Vibration Thresholds for structural damage, PPV (mm/s)		
	Short Term	Long Term	
	At Foundation	Uppermost Floor	Uppermost Floor

	0 to 10 Hz	10 to 50 Hz	50 to 100 Hz	All Frequencies	All Frequencies
Commercial / Industrial	20	20 to 40	40 to 50	40	10
Residential	5	5 to 15	15 to 20	15	5
Sensitive / Historic	3	3 to 8	8 to 10	8	2.5

14.10 NOISE IMPACTS

Construction activities would result in a short-term increase in localised noise levels. Potential Noise Impacts will be associated with works:

- Site establishment
- Drainage Works
- Local Road works
- Paving / Asphaltting

A Detailed Noise and Vibration Impact Statement has been prepared to detail the noise and vibration impacts (APPENDIX P).

14.11 VIBRATION IMPACTS

Vibration during construction would not have impacts on nearby buildings or sensitive receivers where the separation distances for vibration intensive plant are complied with. The closest sensitive receiver is located about 460 metres from the works area and given the type of works required it is unlikely that there would be any construction activities within the cosmetic damage range. In addition, none of the larger equipment would be required for these works would be within the human response distance criteria.

14.12 NOISE AND VIBRATION MITIGATION MEASURES

Table 36 Noise and vibration mitigation measures

ID	Measure/Requirement	COA / REMM Reference	Responsibility
NVM1	Construction Works are only to occur: <ul style="list-style-type: none"> ▪ Monday to Friday: 7am to 6pm ▪ Saturday: 8am to 1pm Saturdays after 1pm, Sundays and public holidays: no works unless approved by Sydney Metro Out of Hours protocol and application to TfNSW / Sydney Metro	E38	PM (Project Manager)
NVM2	Detailed Noise and Vibration Impact Statements (DNVIS) must be prepared for any work that may exceed the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E39 and E40 at any residence outside construction hours identified in Condition E35, or where receivers will be highly noise affected. The DNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the works. A copy of the DNVIS must be provided to the ER before the commencement of the associated works. The Planning Secretary and the EPA may request a copy (ies) of the DNVIS.	E47	PM
NVM3	Consider orientation of construction compound layout so that primary noise sources and noisy plant items (generators, pumps, fixed plant) to minimise impact to nearby noise sensitive receivers. Consider how structures (sheds and containers) can be placed between sensitive receivers and noise sources (and as close to the noise sources as is practical).	E43	PM / Environment, Sustainability and Approvals Manager (ESAM)
NVM4	Consider selecting site access points and roads as far as possible away from sensitive receptors.	E43	PM / ESAM

ID	Measure/Requirement	COA / REMM Reference	Responsibility
NVM5	Where possible use an alternative low noise process.	E43, E46	Superintendent
NVM6	Plant and equipment is to be maintained as per manufactures recommendation and be in good working order.	E43	PM
NVM7	Where impacts to a sensitive receiver is expected to occur from fixed plant that is regularly operating an acoustic screen, such as shrouds, enclosures, must be considered.	E43, E46	Superintendent
NVM8	Selection of low-noise plant and equipment of appropriate size and power, including alternatives to diesel and petrol engines and pneumatic units such as hydraulic or electric-controlled units where feasible. Select compressors that are silenced, or sound-reduced models fitted with acoustic enclosures.	E43, E46	PM
NVM9	Minimise concurrent operation of dominant noise-generating plant to reduce noise impacts	E43	Superintendent
NVM10	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	E43, E46	PM / Superintendent
NVM11	Where reasonable and feasible arrange construction activities to restrict need for reversing of plant and use of reversing alarms.	E43, E46	PM / Superintendent
NVM12	No swearing or unnecessary shouting or loud stereos/radios on site	E43	PM / Superintendent
NVM13	No dropping of materials from height, throwing of metal items and slamming of doors	E43	PM / Superintendent
NVM14	No excessive revving of plant and vehicle engines	E43	PM / Superintendent
NVM15	Plant and equipment is to be switched off when not being used rather than left idling for prolonged periods.	E43	PM / Superintendent
NVM16	Controlled release of compressed air	E43	PM / Superintendent
NVM17	Residents, businesses and other stakeholders within the vicinity of the proposed works would be notified of the scheduled works at least seven (7) calendar days prior to construction. This would include the provision of a contact person and phone number to enable complaints to be received and responded to, if required.	E43	PM / Comms Manager
NVM18	Verification measurements should be undertaken at the start of high noise generating activities and to assist in managing complaints. Predicted noise levels from the proposed works should be verified by measuring construction noise and background noise levels when high noise generating activities are undertaken or where complaints are received.	E43	ESAM
NVM19	Noisy works such as saw cutting, chain sawing and jack hammering is only to be undertaken prior to midnight.	E43	PM / Superintendent
NVM20	Mark safe-working distance to building on ECM's and demarcate these zones on site when utilising vibratory equipment such as vibratory rollers	E43	PM / Superintendent
NVM21	Noise Barriers are to be utilised when undertaking traffic control, site establishment during out of hours. Such barriers included noise blankets or other solid barrier that shields the noise from sensitive receivers.	E43, E46	PM / Superintendent

Table 37 Standard mitigation measures from Table 11 from SM CNVS

Action required	Applies to	Details	Implementation
Site inductions	Airborne noise Ground-borne noise and vibration	All employees, contractors and subcontractors are to receive an environmental induction. The induction must at least include: <input type="checkbox"/> All relevant project specific and standard noise and vibration mitigation measures <input type="checkbox"/> Relevant licence and approval conditions	All site personnel inducted



Action required	Applies to	Details	Implementation
		<input type="checkbox"/> Permissible hours of work <input type="checkbox"/> Any limitations on high noise generating activities <input type="checkbox"/> Location of nearest sensitive receivers <input type="checkbox"/> Construction employee parking areas <input type="checkbox"/> Designated loading/unloading areas and procedures <input type="checkbox"/> Site opening/closing times (including deliveries) <input type="checkbox"/> Environmental incident procedures	
Implement community consultation measures	Airborne noise Ground-borne noise and vibration	Periodic Notification (monthly letterbox drop) Website Project information and construction response telephone line Email distribution list Place Managers	Notification will be undertaken and will be ongoing
Register of Noise Sensitive Receivers	Airborne noise Ground-borne noise and vibration	A register of all noise and vibration sensitive receivers (NSRs) would be kept on site. The register would include the following details for each NSR: <input type="checkbox"/> Address of receiver <input type="checkbox"/> Category of receiver (e.g. Residential, Commercial etc.) <input type="checkbox"/> Contact name and phone number	Register maintained by Communications Team
Behavioural practices	Airborne noise	No swearing or unnecessary shouting or loud stereos/radios; on site. No dropping of materials from height; throwing of metal items; and slamming of doors. No excessive revving of plant and vehicle engines Controlled release of compressed air.	Standard control included in the project induction
Monitoring	Airborne noise Ground-borne noise and vibration	A noise monitoring program is to be carried out for the duration of the works in accordance with the Construction Noise and Vibration Management Plan and any approval and licence conditions.	As per Mitigation Measures
Attended vibration measurements	Ground-borne vibration	Attended vibration measurements are required at the commencement of vibration generating activities to confirm that vibration levels satisfy the criteria for that vibration generating activity. Where there is potential for exceedances of the criteria further vibration site law investigations would be undertaken to determine the site-specific safe working distances for that vibration generating activity. Continuous vibration monitoring with audible and visible alarms would be conducted at the nearest sensitive receivers whenever vibration generating activities need to take place inside the applicable safe-working distances.	Vibration impacts not expected due to distance to sensitive receivers. The largest "minimum working distance" identified in RMS Construction Noise and Vibration Guideline is 100m. The closest building is 460m from the site.
Construction hours and scheduling	Airborne noise Ground-borne noise and vibration	Where feasible and reasonable, construction would be carried out during the standard daytime working hours. Work generating high noise and/or vibration levels would be scheduled during less sensitive time periods.	Work schedule during standard hours
Construction respite period	Ground-borne noise and vibration Airborne noise	High noise and vibration generating activities may only be carried out in continuous blocks, not exceeding 3 hours each, with a minimum respite period of one hour between each block.	Respite period to be implemented as per the DNVIS (APPENDIX P). Currently no respite periods are anticipated to be required due to limited impacts of out of hours works.

Action required	Applies to	Details	Implementation
Equipment selection	Airborne noise Ground-borne noise and vibration	Use quieter and less vibration emitting construction methods where feasible and reasonable. For example, when piling is required, bored piles rather than impact-driven piles will minimise noise and vibration impacts. Similarly, diaphragm wall construction techniques, in lieu of sheet piling, will have significant noise and vibration benefits.	Suitable sized plant will be used. Use of electric plant/equipment will be considered through development of Construction Methodologies.
Maximum noise levels	Airborne-noise	The noise levels of plant and equipment must have operating Sound Power Levels compliant with the criteria in Table 13 SM CNVS	Plant to be verified onsite.
Rental plant and equipment	Airborne-noise	The noise levels of plant and equipment items are to be considered in rental decisions and in any case cannot be used on site unless compliant with the criteria in Table 13 SM CNVS	Plant to comply with Table 13 SM CNVS
Plan worksites and activities to minimise noise and vibration	Airborne noise Ground-borne vibration	Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site.	Worksite planned to minimise reversing.
Non-tonal reversing alarms	Airborne noise	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work.	Non-tonal to be used as per Mitigation Measures
Minimise disturbance arising from delivery of goods to construction sites	Airborne noise	Loading and unloading of materials/deliveries is to occur as far as possible from NSRs Select site access points and roads as far as possible away from NSRs Dedicated loading/unloading areas to be shielded if close to NSRs Delivery vehicles to be fitted with straps rather than chains for unloading, wherever feasible and reasonable	Delivery area will be designated to provide shielding as far as practicable considering site constraints.
Shield stationary noise sources such as pumps, compressors, fans etc	Airborne noise	Stationary noise sources would be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained. Appendix F of AS 2436: 1981 lists materials suitable for shielding.	Generators will be for caravan and will be an enclosed unit.
Shield sensitive receivers from noisy activities	Airborne noise	Use structures to shield residential receivers from noise such as site shed placement; earth bunds; fencing; erection of operational stage noise barriers (where practicable) and consideration of site topography when siting plant.	Site sheds will not be used. Caravan with amenities will be used. Due constraints to maintain access and small size and dynamic nature of the site. Shielding using noise barrier is not practicable.

Table 38 Additional Management Measures from Table 15 SM CNVS

Measure	Description	Abbreviation
Alternative accommodation	Alternative accommodation options may be provided for residents living in close proximity to construction works that are likely to incur unreasonably high impacts over an extended period of time. Alternative accommodation will be determined on a case-by-case basis.	AA
Monitoring	Where it has been identified that specific construction activities are likely to exceed the relevant noise or vibration goals, noise or vibration monitoring may be conducted at the affected receiver(s) or a nominated representative location (typically the nearest receiver where more than one receiver have been identified). Monitoring can be in the form of either unattended logging or operator attended surveys. The purpose of monitoring is to inform the relevant personnel when the noise or vibration goal has been exceeded so that additional management measures may be implemented.	M

Measure	Description	Abbreviation
Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Communications representatives from the contractor would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project.	IB
Letter box drops	For each Sydney Metro project, a newsletter is produced and distributed to the local community via letterbox drop and the project mailing list. These newsletters provide an overview of current and upcoming works across the project and other topics of interest. The objective is to engage and inform and provide project-specific messages. Advanced warning of potential disruptions (e.g. traffic changes or noisy works) can assist in reducing the impact on the community. Content and newsletter length is determined on a project-by-project basis. Most projects distribute notifications on a monthly basis. Each newsletter is graphically designed within a branded template.	LB
Project specific respite offer	The purpose of a project specific respite offer is to provide residents subjected to lengthy periods of noise or vibration respite from an ongoing impact.	RO
Phone calls and emails	Phone calls and/or emails detailing relevant information would be made to identified/affected stakeholders within 7 days of proposed work. Phone calls and/or emails provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs etc.	PC
Specific notifications	Specific notifications would be letterbox dropped or hand distributed to identified stakeholders no later than 7 days ahead of construction activities that are likely to exceed the noise objectives. This form of communication is used to support periodic notifications, or to advertise unscheduled works.	SN

Table 39 Application of Additional Mitigation Measures – Airborne Construction Noise (Table 16 SM CNVS)

Time Period		Mitigation Measures			
		Predicted LAeq (15minute) noise level Above NML			
		0 to 10 dB	10 to 20 dB	20 to 30 dB	> 30 dB
Standard	Mon-Fri (7.00 am - 6.00 pm)	-	LB	LB, M, SN	LB, M, SN
	Sat (8.00 am - 1.00 pm)				
	Sun/Pub Hol (Nil)				
OOHW (Evening)	Mon-Fri (6.00 pm - 10.00 pm)	LB	LB, M	LB, M, SN, RO	LB, M, SN, IB, PC, RO
	Sat (1.00 pm - 10.00 pm)				
	Sun/Pub Hol (8.00 am - 6.00 pm)				
OOHW (Night)	Mon-Fri (10.00 pm - 7.00 am)	LB	LB, M, SN, RO	LB, M, SN, IB, PC, RO, AA	LB, M, SN, IB, PC, RO, AA
	Sat (10.00 pm - 8.00 am)				
	Sun/Pub Hol (6.00 pm - 7.00 am)				

14.13 OUT OF HOURS WORKS

Any out of hours must be approved via the SM-WSA Out of Hours Protocol. This includes submitting the SM-WSA Out-of-hours work application form. SM-WSA and the ER must review and provide any feedback. The Communications Representative then endorse the application. The ER must confirm the risk level of the application and then either:

For low risk level, reviews the application for approval or endorse the application, and,

For high risk level endorse and then SM-WSA must submit the application to NSW Secretary Department of Planning and Environment for approval.

This process is detailed below in Figure 5.

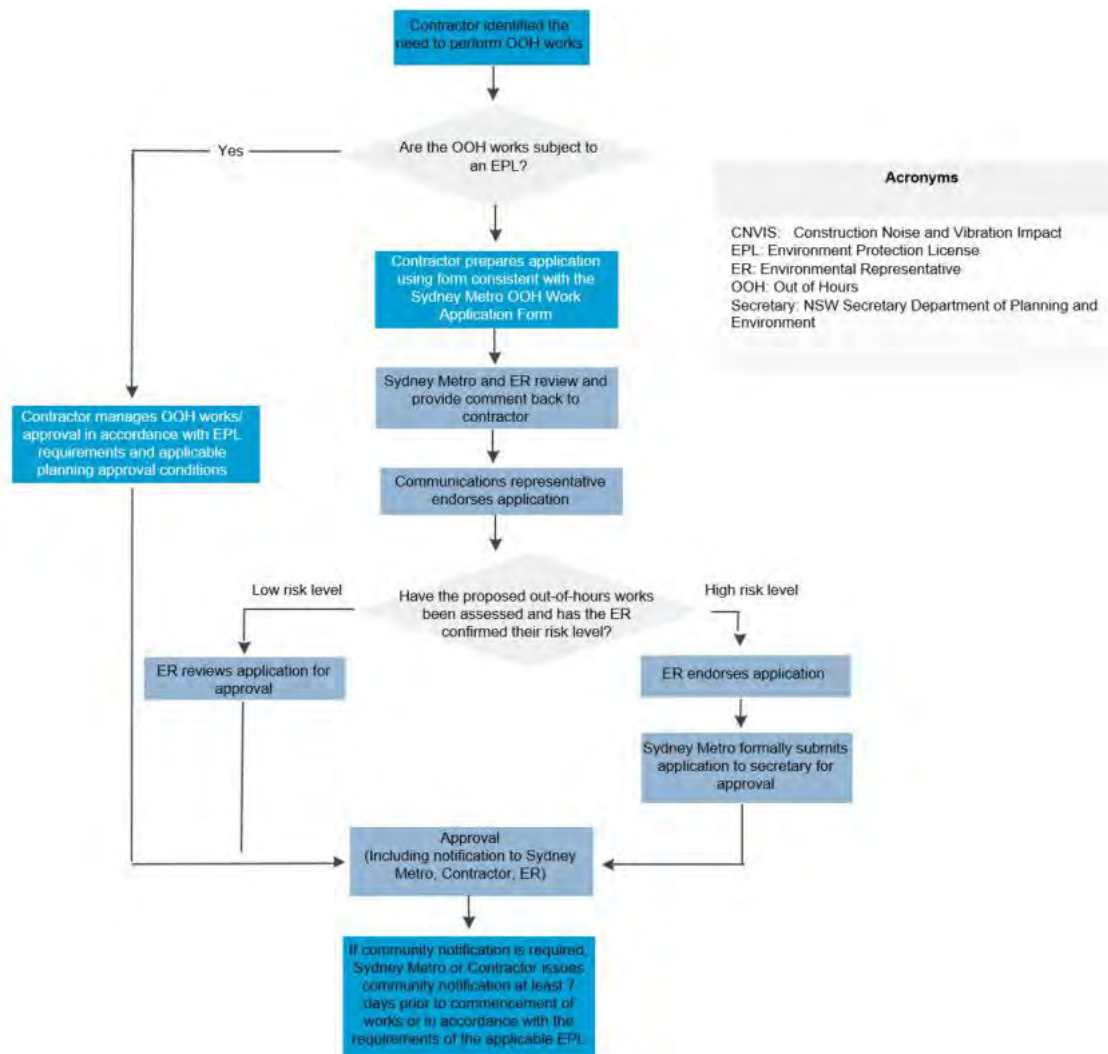


Figure 5 SM-WSA OOH Work Approval Process (Figure 1 from SM-WSA OOHW Protocol)

Detailed Noise and Vibration Impact Statements (DNVIS) must be prepared for any work that may exceed the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E39 and E40 at any residence outside construction hours identified in Condition E35, or where receivers will be highly noise affected. The DNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the works. A copy of the DNVIS must be provided to the ER before the

commencement of the associated works. The Planning Secretary and the EPA may request a copy (ies) of the DNVIS.

14.14 TRAINING

All employees, contractors and utility staff working on site will undergo site induction training relating to noise and vibration management issues. The induction training will address elements related to noise and vibration management including:

- a) avoiding use of radios during work outside normal hours,
- b) avoiding shouting, swearing and slamming doors,
- c) operating machines at low speed or power and switching off when not being used rather than left idling for prolonged periods, where practical,
- d) minimising reversing,
- e) avoiding dropping materials from height and avoiding metal to metal contact of material,
- f) Controlled release of compressed air.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in noise and vibration monitoring. Targeted training will also occur in response to non-conformance and repeated incidents.

Further details regarding staff induction and training are outlined in Section 18 of the CEMP.

14.15 MONITORING AND INSPECTION

Monitoring and inspection will be recorded on the Weekly Environmental Inspection Forms.

The Environmental Representative will inspect the site regularly and will inspect any noise and vibration control measures.

Typical compliance records would consist of:

- Inspections undertaken in relation to noise and vibration management measures
- Weekly Environmental Inspection forms
- Toolbox training records
- Noise record sheets from plant and environmental noise monitoring
- Noise monitoring records by specialist consultants
- Vibration monitoring records, records of enquiries and complaints
- Records of noise and vibration monitoring results against appropriate NML's and vibration criteria
- Records of community enquiries and complaints and the Contractor's response.

Noise monitoring to verification of predicted noise levels will be undertaken:

1. Start of new construction activity
2. Following a complaint.

14.16 COMPLAINTS HANDLING AND INCIDENT RESPONSE

Abergeldie will handle enquiries/ complaints in a responsive manner. Throughout the works, the team will be contacting multiple and varied internal and external stakeholders. The Sydney Metro Overarching Community Communication Strategy WSA and Community Action Plan details procedures to ensure that the process of dealing with enquires and complaints by Abergeldie is consistent and in line with the Project's enquiry and complaints handling management policies.

The Environment Sustainability and Approvals Manager and Environment Coordinator will assist the Stakeholder and Community Engagement Manager in responding to environmental complaints and



maintain a register of Environmental Complaints for reporting to the EPA and other relevant agencies.

Investigation of all noise and vibration complaints will occur, where there is potential for management levels to be exceeded monitoring will occur to verify levels at the receiver. If levels are exceeded additional mitigation measures will be implemented to avoid future occurrences.

TfNSW operate a 24 hour construction complaints line (1800 684 490).

The Environment, Sustainability and Approvals Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements in the management of any environmental issues which have resulted in community complaints.

15 HERITAGE MANAGEMENT

The following are the minimum general control measures to be implemented on the project. These control measures are in accordance with the COA, REMM, CEMF and Aboriginal Cultural Heritage Management Plan (ACHMP).

15.1 HERITAGE REQUIREMENTS

The Project will be undertaken with the following commitments in Table 40 to Table 43.

Table 40 Relevant Heritage COA Commitments

COA Reference	COA	How Addressed
E19	The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1. Unexpected heritage finds identified by the CSSI must be managed in accordance with the Unexpected Heritage Finds and Human Remains Procedure outlined in Conditions E34 to E36. Consideration of avoidance and redesign to protect unexpected finds of state heritage significance must be addressed where this condition applies	The SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K). Commitment included in Section 15.1 Note where an unexpected find triggers additional COA, this management plan will be reviewed and updated in accordance with Section 10
E24	Archival photographic digital recording must be undertaken for all listed heritage items which will be affected by the CSSI. The recordings must be undertaken prior to the commencement of Work which may impact the items and documented in an Archival Recording Report. The recordings must include buildings, structures and landscape features and detailed maps showing the location of features. The archival recording must be prepared in accordance with How to Prepare Archival Records of Heritage Items (NSW Heritage Office, 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office, 2006).	Archival photographic digital recording undertaken for the McGarvie-Smith Farm. See Section 15.4.1
E28	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval	Scope of Works are not anticipated to impact Aboriginal heritage. The SM-WSA Unexpected Finds Procedure is to be implemented for the duration of the Project
E29	The Registered Aboriginal Parties (RAP) must be kept regularly informed about the CSSI. The RAP must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the CSSI throughout construction	TfNSW / SM-WSA will keep RAP regularly informed as required.
E30	<p>The Aboriginal Cultural Heritage Management Plan (AC included in the documents listed in Condition A1 must be updated to include:</p> <p>(a) a methodology for the completion of pedestrian surveys for all areas within the project footprint yet to be surveyed;</p> <p>(b) procedures for undertaking further test excavation and, if necessary, salvage excavations prior to the commencement of works in areas subject to further test excavation;</p> <p>(c) mapping that clearly outlines all areas yet to be subject to survey, test excavations, and salvage excavations;</p> <p>(d) a procedure to update mapping following the completion of survey, test excavations, and salvage excavations that detail the archaeological works conducted across the project footprint;</p> <p>(e) a procedure for updating the predictive model following the identification of new Aboriginal heritage items; and</p> <p>(f) a procedure to report and update the effectiveness of the Aboriginal Cultural Heritage Management Plan following the completion of survey, test excavation activities or significant artefact finds.</p>	<p>The ACHMP will be implemented for the duration of the Project. The ACHMP is provided in APPENDIX M</p> <p>It is noted that Aboriginal artefacts are not anticipated based on the scope of works</p>

COA Reference	COA	How Addressed
	<p>The updated Plan must be submitted to the Planning Secretary for information prior to works in areas identified for further test excavations.</p> <p>Note: Salvage excavations in the areas identified for salvage in documents in Condition A1, may occur prior to additional test excavations occurring</p>	
E33	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects or places must not recommence until Heritage NSW has been informed. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition E34 and include registration in the Aboriginal Heritage Information Management System (AHIMS), where required	The SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project APPENDIX K
E34	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values) in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW	The SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K). Commitment included in Section 15.1
E35	The Unexpected Heritage Finds and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in consultation with the Heritage Council of NSW (with respect to non-Aboriginal cultural heritage) and in relation to Aboriginal cultural heritage, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction	The SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project APPENDIX K
E36	<p>The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction. Where archaeological investigations have been undertaken as a result of Unexpected Finds notifications then a Final Archaeological Report must be provided in accordance with Heritage Council guidance and standard requirements for final reporting under Excavation Permits.</p> <p>Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately. Management of human remains in NSW is subject to requirements set out in the <i>Public Health Act 2010 (NSW)</i> and <i>Public Health Regulation 2012 (NSW)</i>. Nothing in these conditions prevents separate procedures for the Unexpected Heritage Finds and Human Remains Procedure</p>	The SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project APPENDIX K

Table 41 Relevant Heritage REMM as identified in the Staging Report

REMM Reference	REMM Requirement	How Implemented	Responsibility
NAH3	<p>Archival recording of heritage items which would be impacted or that would have their setting altered, would be carried out in accordance with the NSW Heritage Office's Photographic Recording of Heritage Items Using Film or Digital Capture (2006). The following items would be archivally recorded:</p> <ol style="list-style-type: none"> 1) St Marys Railway Station 2) Luddenham Road Alignment 3) McMaster Farm 4)McGarvie-Smith Farm 	Section 15.4.1 TfNSW (M12) have completed Archival recording for the McGarvie-Smith Farm.	TfNSW ESAM



	5) Kelvin Park Group (the State Heritage listed curtilage) 6) Bringelly RAAF Base		
NAH9	If suspected human remains or unexpected items of potential heritage significance are discovered within the on-airport area, all activity would cease and the unexpected/chance finds requirements specified in the Western Sydney Airport European and Other Heritage Construction Environmental Management Plan would be followed	Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K).	Supervisor ESAM
AH1	Aboriginal stakeholder consultation would continue to be carried out in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (NSW Office of Environment and Heritage, 2010). Registered Aboriginal Parties would be provided with opportunities to participate in survey and testing in unverified areas of Aboriginal archaeological sensitivity, archaeological salvage works and unexpected find assessments (if required).	TfNSW / SM-WSA will keep RAP regularly informed as required.	SM-WSA
AH2	Areas of unverified Aboriginal archaeological sensitivity would be subject to archaeological survey, if required, and test excavation prior to construction in accordance with the Aboriginal Cultural Heritage Management Plan	TfNSW (M12) Elizabeth Drive Roundabout Works Aboriginal Cultural Heritage Clearance already undertaken by Kelleher Nightingale attached is APPENDIX L. Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K).	Supervisor ESAM
AH6	Aboriginal Heritage Information Management System site cards would be produced for all newly identified sites other than those identified on Commonwealth land. These should be submitted to the Aboriginal Heritage Information Management System Registrar as soon as practicable within one month of being identified. Newly identified sites within the boundaries of Defence Establishment Orchard Hills (Commonwealth land) would be reported to the Department of Defence to be managed in accordance with the relevant provisions of the Defence Establishment Orchard Hills Heritage Management Plan	Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K)	Supervisor ESAM
AH7	Aboriginal Site Impact Recording forms for sites subject to archaeological salvage would be submitted to the Aboriginal Heritage Information Management System register within one month of the completion of salvage works within their bounds.	Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K)	Supervisor ESAM
AH8	If any suspected human remains or unexpected Aboriginal cultural heritage objects are discovered within the on-airport area, all activity will cease and the unexpected finds protocol and discovery of human remains protocol specified in the Western Sydney Airport Aboriginal Cultural Heritage Construction Environmental Management Plan would be followed	Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K)	Supervisor ESAM
AH11	Measures would be implemented to ensure that Aboriginal sites located outside of the construction footprint, but within 100m of it,	Boundary Fencing/Demarcated will be established.	N/A

	would not be affected by construction activities	Areas outside project boundary to be signposted as no-go zones.	
AH12	<p>Reporting for all archaeological salvage works completed for the project would include:</p> <p>1) a minimum of one interim Aboriginal archaeological salvage report providing a summary of salvage works completed up to the reporting date, including the results of any post-excavation analyses completed. Interim results may be used to inform consistency assessments and Aboriginal heritage interpretation initiatives</p> <p>2) an Archaeological Salvage Report detailing the results of the archaeological salvage program (including the results of any post excavation on analysis) would be completed within one year of the completion of the fieldwork component of the program. The Archaeological Salvage Report would be consistent with the best practice guidelines suggested by the Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b) and the Aboriginal Cultural Heritage Standards & Guidelines Kit (NSW NPWS 1997)</p>	<p>TfNSW (M12) team have confirmed completion of Archaeological Salvage works within the project area.</p> <p>Works to proceed under SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K)</p>	Supervisor ESAM

Table 42 ACHMP Management Requirements

ACHMP Reference	ACHMP Requirement	How Implemented	Responsibility
Specific Management Requirement - Nil	No specific ACHMP requirement related to the project footprint	N/A	N/A
4.5	Unexpected Aboriginal heritage finds are to be managed in accordance with Section 6.24 of Sydney Metro's Unexpected Heritage Finds Procedure [SM-18-00105232]	SM-WSA Unexpected Finds Procedure to be implemented (APPENDIX K)	Project Manager ESAM Supervisor
4.6	In the event that suspected human skeletal material is exposed within the off-airport component of the construction footprint, Sydney Metro's Unexpected Heritage Finds Procedure [SM-18-00105232], will be followed	SM-WSA Unexpected Finds Procedure to be implemented (APPENDIX K)	Project Manager ESAM Supervisor

Table 43 CEMF Heritage Management Requirements

CEMF Reference	CEMF Requirement	How Implemented	Responsibility
9.1 a	<p>a) Embed significant heritage values through any architectural design, education or physical interpretation;</p> <p>b) Minimise impacts on items or places of heritage value;</p> <p>c) Avoid accidental impacts on heritage items;</p> <p>d) Maximise worker's awareness of indigenous and non-indigenous heritage; and</p> <p>e) For on-airport works, the Sydney Metro Western Sydney Airport Aboriginal Cultural Heritage CEMP and the European and Other Heritage CEMP will detail all the heritage</p>	<p>a) Abergeldie contact is construct only. Heritage values to be implemented by TfNSW / SM-WSA</p> <p>b) Works undertaken outside of exclusion zone and implementation of SM-WSA Unexpected Finds Protocol will be implemented for the duration of the Project (refer to APPENDIX K)</p> <p>c) Works undertaken outside of exclusion zone</p>	Supervisor ESAM

CEMF Reference	CEMF Requirement	How Implemented	Responsibility
	management objectives and will be consistent with the WSA Aboriginal Cultural Heritage CEMP and European and Other Heritage CEMP, including all appendices to these CEMP documents.	d) Heritage items to be included within Project environmental induction e) N/A works off airport	
9.2 b	The Contractor's regular inspections will include checking of Aboriginal and non-Aboriginal heritage mitigation measures	Heritage to be included in regular inspection checklists	ESAM
9.2 c	Compliance records will be retained by the Contractor. These will include: i. Inspections undertaken in relation to heritage management measures; ii. Archival recordings undertaken of any heritage item; iii. Unexpected finds and stop work orders; and iv. Records of any impacts avoided or minimised through design or construction methods	The identified records will be kept on file.	ESAM
9.3	a. The on-airport Aboriginal Cultural Heritage and European and there Heritage CEMPs and the off-airport Heritage Management Plan will include the following mitigation measures as well as relevant Conditions: i. Induction courses for site workers will include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values. ii. Any heritage item not affected by the works will be retained and protected throughout construction; iii. during construction undertake professional archaeological investigation excavation and reporting of any historical Indigenous heritage sites of state significance which will be affected. Reporting may be completed as construction progresses; iv. Undertake archival recordings of all non-Indigenous heritage items affected by the works prior to commencement of works; and v. Implement unexpected heritage find procedures for Indigenous and non Indigenous heritage items.	Section Section 6.10 Section 15.4 Already undertaken see Appendix L TfNSW (M12) Archival Photographic Recording APPENDIX K	ESAM

15.2 EXISTING ABORIGINAL HERITAGE AND IMPACTS

Chapter 13 of the EIS reported that Aboriginal items may potentially impacted with the Project footprint. Aboriginal Heritage will be management via the SM-WSA Unexpected Finds Protocol.

Off-airport construction corridor – between Luddenham Road construction site and Elizabeth Drive:	Potential for impacts on: <ul style="list-style-type: none"> areas of archaeological sensitivity identified along the flats of the lower slopes around Cosgroves Creek and unnamed drainage lines, if present cultural heritage values.
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The project is located in an Area of archaeological sensitivity, as shown in Map in figure 5-5c of the EIS Technical Report 5 Aboriginal Heritage, extract provided below in Figure 6.

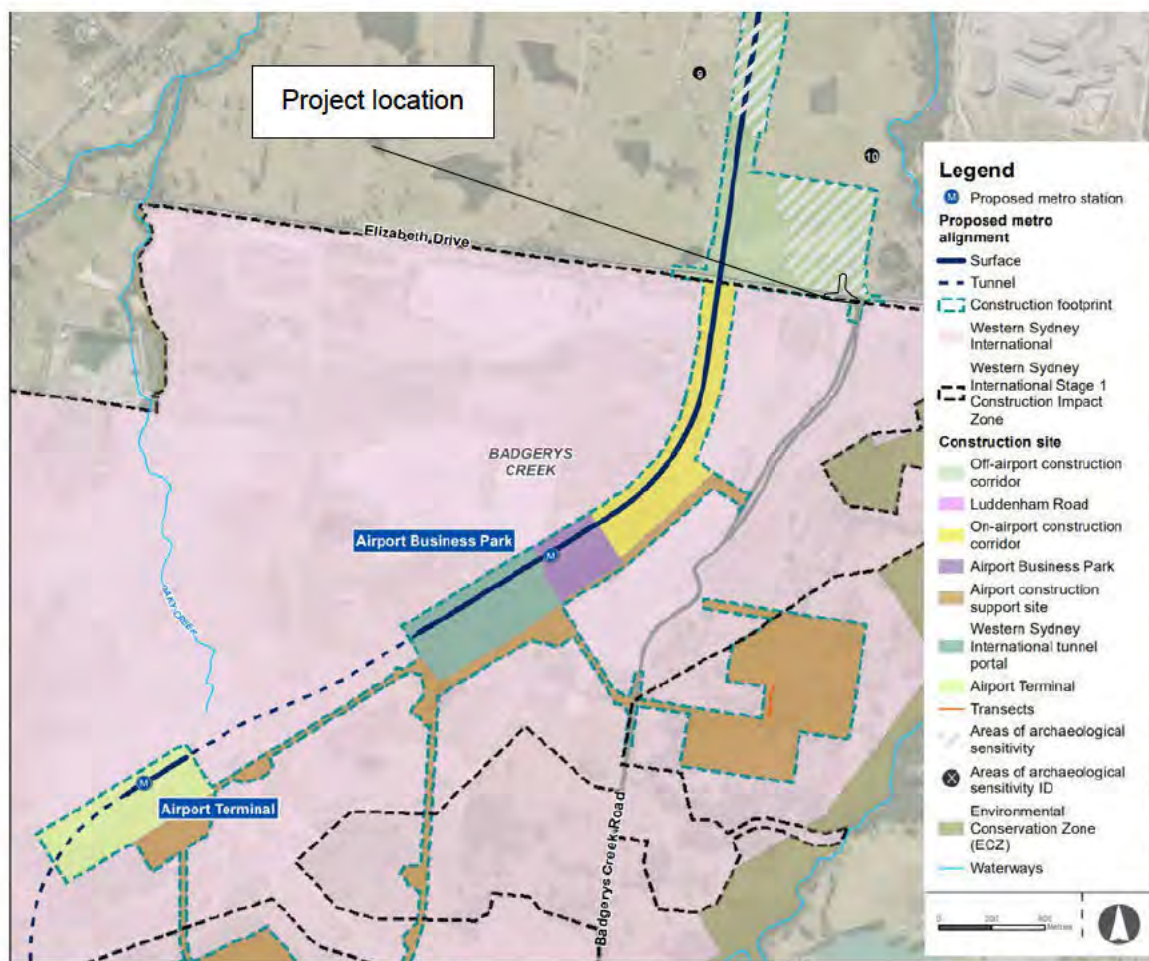


Figure 6 Extract for Figure 5-5c from Technical Report 5

Additionally, to the SM-WSA EIS, the area is also located with an area of the M12 Project and was assessed by the M12 Motorway Environmental Impact Statement (EIS) (dated October 2019). This EIS and submissions report identified one Aboriginal archaeological site in the vicinity of the current proposed works: BWB, part of the Badgerys Creek Upstream site complex. Conditions of approval for the project included the requirement for Aboriginal archaeological salvage within the site to mitigate impact. Kelleher Nightingale Consulting was engaged to undertake the Aboriginal archaeological salvage fieldwork with the project area. A letter from Kelleher Nightingale Consulting is included as APPENDIX L which confirms that no further Aboriginal archaeological mitigation is required within the proposed work area.

15.3 EXSITING NON-ABORIGINAL HERITAGE AND IMPACTS

The project is partly located within the McGarvie Smith Farm (1857) area as part of the Penrith LEP 2010. The works will include construct the stub road from the road-about for approximately 40m into the curtilage area.

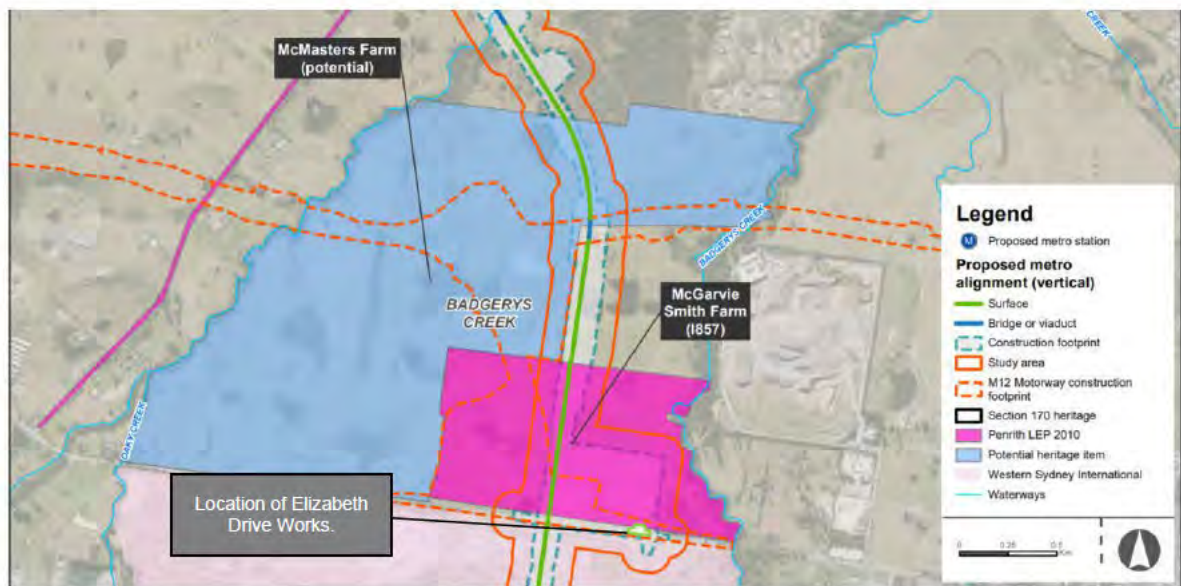


Figure 7 Heritage Areas

The buildings and items of signification located within the McGarvie-Smith Farm is listed on the Penrith LEP 2010 are located greater than 700m from the work area. Direct impacts to these items are not going to occur nor is vibration impacts considered a risk to these items. The project will begin to impact on the landscape values as identified in the EIS, resulting in adverse impacts to the significance of the item, due to the impacting of the rural character, and the introduction of an intrusive element into the curtilage. No known potential moveable heritage items will be impacted by the proposed works.

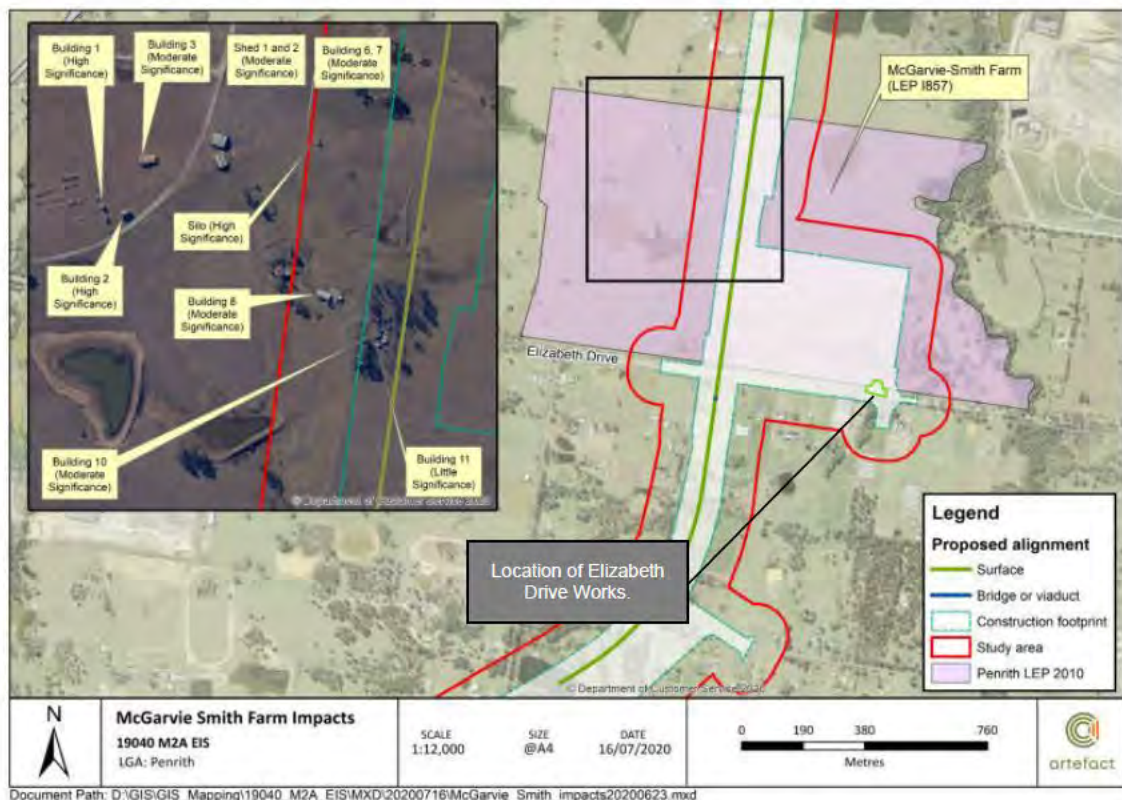


Figure 8 Location of McGarvie Smith Farm in relation to the project construction footprint (Figure 27 of EIS Tech Paper 4)

15.4 HERITAGE MITIGATION MEASURES

The Project will be undertaken with the following commitments in Table 44.

Table 44 Heritage Mitigation Measures

Reference	Mitigation Measures	COA / REMM Reference	Responsibility
HHM1	The SM-WSA Unexpected Finds Procedure will be implemented for the duration of the Project (refer to APPENDIX K). Note where an unexpected find triggers additional COA, this management plan will be reviewed and updated in accordance with Section 10. M12 Elizabeth Drive Roundabout Works Aboriginal Cultural Heritage Clearance already undertaken by Kelleher Nightingale attached is APPENDIX L	E19, E33, E32, E33, E34, E35, E36, AH2, NAH9	Project Manager Supervisor ESAM
HHM2	Sydney Metro ACHMP will be implemented for the duration of the Project. The ACHMP is provided in APPENDIX M.	E28, E29, E30,	ESAM
HHM3	Boundary Fencing to be established prior to clearing.	E28, AH11	Supervisor ESAM
HHM4	The Registered Aboriginal Parties (RAP) must be kept regularly informed about the CSSI. The RAP must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the CSSI throughout construction. TfNSW / SM-WSA will keep RAP regularly informed as required.	E29, AH1	TfNSW Environmental Officer
HHM5	Heritage measures from this plan will be included within the Project induction and within relevant Environmental Control Maps (ECM). Work crews are to be made aware of the ECM and heritage requirements.	Best Practice	Supervisor ESAM

15.4.1 Archival Recording

Archival recording has been undertaken by the TfNSW M12 Project which cover the entire area of the proposed scope of works of this CEMP.

The Archival Recording was undertaken by Artefact Heritage Services for the McGarvie Smith Farm specific including all the operational and construction areas of the M12 Project. The project area is shown in Figure 9 extracted from the M12 Motorway Photographic Archival Report.

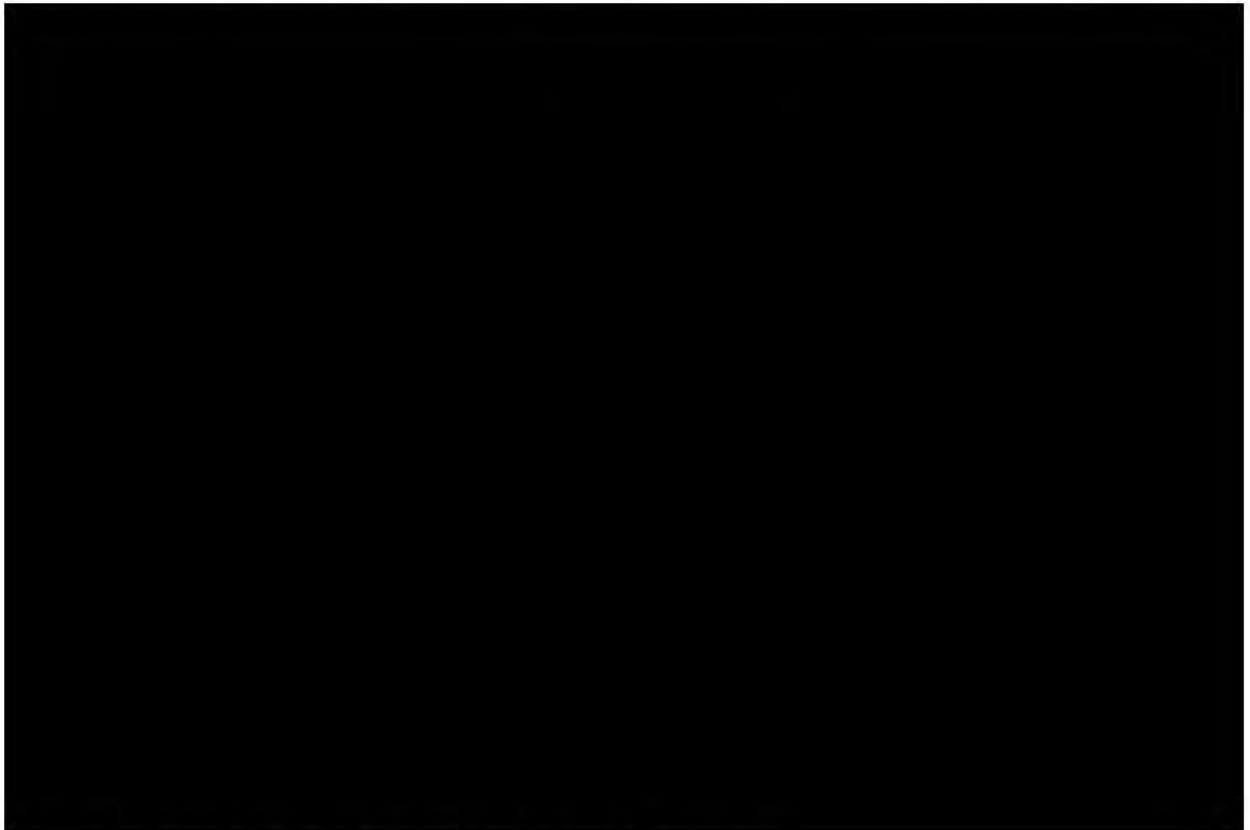


Figure 9 Extract from M12 Photographic Archival Recording

16 FLORA AND FAUNA

16.1 FLORA AND FAUNA REQUIREMENTS

Relevant flora and fauna requirement as outlined in the COA, REMM and CEMF are presented in Table 45 to Table 47.

Table 45 Relevant Flora and Fauna COA Commitments

COA Reference	COA	How Addressed	Responsibility
E2	The clearing of native vegetation must be minimised to the greatest extent practicable with the objective of reducing impacts to threatened ecological communities and threatened species habitat.	Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	Project Manager Supervisor ESAM
E3	Impacts to plant community types must not exceed those identified in the documents listed in Condition A1 of this Exhibit, unless otherwise approved by the Planning Secretary. In requesting the Planning Secretary's approval, an assessment of the additional impact(s) to plant community types and an updated ecosystem and / or species credit requirement under Condition E4 below, if required, must be provided.	SM-WSA to obtain and retire credits. Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	Project Manager Supervisor ESAM
E4	Prior to impacts on the biodiversity values set out in Table 3 and Table 4, the number and classes of ecosystem credits and species credits (I ke-for-like) must be retired. Ecosystem Credits Plant Community Type (PCT) ID and name 724: Broad-leaved Ironbark- Grey Box - Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland Plain, Sydney Basin Bioregion -246 835: Forest Red Gum- Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion- 217 849: Grey Box- Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion -204 1800: Swamp Oak open forest on riverflats of Cumberland Plain and Hunter Valley -181 (Total 848) Acacia bynoeana (Bynoe's Wattle)- 31 Acacia pubescens (Downy Wattle) -54 Allocasuarina glauca -47 Cynanchum elegans (White-flowered Wax Plant) -18 Dillwynia tenuifolia -72 Grevillea juniperina subsp. juniperina (Juniper-leaved Grevillea) -153 Grevillea parviflora subsp. parviflora (Small-flower Grevillea) -32 Marsdenia viridiflora subsp. viridiflora (Endangered population -137 Marsdenia viridiflora R. Br. subsp viridiflora Micromyrtus minutiflora -47 Pimlea curvilora var. curvilora -18 Pimlea spicata (Sp ked Rice-flower) -22 Pultenaea	SM-WSA to obtain and retire credits. Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	SM-WSA Manager Planning Project Manager Supervisor ESAM

COA Reference	COA	How Addressed	Responsibility
	parviflora -31 Meridolum comeovirens Cumberland Plain Land Snail -159 Myotis Macropus (Southern Myotis) -292 Total - 1,113 Table 4: Species credits required Note: Credits have been calculated using the Biodiversity Assessment Method.		
E5	The requirement to retire like-for-like ecosystem credits and species credits in Condition E4 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the number and classes of ecosystem credits and species credits.	SM-WSA to obtain and retire credits. Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	SM-WSA Manager Planning Project Manager Supervisor ESAM
E6	Where evidence of compliance with the Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules has been provided to the Planning Secretary, variation rules may be applied to retire the relevant ecosystem credits and species credits as set out in the BAM Biodiversity Credit Report (Variation)	SM-WSA to obtain and retire credits. Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	SM-WSA Manager Planning Project Manager Supervisor ESAM
E7	Evidence of the retirement of credits in satisfaction of Condition E4 or payment to the Biodiversity Conservation Fund in satisfaction of Condition E5 must be provided to the Planning Secretary prior to commencement of works.	SM-WSA to obtain and retire credits. Completion of the SM-WSA Pre-clearing inspection prior to clearing (APPENDIX O). Construction boundary to be flagged and marked prior to clearing. Boundary to mark areas outside project boundary as no-go zones.	SM-WSA Environment Manager Project Manager Supervisor ESAM
E12	Prior to vegetation clearing, the Proponent must identify where it is practicable for the CSSI to reuse native trees and vegetation that are to be removed. If it is not possible for the CSSI to reuse removed native trees and vegetation, the Proponent must consult with the relevant council(s), NSW National Parks & Wildlife Service, Western Sydney Parklands Trust, Greater Sydney Local Land Services, Landcare groups, DPI Fisheries and any additional relevant government agencies to determine if: (a) hollows, tree trunks (greater than 25-30 centimetres in diameter and 2-3 metres in length), mulch, bush rock and root balls salvaged from native vegetation impacted by the CSSI; and (b) collected plant material, seeds and/or propagated plants from native vegetation impacted by the CSSI, could be used by others in habitat enhancement and rehabilitation work, before pursuing other disposal options.	Re-use of the trees will be considered onsite and if not consultation with authorities will occur.	Project Manager Supervisor ESAM

COA Reference	COA	How Addressed	Responsibility
E13	Revegetation and the provision of replacement trees must be informed by a Tree Survey undertaken during detailed design. The Tree Survey must identify the number, type and location of any trees to be removed, except for trees that are offset under Condition E4. The Tree Survey must be submitted to the Planning Secretary for information with the Place, Urban Design and Corridor Landscape Plan required under Condition E79. Where trees are to be removed, the Proponent must provide a net increase in the number of replacement trees at a ratio of 2:1, except trees that are offset under Condition E4. Replacement trees must have a minimum pot size consistent with the relevant authority's plans / programs / strategies for vegetation management, street planting, or open space landscaping, or as agreed by the relevant authority(ies). Note: For the purposes of this condition, the relevant authority is that State or local government authority that owns or manages the land on which the replacement trees will be planted.	Tree Survey to be undertaken with pre-clearing inspection. Pre-clearing checklist will be prepared and provide to SM-WSA for approval.	ESAM

Table 46 Relevant flora and fauna REMM as identified in the Staging Report

REMM Reference	REMM Requirement	How Implemented	Responsibility
FF10	The impact of Key Threatening Processes as a result of the project would be managed and minimised where possible through: <ul style="list-style-type: none"> • implementation of weed management measures to prevent the introduction and spread of weeds including exotic vines and scramblers, <i>Olea europaea</i> (African Olive), <i>Chrysanthemoides monilifera</i>, <i>Lantana camara</i>, and exotic perennial grasses • implementation of pathogen management measures to prevent the introduction and spread of pathogens including amphibian chytrid, <i>Phytophthora</i> spp., and Exotic Rust Fungi of the order Pucciniales • implementation of management measures to protect the riparian zone to ensure fish passage and protect fish habitat in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management (DPI (Fisheries NSW,) 2013), and minimisation of vegetation removal within the riparian zone where possible 	Weed management measures included in mitigation measures.	Project Manager Supervisor ESAM
LV1	Opportunities for the retention and protection of existing street trees and trees within the construction sites would be identified during detailed construction planning	See mitigation measure FF-1	Project Manager
LV2	Existing trees to be retained would be protected prior to the commencement of construction in the vicinity of these trees in accordance with AS4970-2009 Protection of Trees on Development Sites	Refer ECM	Supervisor

Table 47 CEMF Flora and Fauna Management Requirements

CEMF Reference	CEMF Requirement	How Implemented	Responsibility
10.1	<p>The following flora and fauna management objectives will apply to construction:</p> <ul style="list-style-type: none"> i. Minimise impacts on flora and fauna; ii. Design waterway modifications and crossings to incorporate best practice principles; iii. Retain and enhance existing flora and fauna habitat wherever possible; iv. Appropriately manage the spread of weeds and plant pathogens; and v. For on-airport works, the Sydney Metro Western Sydney Airport Biodiversity CEMP will detail all fauna and flora management objectives and will be consistent with the WSA Biodiversity CEMP, including all appendices to the Biodiversity CEMP 	<ul style="list-style-type: none"> i. Abergeldie contact is construct only. Design impacts to flora and fauna to be implemented by TfNSW / SM-WSA. Construction impacts to be minimised by limiting work zones. ii. N/A to scope iii. Retain vegetation that does not need to be removed by installing no-go zone flagging. iv. Mitigation measure included, v. N/A works off airport 	Supervisor ESAM
10.1 b.	<p>Principal Contractors would undertake the following ecological monitoring as a minimum:</p> <ul style="list-style-type: none"> i. A pre-clearing inspection will be undertaken prior to any native vegetation clearing by a suitable qualified ecologist and the Contractor's ESAM (or delegate). The pre-clearing inspection will include, as a minimum: <ul style="list-style-type: none"> • Identification of hollow bearing trees or other habitat features; Identification of any threatened flora and fauna; • A check on the physical demarcation of the limit of clearing; • An approved erosion and sediment control plan for the worksite; and • The completion of any other pre-clearing requirements required by any project approvals, permits or licences. ii. The completion of the pre-clearing inspection will form a HOLD POINT requiring sign-off from the Contractor's ESAM (or delegate) and a qualified ecologist; and iii. A post clearance report, including any relevant Geographical Information System files, will be produced that validates the type and area of vegetation cleared including confirmation of the number of hollows impacted and the corresponding nest box requirements to offset these impacts 	<p>Completion of the SM-WSA Pre-clearing Approval Form</p> <p>Pre-clearing inspection report to be undertaken prior clearing (APPENDIX O)</p> <p>Inspection report to be approved by a qualified ecologist and the ESAM.</p> <p>ESCP to be approved prior to clearing.</p>	ESAM

Table 48 EPBC Approval conditions and the Biodiversity Management Plan

EPBC Condition	Description	Responsibility	Addressed
EPBC 1	1. The approval holder must not clear outside the study area.	Abergeldie	Clearing limited to the construction area which is located within the study area
EPBC 2	2. To minimise the impacts of the action on protected matters, the approval holder must not clear more than the following specified amounts within the study area: a. 5.87 hectares of Cumberland Plain Woodlands and Shale-Gravel Transition Forest threatened ecological community (TEC).	Abergeldie	<p>Clearing limited to the construction area which is located within the study area</p> <p>Total areas cleared to be managed by Metro</p>

	b. 4.94 hectares of Coastal Swamp Oak (<i>Casuarina glauca</i>) Forest of New South Wales and South East Queensland TEC. c. 24.79 hectares of Grey-headed Flying-fox habitat. d. 7.3 hectares of native vegetation on the Defence Establishment Orchard Hills site (which may include threatened ecological communities in conditions 2a and 2b). e. 335 individuals of <i>Grevillea juniperina</i> subsp. <i>juniperina</i> on the Defence Establishment Orchard Hills site (Lot 1 DP 629326 and Lot 2 DP 242968). f. The number of individuals identified by pre-clearance surveys, undertaken in accordance with conditions 3 - 5.		
EPBC 3	3. To inform the preparation of the Biodiversity Management Plan required under conditions 8 and the Biodiversity Offset Strategy required under conditions 18, the approval holder must undertake pre-clearance surveys in areas not yet surveyed for the following species: a. Bynoe's Wattle. b. Downy Wattle. c. <i>Allocasuarina glauca</i> . d. White-flowered Wax Plant. e. Small-flower <i>Grevillea</i> . f. <i>Micromyrtus minutiflora</i> . g. <i>Pimelea curviflora</i> var. <i>curviflora</i> . h. Spiked Rice-flower. i. <i>Pultenaea parviflora</i> .	SM-WSA	Pre-clearance surveys undertaken by SM- WSA as part of preparation of Biodiversity Management Plan
EPBC 4	4. Pre-clearance surveys in areas not yet surveyed must be undertaken in accordance with the NSW Biodiversity Assessment Method, or another methodology agreed to by the Department in writing.	Sydney Metro	Pre-clearance surveys undertaken by SM- WSA as part of preparation of Biodiversity Management Plan
EPBC 5	5. The results of the pre-clearance surveys in areas not yet surveyed must be submitted to the Department in writing prior to, or with, the submission of: a. The Biodiversity Management Plan required under condition 8; and b. The Biodiversity Offset Strategy required under condition 18.	Sydney Metro	Pre-clearance surveys undertaken by SM- WSA as part of preparation of Biodiversity Management Plan
EPBC 9	9. The Biodiversity Management Plan must be consistent with the Department's Environmental Management Plan Guidelines (2014), and must include: a. Environmental objectives, relevant protected matters, and a reference to EPBC Act approval conditions to which the Biodiversity Management Plan refers; b. A table of commitments made in the Biodiversity Management Plan to achieve the objectives, and a reference to where the commitments are detailed in the Biodiversity Management Plan; c. Reporting and review mechanisms, and documentation standards, to demonstrate compliance with the Biodiversity Management Plan; d. An assessment of risks to achieving Biodiversity Management Plan environmental objectives and risk management strategies that will be applied; e. Impact avoidance, mitigation and repair measures, and their timing; f. A monitoring program, which must include: i. measurable performance indicators; ii. trigger values for corrective actions; iii. the timing and frequency of monitoring to detect trigger values and changes in the performance indicators; and iv. proposed corrective actions, if trigger values are	Sydney Metro	SM-WSA Off-airport Biodiversity Management Plan approved

	reached. g. Provide any links to other plans or conditions of approval for the action.		
EPBC 10	10. The approval holder must not commence the action unless the Minister has approved the Biodiversity Management Plan in writing.	Sydney Metro	SM-WSA Off-airport Biodiversity Management Plan approved
EPBC 11	11. If the Minister approves the Biodiversity Management Plan then the Biodiversity Management Plan must be implemented.	Contractor	Approved SM-WSA Off-airport Biodiversity Management Plan to be implemented
EPBC 12	12. The approval holder must submit to the Minister, for approval, a Staging Plan in relation to the construction of the action, prior to commencement of the action.	Sydney Metro	N/A
EPBC 13	13. The approval holder must implement the Staging Plan approved by the Minister.	Contractor	N/A
EPBC 19	19. The Biodiversity Offset Strategy must: a. Be prepared by a suitably qualified ecologist; b. Be prepared in accordance with the NSW Biodiversity Assessment Method; c. Be based on and consistent with the Biodiversity Development Assessment Report at Appendix A of the EIA; d. Be consistent with the principles of the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012); and e. Provide for the number of individuals identified in accordance with condition 3; and f. Set out: i. The process used for quantifying the impacts to protected matters based on the final design of the action, with quantification of the final number and class of biodiversity credits required to offset the residual impacts of action on protected matters; ii. Details of how the credit requirement to offset the impacts from each stage of construction (defined in the Staging Plan) will be determined and reported; and iii. How offset requirements will be satisfied, including the timeframes by which offsets must be secured in relation to each stage of construction as defined within the Staging Plan.	Sydney Metro	Biodiversity Offset Strategy completed and being implemented
EPBC 20	20. The approval holder must not commence the action unless the Minister has approved the Biodiversity Offset Strategy in writing.	Sydney Metro	SM-WSA confirmed the Biodiversity Offset Strategy is approved
EPBC21	21. If the Minister approves the Biodiversity Offset Strategy then the Biodiversity Offset Strategy must be implemented.	Contractor	CEMP State implementation of the Biodiversity Offset Strategy
EPBC22	22. The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action.	Sydney Metro	N/A
EPBC23	23. The approval holder must notify the Department in writing of the date of commencement of each stage of the action, as specified in the Staging Plan required under condition 12, within 10 business days after the date of commencement of the relevant stage of the action.	Sydney Metro	N/A
EPBC 24	24. The approval holder must maintain accurate and complete compliance records.	Contractor and Sydney Metro	This CEMP Section 9.7

EPBC 25	<p>25. If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request.</p> <p>Note: Compliance records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the Department's website or through the general media.</p>	Contractor	This CEMP Section 9.7
EPBC 26	<p>26. The approval holder must:</p> <ul style="list-style-type: none"> a. submit plans electronically to the Department b. publish each plan on the website within 3 month of the date the plan is approved by the Minister or the date a revised action management plan is submitted to the Minister or the Department, unless otherwise agreed in writing by the Minister c. exclude or redact sensitive ecological data from plans published on the website or provided to a member of the public d. keep plans published on the website until 24 months after the completion of the action, or as otherwise agreed by the department in writing. 	Sydney Metro	Noted
EPBC 27	<p>27. The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps, and other spatial and metadata required under the Biodiversity Management Plan, is prepared in accordance with the Department's Guidelines for biological survey and mapped data (2018) and submitted electronically to the Department in accordance with the requirements of the plan.</p>	Contractor and Sydney Metro	Noted
EPBC29	<p>29. The approval holder must notify the Department in writing of any: incident; non-compliance with the conditions; or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than 2 business days after becoming aware of the incident or non-compliance. The notification must specify:</p> <ul style="list-style-type: none"> a. any condition which is or may be in breach b. a short description of the incident and/or non-compliance c. the location (including co-ordinates), date, and time of the incident and/or non-compliance. In the event the exact information cannot be provided, provide the best information available. 	Contractor and Sydney Metro	Appendix N & Contract requirements for incidents
EPBC30	<p>30. The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:</p> <ul style="list-style-type: none"> a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future b. the potential impacts of the incident or non-compliance c. the method and timing of any remedial action that will be undertaken by the approval holder. 	Contractor and Sydney Metro	Appendix N & Contract requirements for incidents
EPBC31	<p>31. The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.</p>	Contractor and Sydney Metro	Independent audits are arranged by the Principal (TfNSW/SM-WSA) if requested)

16.2 EXISTING ENVIRONMENT AND POTENTIAL IMPACTS

The EIS identifies two small patches of vegetation regrowth associated with the Plant Community Type (PCT) 835 which is Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion (listed under the BC Act). The updated BDAR in the Sydney Metro Submissions Report shows that only sparse regrowth PCT835 now remains within the works area at the south-eastern edge of the former McGarvie-Smith Farm shown in Figure 10.

The vegetation to be removed is not listed under the EPBC Act. The EPBC approval applies to the site location however, and the EPBC Biodiversity Management Plan must be implemented and complied with.



Figure 10 Mapped PCT 835 Forest Red Gum - Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion

The areas to the south and along Elizabeth Drive road corridor were removed by the Western Sydney Airport Badgerys Creek Road realignment which included construction of the roundabout. A Biodiversity Development Assessment Report has been completed as part of the EIS, no further impacts to mapped Plant Community Types. Vegetation to be impacted include a small regrowth trees and shrubs, and one large tree to the northern extent of the work site. Approximate extent of disturbance is shown in the image below.



Figure 11 Approximate extent of disturbance

There is also the potential for grey-headed flying fox habitat under the EPBC approval.

16.3 FLORA AND FAUNA MITIGATION MEASURES

Table 49 shows the relevant flora and fauna mitigation measures to be implemented during the Project.

Table 49 Flora and Fauna Mitigation Measures

No.	Mitigation Measures	COA / REMM Reference	Responsibility
FF-1	All vegetation removal would be limited to the minimum extent necessary to construct the road. Completion and approval of the SM-WSA Pre-clearing inspection approval form prior to clearing.	E2, LV1	Project Manager Supervisor Environmental Sustainability and Approvals Manager
FF-2	Prior to clearing and inspection report undertaken by ecologist must be completed. This report forms a hold point and must be approved by the ESAM prior to clearing. Inspection must include a tree survey, including type, height, diameter, health. Inspection will include survey for potential foraging habitat for the Grey-headed Flying-fox.	E13	Project Manager Supervisor Environmental Sustainability and Approvals Manager
FF-3	Prior to the commencement of any works, a physical clearing boundary is to be demarcated and implemented. The demarcation of the exclusion zone will be in accordance with Biodiversity Guidelines – Protecting and Managing Biodiversity on RTA Projects: Guide 2: exclusion zones (RTA 2011).	E2	Project Manager Supervisor Environmental Sustainability and Approvals Manager
FF-4	If any fauna is observed on site. Works are to cease until the animal has left the area. Workers are not to approach the animal. Should relocation of an animal be required, an appropriate location will be identified by a suitably experienced ecologist. Contact the ESR for further advice. Contact Wires: 1300 094 737 Records of fauna captured and relocated are to be kept. Records will be saved on the Project server and provided to TfNSW on request.	FF1	Project Manager Supervisor Environmental Sustainability and Approvals Manager
FF-5	If an unexpected threatened species, habitat or population is encountered implement the following unexpected finds process.	FF1	Project Manager Supervisor Environmental Sustainability and Approvals Manager
FF-6	Control the movement of vehicles, machinery and workers so as to minimise the potential for spread of weeds within and outside the proposal area.	FF1, FF10	Project Manager Supervisor

No.	Mitigation Measures	COA / REMM Reference	Responsibility
			Environmental Sustainability and Approvals Manager
FF-7	Reduce the potential for off-site impacts arising from sedimentation, dust, and noise through the implementation of a Construction Environment Management Plan (CEMP). The CEMP should seek to retain any native vegetation present within and around the proposal area wherever possible. The CEMP should include erosion and sediment controls in accordance with <i>Managing urban stormwater: soils and construction</i> (the Blue Book).	FF1	Site Supervisor / Environment, Sustainability and Approvals Manager
FF-8	Handling of injured fauna must be carried out by licensed fauna handler such as fauna ecologist or wildlife carer. If native fauna are captured during vegetation clearing, they must be released into a suitable nearby location that has been identified as such by an ecologist. Keep records of fauna captured and relocated.	FF1	Site Supervisor / Environment, Sustainability and Approvals Manager
FF-9	Re-use of tree material will be considered onsite and in not required, consultation with authorities will occur	E12	Site Supervisor / Environment, Sustainability and Approvals Manager
FF-10	Existing trees to be retained would be protected prior to the commencement of construction in the vicinity of these trees in accordance with AS4970-2009 Protection of Trees on Development Sites.	LV2	Site Supervisor / Environment, Sustainability and Approvals Manager

17 VISUAL AMENITY

17.1 VISUAL AMENITY REQUIREMENTS

The Project will be implemented in accordance with the relevant CSSI 10051, COA, REMM and CEMF. Table 50 shows relevant visual amenity controls.

Table 50 summarises the mitigation measures / controls required to satisfy the requirements of the CEMF, COA and REMM.

Table 50 Relevant Visual Amenity Controls

Reference	Mitigation Measures	How Implemented
COA E62	The CSSI must be constructed in a manner that minimises visual impacts of construction sites including temporary landscaping and vegetative screening, minimising light spill, and incorporating architectural treatment and finishes within key elements of temporary structures that reflect the context within which the construction sites are located, wherever practicable.	Temporary screening to be implemented around work areas During out of hours works, lights to be directed to minimise light spill Design to be undertaken to incorporate visual amenity aspects. Note that Abergeldie's scope of work is construct only. Design managed by TfNSW
CEMF 11.1 a	The following visual and landscape management objectives will apply to the construction of the project: i. Minimise impacts on existing landscape features as far as feasible and reasonable; ii. Ensure the successful implementation of the Landscape Design; iii. Reduce visual impact of construction to surrounding community; and iv. For on-airport works, the Sydney Metro Western Sydney Airport Visual and Landscape CEMP will detail all the visual amenity and landscaping management objectives and will be consistent with the WSA Visual and Landscape CEMP, including all the appendices to the CEMP.	Works to be undertaken in accordance with the design provided. The design will be developed to minimise impacts on existing features. Note that design is managed by TfNSW Works to be undertaken in accordance with the design provided Works to be undertaken in accordance with COA A24

Reference	Mitigation Measures	How Implemented
CEMF 11.2 a	<p>An-airport management of visual and landscaping will be achieved through the implementation of the SMWSA Visual and Landscape CEMP and Principal Contractors will develop and implement a Visual Amenity Management Plan for all the off-airport temporary works which will include as a minimum:</p> <ul style="list-style-type: none"> i. The visual mitigation measures as detailed in the planning approval documentation for construction; ii. Input from an experienced Landscape or Urban Designer; iii. The maintenance of outward facing elements of site hoarding or noise barriers, including the removal of graffiti and weeds; iv. Apply the principles of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant safety design requirements and detail mitigation measures to minimise lighting impacts on sensitive receivers for all permanent, temporary and mobile light sources; v. Identify the processes and procedures that will be used for the incorporation of the principles of Crime Prevention Through Environmental Design (CPTED) in the design and construction of any temporary site facilities; and vi. Compliance record generation and management. 	<p>Management plan is not required in accordance with the Staging Report. Visual amenity controls are included within this CEMP (this table).</p> <p>The road will be design with input from an experienced landscape or urban designer. It is noted that design of the road is managed by TfNSW</p> <p>Graffiti will be cleaned from surfaces and weeds removed from outward facing facades.</p> <p>The lighting design will consider the principals of AS 4282-1997. It is noted that design of the is managed by TfNSW</p> <p>The principles of CPTED will be incorporated into the design. It is noted that design of the is managed by TfNSW</p> <p>Compliance records related to visual amenity impacts will be retained on file in accordance with Section 9.7</p>
CEMF 11.2 b	<p>Visual and landscape measures will be incorporated into the Principal Contractor's regular inspections including checking the health of retained vegetation around site boundaries, checking the condition of any site hoarding and acoustic sheds, and checking the position and direction of any sight lighting.</p>	<p>To be incorporated into regular inspections</p> <p>Template inspection checklist included in APPENDIX I</p>
CEMF 11.2 c	<p>The Contractor will retain compliance records of any inspections undertaken in relation to visual and landscape measures.</p>	<p>Records of inspections are to be kept</p>

17.2 EXISTING ENVIRONMENT AND IMPACTS

The landscape character of the project area comprises a mixed rural residential setting with a diverse mix of land uses. The works are not adjacent to sensitives land uses and minimal impacts are adjacent to development along Elizabeth Drive for WSA and M12 Motorway.

Based on the risk assessment below management measures are included within the following sections.

17.3 VISUAL AMENITY MITIGATION MEASURES

The Project will be implemented in accordance with the relevant CSSI 10051, COA, REMM and CEMF. Table 51 shows relevant visual amenity the mitigation measures / controls required to satisfy the requirements of the CEMF, COA and REMM.

Table 51 Relevant Visual Amenity Controls

Reference	How Implemented		Responsibility
VA-1	Boundary screening will be provided by Shade cloth which is to be erected on site boundaries to screen sensitive receivers	E62	Supervisor
VA-2	During out of hours works, lights to be directed to minimise light spill to sensitive receivers	CEMF 11.1 a, 11.2	Supervisor
VA-3	Graffiti will be cleaned from surfaces and weeds removed from outward facing facades	CEMF 11.1 a, 11.2	Supervisor

17.4 MONITORING

Inspection of visual amenity controls will be undertaken by site inspection. The inspection will be recorded in the site inspection checklist see APPENDIX I.

Compliance records related to visual amenity impacts will be retained on file in accordance with Section 9.7.

18 SOIL AND WATER MANAGEMENT

18.1 SOIL AND WATER REQUIREMENTS

Relevant soil and water management measures as outlined in the COA, REMM and CEMF are presented in Table 52 to Table 54.

Table 52 Relevant Soil and Water COA

COA Reference	COA	How Addressed
E92	Before commencement of any construction that would result in the disturbance of moderate to high risk contaminated sites as identified in the documents identified in Condition A1, Detailed Site Investigations (for contamination) must be conducted to determine the full nature and extent of the contamination. The Detailed Site Investigation Report(s) and the subsequent report(s), must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Detailed Site Investigations must be undertaken in accordance with guidelines made or approved under section 105 of <i>Contaminated Land Management Act 1997 (NSW)</i> .	Due to the scope and scale of the works, DSI's are not proposed. The scope of works only occurs in a limited area of the AEC44 and not in the areas near the dams with the historic presence of import fill which drive the medium. Insitu sampling and waste classification will occur prior to ground disturbance within any AEC to determine presence and extent any potential of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.
E93	Should remediation be required to make land suitable for the final intended land use, a Remedial Action Plan must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Remedial Action Plan must be prepared in accordance with relevant guidelines made or approved by the EPA under section 105 of the Contaminated Land Management Act 1997 (NSW) and must include measures to remediate the contamination at the site to ensure the site will be suitable for the proposed use when the Remedial Action Plan is implemented. Note: Nothing in this condition prevents the Proponent from preparing individual Remedial Action Plans for separate sites.	Contaminated Land Consultant to review RAP if required from unexpected finds.
E98	An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during construction.	An unexpected finds protocol is included within APPENDIX G
E99	The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.	An unexpected finds protocol is included within APPENDIX G
E128	Before undertaking any work and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with Managing Urban Stormwater: Soils and Construction Vol 1 4th ed. by Landcom, 2004 (The Blue Book)	PESCPs are included with area specific Environmental Control Maps (Section 18.6)
E130	If construction stage stormwater discharges are proposed, a Water Pollution Impact Assessment will be required. Any such assessment must be prepared in consultation with the EPA and be consistent with the National Water Quality Guidelines, with a level of detail commensurate with the potential water pollution risk	No stormwater discharges are proposed. Run-off water leaving the site would be managed in accordance with the PESCP.

COA Reference	COA	How Addressed
	Note: If an EPL is required the Water Pollution Impact Assessment will be required to inform licensing consistent with section 45 of the POEO Act.	

Table 53 Relevant Soil and Water REMM

REMM Reference	REMM	How Addressed
SC1	The Soil and Water Management Plan would incorporate the following measures: 1) for low risk areas of environmental concern, worker health and safety measures, waste management and tracking for contamination would be outlined. 2) for medium and high risk areas of environmental concern, detailed site investigations and review of further available information would be undertaken prior to the start of construction	Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.
SC2	Based on outcomes of SC1: 1) if a medium or high risk area of environmental concern is reassessed as low risk, the site would be managed in accordance with the Soil and Water Management Plan. This would typically occur where there is minor, isolated contamination that can be readily remediated through standard construction practices such as excavation and off site disposal 2) for areas of environmental concern that remain or change to medium risk, visual inspections and monitoring would be performed during earthworks. If suspected contamination is encountered, the materials would be subject to sampling and analysis to assess management requirements in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines 3) for areas of environmental concern that remain or change to high risk, a Sampling, Analysis and Quality Plan would be prepared for Detailed Site Investigations or data gap investigations. The results from the site investigations would be assessed against criteria contained within the National Environment Protection (Assessment of Site Contamination) Measure (2013) and other applicable NSW statutory guidelines to assess whether remediation is required. Remediation works would be performed in accordance with the hierarchy of preferred strategies in the Guidelines for the NSW Site Auditor Scheme (NSW Environment Protection Authority, 2017) and other guidelines made or endorsed by the NSW Environment Protection Authority. Where practical, remediation works would be integrated with excavation and development works performed during construction	Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.
SC3	Where information gathered from investigations for medium and high risk areas of environmental concern (as per mitigation measure SC1) is insufficient to determine the risk of contamination, a detailed site investigation would be carried out in accordance with the National Environment Protection Measure (2013) and other guidelines made or endorsed by the NSW Environment Protection Authority Where data from the additional data review (mitigation measure SC1) or the detailed site investigation (mitigation measure SC2) confirms that contamination would require remediation, a Remediation Action Plan would be developed for the area of the construction footprint. If a Remediation Action Plan is required, it would be developed in accordance with NSW Environment Protection Authority statutory guidelines and a Site Auditor would be engaged. Remediation methodologies would be undertaken in accordance with Australian	Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.

REMM Reference	REMM	How Addressed
	Standards and other relevant government guidelines and codes of practice Remediation would be performed as an integrated component of construction and to a standard commensurate with the proposed end use of the land	
SC4	If a duty to report to the NSW Environment Protection Authority under Section 60 of the <i>Contaminated Lands Management Act 1997</i> is triggered, or where a medium to high risk of contamination is identified, an accredited Site Auditor would review and approve the Remediation Action Plan (including issue of interim audit advice), and would develop a Site Audit Statement and Site Audit Report upon completion of remediation	Not triggered to date for this Scope of Works Based on previous assessments and the outcomes of the Risk assessment contaminated soils are not expected. Soils found to be potentially contaminated will be managed initially in accordance with the Unexpected Finds Protocol
SC5	An unexpected finds procedure would be developed and implemented as part of the project Soil and Water Management Plan, outlining a set of potential contamination issues which could be encountered, and detailing the management actions to be implemented. The unexpected finds procedure would include a process for chemical and asbestos contamination and would generally include: <ul style="list-style-type: none"> • cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands consultant • collection of soil samples for chemical or asbestos analysis, where required, based on observations • assessment of results against applicable land use or waste classification criteria in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority • management of the contamination in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines • the unexpected finds procedure for on-airport construction would be consistent with the Western Sydney Airport unexpected finds procedure detailed in the Western Sydney Airport Soil and Water Construction Environmental Management Plan 	An unexpected finds protocol is included within APPENDIX G
SC6	Post construction, an inspection of construction, stockpiling and laydown sites and soil validation of redundant sedimentation/water quality basins would be undertaken to assess if further investigation and remediation is required. Investigation and remediation (if required) would be undertaken in accordance with the Soil and Water Management Plan (off-airport) and a project specific Remediation Action Plan that would be prepared in a manner consistent with the Western Sydney Airport Remediation Action Plan (on-airport). All inspections, investigations and remediation would be undertaken by a qualified contaminated lands consultant with reports prepared or reviewed by a Certified Contaminated Land Consultant	If contamination is encountered, implement the unexpected finds protocol is included within APPENDIX G
HYD1	Construction planning would consider flood related mitigation, including: <ul style="list-style-type: none"> staging construction works to reduce the duration of works within the floodplain daily and continuous monitoring of weather forecasts and storm events, rainfall levels and water levels in key watercourses to identify potential flooding events and related flood emergency response consultation with NSW State Emergency Services and relevant local councils to ensure consistent approaches to the management of flood events (off-airport only) provide flood-proofing to excavations at risk of flooding during construction, where reasonable and feasible, such as raised entry into shafts and/or pump-out facilities to minimise ingress of floodwaters into shafts and the dive structure review of site layout and staging of construction works to avoid or minimise obstruction of overland flow paths and limit the extent of flow diversion required 	Works are located outside of identified flood prone areas. The 1 in 100-year flood extent of Badgerys Creek does not extend into the works area but is located to the north and east of the works area Daily weather monitoring will be undertaken to monitor for potential flooding events Consultation with Emergency Services will be managed by SM-WSA. Abergeldie will participate with SM-WSA as requested Water diversions to be constructed around work areas to divert surface water from un-stabilised areas

REMM Reference	REMM	How Addressed
		PESCPs will be developed and reviewed to minimise impacts to overland flows

Table 54 Relevant CEMF Control Measures

CEMF Reference	Control Measure	How Addressed
5.4	a. Where measures for reinstatement are not stipulated in the contracts mitigation measures for reinstatement of construction and ancillary lands will be produced in consultation with Sydney Metro the landowner and stakeholders.	PESCP to be developed to minimise pollution of surface water through construction
5.4	b. Mitigation measures required for reinstatement will be incorporated into the CEMP and will include as a minimum: i. Principal Contractors will clear and clean all working areas and accesses at project completion; ii. At the completion of construction all plant temporary buildings or vehicles not required for the subsequent state of construction will be removed from the site; iii. All land including roadways footpaths loading facilities or other land having been occupied temporarily will be returned to their pre-existing condition or better; and iv. Reinstatement of community spaces infrastructure and services will occur as soon as possible after completion of construction.	Soil and water controls will be managed through ECM which include sediment and erosion controls PESCP to be developed to minimise pollution of surface water through construction Spill kits to be located within the works area
12.1 a	The following soil and water management objectives will apply to construction: i. Minimise pollution of surface water through appropriate erosion and sediment control; ii. Minimise leaks and spills from construction activities; iii. Maintain existing water quality of surrounding surface watercourses; iv. Source construction water from non-potable sources, where feasible and reasonable; and v. For on-airport works, the Sydney Metro Western Sydney Airport Soil and Water CEMP will detail all the soil and water management objectives and will be consistent with the WSA Soil and Water CEMP, including all appendices to the CEMP	Soil and water controls will be managed through ECM which include sediment and erosion controls PESCP to be developed to minimise pollution of surface water through construction Spill kits to be located within the works area Where possible, water will be sourced from non-potable sources On-airport works aren't applicable to this scope.
12.2 a	On-airport management of soil and water will be achieved through the implementation of the SMWSA Soil and Water CEMP and Principal Contractors will develop and implement a Soil and Water Management Plan for all off-airport works. Both plans will include as a minimum: i. The soil and water mitigation measures as detailed in the planning approval documentation and sustainability requirements; ii. Details of construction activities and their locations, which have the potential to impact on water courses, storage facilities, stormwater flows, and groundwater; iii. Surface water and ground water impact assessment criteria consistent with the principles of the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines for off-airport works and the Airports (Environment Protection) Regulations 1997 for on-airport works (with due consideration of the ANZECC guidelines); iv. Management measures to be used to minimise surface and groundwater impacts, including identification of water treatment measures and discharge points, details of how spoil and fill material required by the project will be sourced, handled, stockpiled, reused and managed; erosion and sediment control measures; salinity control measures and the consideration of flood events; v. A contingency plan, consistent with the NSW Acid Sulphate Soils	Applicable minimum requirements listed have been included in the CEMP as assessed in the aspect specific risk assessment

CEMF Reference	Control Measure	How Addressed
	<p>Manual (EPA 1998), to deal with the unexpected discovery of actual or potential acid sulphate soils both on and off-airport lands. The plan must including procedures for the investigation, handling, treatment and management of such soils and water seepage;</p> <p>vi. Management measures for contaminated material (soils, water and building materials) and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material, including asbestos, during construction;</p> <p>vii. A description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, how the results of the monitoring would be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified;</p> <p>viii. The requirements of any applicable licence conditions;</p> <p>ix. The responsibilities of key project personnel with respect to the implementation of the plan;</p> <p>x. Procedures for the development and implementation of Progressive Erosion and Sediment Control Plans;</p> <p>xi. Identification of locations where site specific Stormwater and Flooding Management Plans are required; and</p> <p>xii. Compliance record generation and management</p>	
12.2 b	Principal Contractors will develop and implement Progressive Erosion and Sediment Control Plans (ESCPs) for all active worksites in accordance with Managing Urban Stormwater: Soils & Construction Volume 1 (Landcom, 2004) (known as the "Blue Book"). The ESCPs will be approved by the Contractor's ESAM (or delegate) prior to any works commencing (including vegetation clearing) on a particular site. Copies of the approved ESCP will be held by the relevant Contractor personnel including the Engineer and the Site Foreman	Progressive Erosion and Sediment Controls will be developed for intrusive works. Controls will be incorporated into the ECM for respective work areas.
12.2 c	ESCPs will detail all required erosion and sediment control measures for the particular site at the particular point in time and be progressively updated to reflect the current site conditions. Any amendments to the ESCP will be approved by the Contractor's ESAM (or delegate)	Progressive Erosion and Sediment Controls will be developed for intrusive works. Controls will be incorporated into the ECM for respective work areas.
12.2 d	Principal Contractors will develop and implement Stormwater and Flooding Management Plans for the relevant construction sites. These plans will identify the appropriate design standard for flood mitigation based on the duration of construction, proposed activities and flood risks. The plan will develop procedures to ensure that threats to human safety and damage to infrastructure are not exacerbated during the construction period	As report in the EIS (Chapter 14), the site is located outside of the 1% and 5% AEP peak flood area. The 1 in 100-year flood extent of Badgerys Creek is located to the north and east of the works area
12.2 e	Contractors will undertake the following soil and water monitoring as a minimum: i. Weekly inspections of the erosion and sediment control measures. Issues identified would be rectified as soon as practicable; ii. Additional inspections will be undertaken following significant rainfall events (greater than 20 mm in 24 hours); and iii. All water will be tested (and treated if required) prior to discharge from the site in order to determine compliance with the appropriate approvals and licencing. No water will be discharged from the site without written approval of the Contractor's ESAM (or delegate). This is to form a HOLD POINT	Refer to Section 8.3 Refer to Section 18.4.1 Refer to Section 18.5
12.2 f	The following compliance records will be kept by Contractors: i. Copies of current ESCPs for all active construction sites; ii. Records of soil and water inspections undertaken; iii. Records of testing of any water prior to discharge; and iv. Records of the release of the hold point to discharge water from the construction site to the receiving environment.	Records will be kept in accordance with Section 9.7

CEMF Reference	Control Measure	How Addressed
12.2 g	<p>The following water resources management objectives will apply to the construction of the project:</p> <ul style="list-style-type: none"> i. Minimise demand for, and use of potable water; ii. Maximise opportunities for water re-use from captured stormwater, wastewater and groundwater; iii. Examples of measures to minimise potable water consumption include: <ul style="list-style-type: none"> Water efficient controls, fixtures and fittings in temporary facilities; Collecting, treating and reusing water generated in tunnelling operations, concrete batching and casting facility processes; Using recycled water or treated water from onsite sources in the formulation of concrete; Harvesting and reusing rainwater from roofs of temporary facilities; Using water from recycled water networks; Collecting, treating and reusing groundwater and stormwater; Using water efficient construction methods and equipment; and Providing designated sealed areas for equipment wash down. 	<p>The identified strategies will be implemented where reasonable and practical and incorporated into work area ECM. Mitigation measures are included in Table 55 below.</p>

18.2 EXISTING ENVIRONMENT

Badgerys Creek is located 350m to the north and east of the works area and there are 3 farm dams/ponds to the north and west of the works area. The 1 in 100-year flood extent of Badgerys Creek does not extend into the works area but is located to the north and east of the works area. Stormwater drainage infrastructure from the existing roundabout is captured in drainage pits and conveyed in pipes to grassed roadside drains east of the intersection. South of the existing roundabout are stormwater ponds associated with the development of Western Sydney Airport. The ground disturbance will be limited to the project extent for stub road construction and associated drainage works. This area will total approximately 9300m².

The area immediately north east of the works area has been identified in the EIS as having potential areas of contamination of medium risk associated with the potential use of fill around dams north of Elizabeth Drive, with the contaminants of potential concern being heavy metals, TRH, SVOCs, PCBs and asbestos.

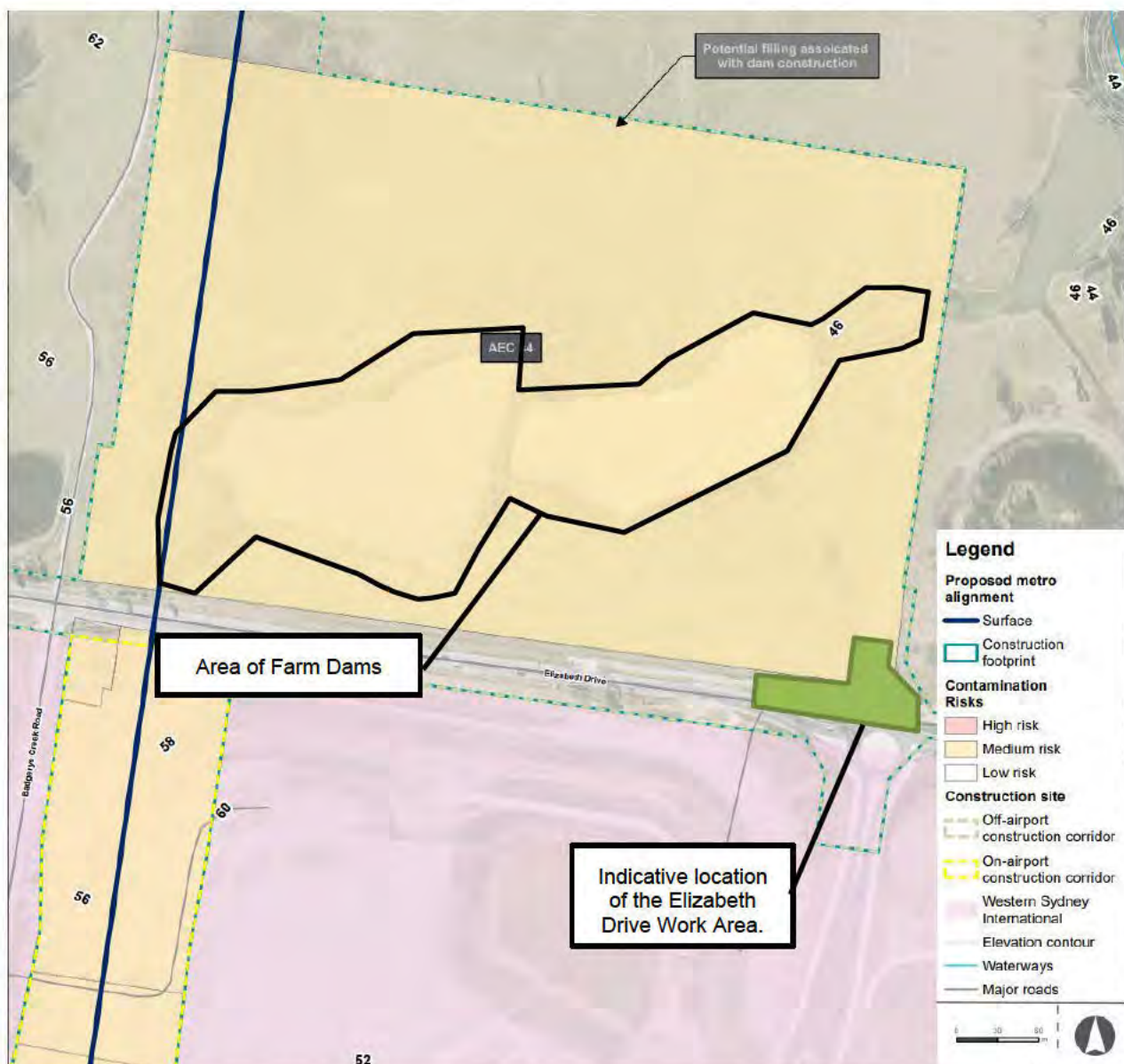


Figure 12 Indicative location of Work Area in relation to farm dams within AEC 44

18.3 SOIL AND WATER MITIGATION MEASURES

Table 55 Soil and Water Mitigation Measures

Mitigation Measure	Control	COA / REMM
SW-1	Prior to the start of work, a Progressive Erosion and Sediment Control Plan (PESCP) is to be prepared in accordance with the requirements of the Blue Book. Refer to Section 18.6 The PESCP will be reviewed by a suitably qualified professional prior to being implemented.	E128
SW-2	Erosion and sediment control measures are to be implemented and maintained to: <ul style="list-style-type: none"> Prevent sediment moving off-site and sediment laden water entering any water course, drainage lines, or drain inlets. Reduce water velocity and capture sediment on site. Minimise the amount of material transported from site to surrounding pavement surfaces. Surface water diversion to be used to avoid flooding of excavations. 	E128, HYD1
SW-3	Stockpile management	E128

Mitigation Measure	Control	COA / REMM
	a) Stockpiles are to be managed in accordance with the following: Locate stockpiles outside of the tree protection zone of trees or native vegetation identified for retention. Delineate the tree protection zone in accordance with AS 4970. a) Locate stockpiles at least 5 m from likely areas of concentrated water flows and at least 10 m from waterways that are classified as Class 1 and Class 2 from the DPI Fisheries guideline "Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings". b) Keep stockpile heights to no greater than 2 m, unless otherwise approved by the Principal, and slopes to no steeper than 2:1. c) Cover, or otherwise protect from erosion, stockpiles that will be in place for more than 20 days as well as any stockpiles that are susceptible to wind or water erosion, within 10 days of forming each stockpile. d) Keep topsoil that is not contaminated by noxious weeds in stockpiles for later spreading on fill batters and other areas. Other material may also be stockpiled but kept separated from the topsoil stockpiles. e) Implement measures to prevent the growth of weeds in topsoil stockpiles. f) Stockpiles will be kept moist with water as required. g) Water carts will be utilised to keep surfaces moist.	
	Daily weather monitoring will be undertaken to monitor for potential flooding events	HDY1
SW-3	Wherever possible stormwater, recycled water or other water sources will be used for dust control in preference to potable water dewatering – refer to Section 18.5)	E128
SW-4	Sedimentation controls are maintained and cleaned by the following measures: <ul style="list-style-type: none"> Sediment fences are cleaned when 60% full. Removed sediment is disposed of by stockpiling. If sediment is topsoil, then it will be reused in landscaping, otherwise sediment is disposed of to a licensed landfill on completion of the project Soil stabilisers will be reapplied when coverage is <70% A daily record of rainfall will be kept in the foreman's report 	E128
SW-5	Dangerous good and hazardous materials storage will be within bunded areas with a capacity of 110 per cent of the maximum single stored volume	E128
SW-6	Spill kits will be provided at all work areas	E128
SW-7	Concrete washouts are to be provided in the work area during concrete shifts. The location of the washouts is to be communicated to concrete delivery drivers on arrival to site.	E128
SW-8	The following strategies to be implemented where possible: <ul style="list-style-type: none"> Water efficient controls, fixtures and fittings in temporary facilities; Collecting, treating and reusing water generated in tunnelling operations, concrete batching and casting facility processes; Using recycled water or treated water from onsite sources in the formulation of concrete; Harvesting and reusing rainwater from roofs of temporary facilities; Using water from recycled water networks; Collecting, treating and reusing groundwater and stormwater; Using water efficient construction methods and equipment; and Providing designated sealed areas for equipment wash down. 	
SW-9	A street sweeper is to be used during haulage activities or as required	E128
SW-10	If contamination is encountered, implement the unexpected finds protocol is included within APPENDIX G	SC5, SC6
SW-11	In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.	SC1, SC2, SC3

18.4 SURFACE WATER MONITORING

Abergeldie is proposing not to implement a broad Surface Water Quality Monitoring program, in accordance with COA C13 based on the following:

- The nearest surface water body is located approximately 350m to the northeast of the site (Badgerys Creek).
- There are developments throughout the catchment that also have overland flows that contribute to water to Badgerys Creek.

- The size of the respective work area in comparison to the overall catchment size is comparatively small and any runoff would have a negligible impact on the water quality of south creek. The calculation for Revised Universal Soil Loss Equation support this statement.

- The Revised Universal Soil Loss Equation (as referenced in Blue Book Vol 1) is calculated to be:

$$A = R K L S P C \dots\dots\dots \text{Equation (1)}$$

where, A = computed soil loss (tonnes/ha/yr)^[1]

R = rainfall erosivity factor - 2500

K = soil erodibility factor – 0.05

LS = slope length/gradient factor – 0.17

P = erosion control practice factor – 1.3

C = ground cover and management factor- 1 = 27.6 tonnes/ha/yr

Since the project site will only be open and disturbed for maximum of 8 weeks the and the disturbed area is approximately 0.21 ha.

Total erosion/sedimentation to be managed on site is:

$$= 27.6 \times 8/52 \times 0.21$$

$$= 0.89 \text{ tonnes}$$

- The Project consists primarily of improvements to road pavement and road infrastructure including drainage. The majority of the works will be at grade, therefore will not collect rainfall.

Based on the scope of the Project it would be unlikely to have measurable impacts on Badgerys Creek. Furthermore, any measured changes within the Creek would be difficult to directly attribute to the Project in isolation from other contributors to the catchment flow. Therefore, monitoring of surface water is not proposed as part of delivery of this Project.

18.4.1 Weather Events

Erosion and sediment controls will be monitored on a regular basis and specifically:

- Pre-rain event where there is a forecast of 10mm or greater (80% chance with a 24hour period). Inspect the site to ensure that all erosion/sedimentation and stabilisation controls are in place and in effective working order;
- Cease all works within flow paths and collect all loose materials and wastes; and
- If there is a possibility that work sites could be flooded, take action to prevent any environmental incidents such as potential pollution incidents and protecting disturbed ground from erosion, including relocating all materials that could cause harm onto higher ground
- Post rain event of greater than 10mm in 24 hours.
- Inspections will be recorded and records maintained by the ESR and/or ESAM.

18.4.2 Water Discharge

Surface water is not proposed to be collected and therefore will not be discharge from site. Excavations will not be left open prior to period of forecasted rain. Should water be collected in excavations or sumps then it will be stored in IBC/tanks/bunds for dust suppression or disposed offsite as a liquid waste.

18.5 PROGRESSIVE EROSION AND SEDIMENT CONTROL PLANS

Site-specific Progressive Erosion and Sediment Controls Plans (PESCPs) are required to be developed prior to commencing intrusive works. PESCPs are live documents and will be developed and updated as the Project progresses. PESCPs are to be developed in accordance with Managing



Urban Stormwater: Soils and Construction Vol 1 4th ed (the Blue Book). PESCPs will be incorporated into the area specific ECM.

PESCPs are to developed by personnel who has completed a training in BLUE BOOKS Vol 1 & 2D and Erosion and Sedimentation Control (with a certificate as proof of training) and who have suitable experience in preparing such plans. Erosion and Sediment Control Plans (including Stabilisation Plans and Stockpile Management Plans) are to be developed by the ESR or ESAM.

PESCP will be implemented before construction starts and inspected regularly, particularly prior to and after a rainfall event of 10mm or greater with a 24 hour period. All disturbed areas and revegetated/stabilised areas together with all permanent and temporary erosion and sediment control works will be examined during environmental inspections as soon as practicable but within 3 hours (during normal work days) or within 24 hours (outside normal work hours and days, including public holidays) after the start of rainfall events exceeding 10mm or greater.

19 AIR QUALITY MANAGEMENT

The following are the minimum general control measures to be implemented on the project. These control measures are in accordance with the COA, REMM and CEMF. Based on the risk assessment in APPENDIX D management measures are included within the following sections of this CEMP.

19.1 AIR QUALITY REQUIREMENTS

Relevant COA, REMM and CEMF control measures are shown in the following tables, Table 56 to Table 58.

Table 56 Relevant Air Quality COA

COA Reference	COA	How Addressed	Responsibility
E1	All reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during construction.	Air quality mitigation measures are provided in Table 60 Air Quality Mitigation Measures Table 60 and will be included within the work area ECM.	ESAM Supervisor

Table 57 Relevant Air Quality REMM

REMM Reference	REMM Description	How Addressed	Responsibility
AQ1	<p>The Air Quality Management Plan for the project would incorporate the following best-practice odour management measures would be implemented during relevant construction works:</p> <ol style="list-style-type: none"> 1) the extent of opened and disturbed contaminated soil at any given time would be minimised 2) temporary coverings or odour suppressing agents would be applied to excavated areas where appropriate 3) regular odour monitoring would be conducted during excavation to verify that no offensive odours are being generated 	Air quality mitigation measures are provided in Table 60 Table 60 Air Quality Mitigation Measures and will be included within the work area ECM.	Project Manager ESAM Supervisor

Table 58 Relevant CEMF Air Quality Control Measures

CEMF Reference	COA	How Addressed	Responsibility
13.1a	<p>The following air quality management objectives will apply to construction:</p> <ol style="list-style-type: none"> i. Minimise gaseous and particulate pollutant emissions from construction activities as far as feasible and reasonable; ii. Identify and control potential dust and air pollutant sources; and 	<p>The identified management objectives will be applied to the Project.</p> <p>Reasonable and feasible mitigation</p>	ESAM Supervisor

CEMF Reference	COA	How Addressed	Responsibility
	iii. For on-airport works, the Sydney Metro Western Sydney Airport Air Quality CEMP will detail all the air quality management objectives and will be consistent with the WSA Air Quality CEMP including all appendices to the CEMP	measures are listed in Table 60, which will be incorporated into work area ECM	
13.2 a	On-airport management of soil and water will be achieved through the implementation of the SMWSA Soil and Water CEMP and Principal Contractors will develop and implement an Air Quality Management Plan for all off-airport works. Both plans will include, as a minimum: <ul style="list-style-type: none"> i. The air quality mitigation measures as detailed in the planning approval documentation; ii. The requirements of any approval and applicable licence conditions; iii. Site plans or maps indicating locations of sensitive receivers and key air quality / dust controls; iv. The responsibilities of key project personnel with respect to the implementation of the plan; v. Air quality and dust monitoring requirements; and vi. Compliance record generation and management. 	Not required in accordance with the staging report Applicable minimum requirements listed have been included in the CEMP as assessed in the aspect specific risk assessment.	N/A
13.2 b	Air quality and dust monitoring will involve the following as a minimum: <ul style="list-style-type: none"> i. Meteorological conditions will be monitored, and appropriate responses will be organised and undertaken periodically by the Principal Contractor; ii. Regular visual monitoring of dust generation from work zones; and iii. Monitoring emissions from plant and construction vehicles to ensure they have appropriate emission controls and are being maintained correctly. 	Air quality monitoring will be implemented for the duration of the Project. In accordance with the monitoring program described in Section 19.4	ESAM Supervisor
13.2 c	The following compliance records will be kept by the Principal Contractor: <ul style="list-style-type: none"> i. Records of any meteorological condition monitoring; ii. Records of any management measures implemented as a result of adverse, windy weather conditions; and iii. Records of air quality and dust inspections undertaken. 	Air quality monitoring results will be recorded and retained on file.	ESAM
13.3	The on-airport Air Quality CEMP and the off-airport Air Quality Management Plan will include the following air quality mitigation measures as well as any relevant Conditions: <ul style="list-style-type: none"> i. Plant and equipment will be serviced and maintained in good working order to reduce unnecessary emissions from exhaust fumes; ii. Plant and equipment to be switched off engines when not in use; iii. The avoidance the use of diesel or petrol powered generators and instead using mains electricity or battery powered equipment, where practicable; iv. Appropriate vehicle speeds on sealed and unsealed roads; v. Development and implementation of a construction logistics plan to manage the sustainable delivery of goods and materials; vi. Implementing measures to support and encourage sustainable travel for construction workers to and from the construction sites; vii. Water suppression will be used for active earthwork areas, stockpiles, unsurfaced haul roads and loads of soil being transported to reduce wind-blown dust emissions; viii. Wheel-wash facilities or rumble grids will be provided and used near the site exit points, 	An air quality management plan is not required in accordance with the Staging Report The identified mitigation measures will be implemented on the project. Refer to Table 60 for the mitigation measures. Plant and equipment to be maintained and in good working condition Plant and equipment to be switched off engines when not in use	ESAM

CEMF Reference	COA	How Addressed	Responsibility
	as appropriate; and ix. Dust extraction and filtration systems will be installed for tunnel excavation works and deep excavation with limited surface exposure.	Speed limits to be set and enforced by Vehicle Movement Plan. Sustainable travel (i.e. car pooling) to be encouraged Dust suppression will be used to minimise wind blown dust emissions Wheel wash / rumble grid / stabilised entry to be established at the site entry N/A	

19.2 EXISTING ENVIRONMENT AND POTENTIAL DUST RECEIVERS

Based on the Scope of Works, it was assessed that the main dust generation activities include:

- Concrete and road sawing,
- Hammering of concrete surfaces,
- Excavation and loading of materials at work areas and compound,
- Dust generated from exposed/disturbed areas, stockpiles and the haulage of materials.

The activities are considered to generate localised dust only, additionally, surfaces will be covered at the conclusion of each shift. Likely receivers from dust are properties that:

- Front the works area; and
- Areas not behind physical barriers, i.e. dust screens or trees.

Figure 13 identifies the properties likely to be affected during the works. Properties within the blue outline are considered to be potential air quality receivers.



Figure 13 Potential impacted air quality properties (shown in blue)

19.3 AIR QUALITY MONITORING PROGRAM

19.3.1 Available Baseline Data

Background data has been sourced from the Sydney Metro – Western Sydney Airport, EIS, Chapter 22.

The existing air quality environment is described below, based on existing publicly available information. Ambient air quality monitoring stations in proximity to the study area include one station at St Marys (around 8.4km north of the project area) and one station at Bringelly (around 2 kilometres south-east of the study area). The monitoring stations are maintained by NSW Department of Planning and Environment (DPE).

Annual air quality data for the period 2014-2019 (Office of Environment and Heritage, 2014-2019) indicates that annual average PM10 concentration around St Marys ranges between 15.1 and 21.2 micrograms per cubic metre (see Table 22-1 in Figure 14), and around Bringelly ranges between 15.8 and 23.6 micrograms per cubic metre (see Table 22-2 in Figure 14). There are a number of recorded exceedances of the 50 micrograms per cubic metre maximum 24-hour concentration criterion, however the exceedances are generally due to exceptional events related to bushfires, hazard reduction burns and dust storms.

Table 22-1 St Marys monitoring location ambient PM₁₀ concentrations (2014-2019)

Statistic	24-hour average PM ₁₀ concentration - µg/m ³						
	Criteria	2014	2015	2016	2017	2018	2019
Maximum 24-hour concentration	50	45.0	53.0	100.2	49.8	100.5	159.8
24-hour exceedance count	-	0	1	3	0	2	26
Statistic	Annual average PM ₁₀ concentration - µg/m ³						
	Criteria	2014	2015	2016	2017	2018	2019
Annual average	25	16.7	15.1	16.0	16.2	19.3	24.7

Table 22-2 Bringelly monitoring location ambient PM₁₀ concentrations (2014-2019)

Statistic	24-hour average PM ₁₀ concentration - µg/m ³						
	Criteria	2014	2015	2016	2017	2018	2019
Maximum 24-hour concentration	50	42.6	57.0	61.6	83.7	92.9	134.0
24-hour exceedance count	-	0	1	3	6	8	24
Statistic	Annual average PM ₁₀ concentration - µg/m ³						
	Criteria	2014	2015	2016	2017	2018	2019
Annual average	25	16.6	15.8	17.0	19.8	21.2	23.6

Figure 14 Tables 22-1 and 22-2 from EIS Chapter 22

Annual air quality data for the period 2016-2019 (Office of Environment and Heritage, 2016-2019) indicates that annual average PM_{2.5} concentration around St Marys is around 8 micrograms per cubic metre (see Table 22-3 in Figure 15), and around Bringelly ranges between 7.8 and 9.8 micrograms per cubic metre (see Table 22-2 in Figure 15). There are a number of recorded PM_{2.5} exceedances of the 25 micrograms per cubic metre maximum 24-hour concentration criterion. As with PM₁₀ concentrations however, the PM_{2.5} exceedances were generally due to exceptional events related to bushfires, hazard reduction burns and dust storms.

Particulate data from 2019 is heavily skewed by the bushfires that occurred across NSW in November and December 2019. Data from 2019 does not represent normal long-term air quality conditions in the Sydney basin.

Table 22-3 St Marys monitoring location ambient PM_{2.5} concentrations (2016-2019)

Statistic	24-hour average PM _{2.5} concentration - µg/m ³				
	Criteria	2016	2017	2018	2019
Maximum 24-hour concentration	25	93.2	38.2	80.5	88.3
24-hour exceedance count	-	5	3	2	21
Statistic	Annual average PM _{2.5} concentration - µg/m ³				
	Criteria	2016	2017	2018	2019
Annual average	8	7.8	8	7.8	9.8

Table 22-4 Bringelly monitoring location ambient PM_{2.5} concentrations (2016-2019)

Statistic	24-hour average PM _{2.5} concentration - µg/m ³				
	Criteria	2016	2017	2018	2019
Maximum 24-hour concentration	25	21.6	52.5	55.6	178.0
24-hour exceedance count	-	0	2	4	27
Statistic	Annual average PM _{2.5} concentration - µg/m ³				
	Criteria	2016	2017	2018	2019
Annual average	8	7.6	7.5	8.0	11.3

Figure 15 Tables 22-3 and 22-4 from EIS Chapter 22

19.3.2 Baseline Data to be Collected

The scope works includes construction of the stub road to be added as the northern fourth leg of the Elizabeth Drive roundabout. The constrained to a small footprint with the duration of the Project anticipated to be completed within 2 months.

The project location and the identified potentially impacted receivers is depicted within Figure 13.

Subsequently, additional baseline data is not proposed to be collected.

19.3.3 Monitoring to be Undertaken

Regular monitoring and inspections will be undertaken during construction. Monitoring and inspections will include:

- Visual observations of air quality in active work areas will be undertaken on a daily basis by the site supervisor to identify construction activities, vehicles or equipment that are generating excessive air emissions
- Environment-specific inspections will be carried out by the ESR/ESAM on a weekly basis.
- Weather will be reviewed on a daily basis using the Australian Government Bureau of Meteorology and local observations. Windy weather (>30kmh) would trigger the implementation of mitigation strategies to prevent dust aerosolization issues.

19.3.4 Parameters and Frequency of Monitoring

The following parameters will be monitored during construction and are shown in Table 59.

Table 59 Air Quality Monitoring

Parameter	Screening Level (as referenced in Chapter 22 if the EIS)	Frequency
Weather conditions and forecast	N/A	Daily
Visual	Visual dust leaving work area	Daily
PM ₁₀	25 ug/m ³	Real-time as required following visual dust leaving work area or a complaint received
PM _{2.5}	8 ug/m ³	Real-time as required following visual dust leaving work area or a complaint received

19.3.5 Reporting of Monitoring Results

The following reporting will be undertaken:

- Weather conditions and forecast included within the supervisor daily site diary
- Daily air quality will be reported in the supervisor site diary
- Attended monitoring will be recorded in an Air Quality Monitoring Form, and the following will be recorded:
 - Weather conditions
 - Location of monitoring
 - Screening criteria
 - Description of works
 - Air quality concentrations (PM_{2.5} and PM₁₀)
 - Visual observations

19.3.6 Analysis of Monitoring Results

Real-time monitoring results will be compared to the Screening Levels used identified in Table 59.

19.3.7 Mitigation Measures

Table 60 identifies the Air Quality mitigation measures that will be employed during construction. The following process will be following should air quality impacts be identified above the

During construction, if an exceedance of the air quality screening criteria is identified the following will occur:

- Works will cease immediately, and the Supervisor and ESAM is to be notified.
- The ESAM will notify the TfNSW Environmental officer. If works are outside of standard hours, the TfNSW Surveillance Officer will be notified by the supervisor.
- The DPE Hour Air Quality Concentration Data (website) will be reviewed to determine if background levels are elevated due to external factors <https://www.dpie.nsw.gov.au/air-quality/air-quality-concentration-data-updated-hourly>
- If the air quality screening criteria is still exceeded. Works will cease and the methodology will be reviewed and adjusted as required. Alternatives may include:
 - Substitute plant / equipment
 - Review the activity and determine if the activity can be relocated
 - Increase the volume / frequency of dust controls
 - Undertake works when more favourable weather conditions are present
- Monitoring will be undertaken to confirm the adequacy of the revised methodology

TfNSW will be notified via email of the exceedance of the screening criteria and resultant actions. An Environment Event will be submitted to TfNSW. A summary of the air quality screening limits will be included within the monthly report.

19.3.8 Review of Data

TfNSW will be notified via email of the exceedance of the screening criteria and resultant actions. A summary of the vibration screening limits will be included within the monthly report provided to TfNSW.

19.4 AIR QUALITY MITIGATION MEASURES

Table 60 summarises the air quality mitigation measures to be implemented on the Project.

Table 60 Air Quality Mitigation Measures

No.	Mitigation Measures	Responsibility
AQ1.	Air quality measures from this plan will be included with Environmental Control Maps (ECM)	Project Manager ESAM
AQ2	Worker amenities at the site compound are to be located to reduce exposure to local residential properties or commercial premises to bad odour, minimising omission of smoke and odours from worker amenities	Project Manager
AQ3	No burning off of waste materials.	Supervisor
AQ5	Construction activities will be modified or stopped if dust is being generated or during high or unfavourable wind conditions if they have a potential to increase the generation or emission of dust.	Supervisor
AQ6.	Control measures including water carts, sprinklers, sprays, dust screens or the application geo-binding agents will be utilised where applicable to control dust emissions on surfaces including earthwork formations, roads and stockpiles. The frequency of use will be modified to accommodate prevailing conditions. In addition, shade cloth will be provided to temporary barriers and compound fencing where there is a high risk of dust being generated and dispersed to potentially sensitive receivers located to the work sites or compound areas.	Supervisor
AQ8.	Should inspections or monitoring identify air quality issues, mitigation	ESAM

No.	Mitigation Measures	Responsibility
	measures being implemented are to be reviewed and revised to ensure that the most appropriate measure or combination of measures is employed.	Supervisor
AQ9.	Stockpiles or areas that may generate dust will be managed to suppress dust emissions including establishment of suitable cover crop or provision of other covering over topsoil stockpiles that will be in place for longer than 20 days	Supervisor
AQ10.	Haul trucks, plant and equipment would be switched off when not in operation for periods of greater than 15 minutes.	Supervisor
AQ11.	Construction plant, vehicles, and machinery (including sub-contractors) will be maintained in good working order and in accordance with manufacturer's specifications. Periodic inspections are to be undertaken on plant / vehicle emissions.	Supervisor
AQ12.	Weather forecasts, site activities & conditions will be reviewed on a daily basis and appropriate measures implemented where unfavourable weather conditions (dry weather, strong winds) are anticipated. The Abergeldie environmental officer will send out alerts to the site teams advising them if unfavourable weather is imminent.	Supervisor
AQ13	Water carts / street sweepers used to minimise wind blown emissions	Supervisor
AQ14	Mains power to be used in lieu of generators where feasible	Supervisor
AQ15	Speed limits to be set / enforced within the work area	Supervisor

20 WASTE MANAGEMENT

The following are the minimum general control measures to be implemented on the project. These control measures are in accordance with the COA, REMM and CEMF. Based on the risk assessment in APPENDIX D management measures are included within the following sections of this CEMP.

20.1 WASTE MANAGEMENT REQUIREMENTS

The purpose of the section of the CEMP is to:

- Provide guidance and outline waste management practices to be followed;
- Encourage efficient use of resources through reuse, reprocessing, recycling;
- Provide for the lawful disposal of wastes generated by the Project; and
- Prevent or minimise adverse environmental impacts.

The following tables, Table 61 to Table 63, present the relevant COA, REMM and CEMF control measures to be implemented throughout the Project.

Table 61 Relevant Waste Management COA

COA Reference	COA	How Addressed
A46	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Included in mitigation measures table
E122	WASTE Waste generated during construction and operation must be dealt with in accordance with the following priorities: (a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced; (b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and (c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of	Included in Section 20.2

COA Reference	COA	How Addressed
E123	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, as the case may be	No waste materials will be brought to site as part of the Scope of Works. Material that meets Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014 may be used onsite in accordance with the order and exemption.
E124	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste	Waste exported offsite will be managed in accordance with the identified controls
E125	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes	Commitment included within Table 64

Table 62 Relevant Waste REMM

REMM Reference	REMM	How Addressed
WR1	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging	Imported materials will be measured prior to ordering in accordance with the control measure
WR2	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities	Waste materials will be separated in accordance with the identified controls
WR3	A material tracking system would be implemented for material transferred between construction sites	Material tracking will be implemented throughout the duration of the Project
HR3	A hazardous materials analysis would be carried out prior to stripping and demolition of structures and buildings which are suspected of containing hazardous materials (particularly asbestos) Hazardous materials and special waste (such as asbestos) would be removed and disposed of in accordance with the relevant legislation, codes of practice and Australian Standards (including the Work Health and Safety and Regulation 2011 (NSW))	Prior to demolition / removal of materials, materials are to be inspected for hazardous materials

Table 63 Relevant Waste CEMF Control Measures

CEMF Reference	CEMF Control Measure Description	How Addressed
14.1 a	<p>The following waste objectives will apply to construction:</p> <ul style="list-style-type: none"> i. Minimise waste throughout the project life-cycle; ii. Waste management strategies for off-airport works will be implemented in accordance with the <i>Waste Avoidance and Resource Recovery Act 2001</i> management hierarchy as follows: <ul style="list-style-type: none"> ▪ Avoidance of unnecessary resource consumption; ▪ Resource recovery (including reuse, reprocessing, recycling and energy recovery); and ▪ Disposal. iii. Consistent with the Western Sydney Airport Waste and Resource Construction Environmental Management Plan, waste management strategies for on-airport works will also be aligned with the NSW Waste Avoidance and Resource Recovery Strategy under the <i>NSW Waste Avoidance and Resource Recovery Act</i> 	Feasible and practical waste measures will be implemented as per the Control Measures. Relevant measures will be included within area specific ECM

CEMF Reference	CEMF Control Measure Description	How Addressed
	2001; and iv. For on-airport works, the Sydney Metro Western Sydney Airport Waste and Resources CEMP will detail all the waste management objectives and will be consistent with the WSA Waste and Resources CEMP including all appendices to the CEMP	
14.1 b	Targets for the recovery, recycling or reuse of construction waste, and beneficial reuse of spoil will be provided by the Contractor	A minimum 95 per cent recycling target is achieved for construction and demolition waste
14.2 b	Contractors will undertake the following waste monitoring as a minimum: i. Weekly inspections will include checking on the waste storage facilities on site; and ii. All waste removed from the site will be appropriately tracked from 'cradle to grave' using waste tracking dockets.	Tracking will be included within inspection reports
14.2 c	Principal Contractors will report all necessary waste and purchasing information to SM - WSA as required for SM-WSA to fulfil their WRAPP reporting requirements	Abergeldie will comply with any requests from SM-WSA
14.2 d	Compliance records will be retained by the Principal Contractors in relation to waste management including records of inspections and waste dockets for all waste removed from the site.	Waste records will be retained on file
14.3 a	The on-airport Waste and Resources CEMP and the off-airport Waste Management Plan will include the following waste management mitigation measures as well as relevant Conditions: i. A central waste area (or areas) would be established, at which waste (including recyclables) would be stored or stockpiled. Stockpiles and bins would be appropriately labelled, managed and monitored till being removed from site; ii. All waste materials removed from the sites will be directed to an appropriately licensed waste management facility; iii. The use of raw materials (noise hoarding, site fencing, etc...) will be reused or shared, between sites and between construction contractors where feasible and reasonable; and iv. Recyclable wastes, including paper at site offices, will be stored separately from other wastes.	Waste Management Plan not required as per the staging report. Mitigation measures are included within Table 64

20.2 WASTE MITIGATION MEASURES

Table 64 summarises the mitigation measures to be implemented on the Project.

Table 64 Waste Mitigation Measures

No.	Mitigation Measures	Responsibility
WR-1	Abergeldie will sample waste in accordance with TfNSW Waste Environmental Procedure – Management of Wastes on Roads and Maritime Services Land (Roads and Maritime 2014) and Roads and relevant roads and maritime waste fact sheets.	Project Manager ESAM
WR-2	The NSW Governments Waste Management Hierarchy of "avoid-reduce-reuse recycle- dispose" will be followed as the framework of waste and resource management throughout the Project. Separation of general wastes, recyclable/reusable materials, and hazardous wastes to avoid mixing with other materials/ wastes	Project Manager ESAM
WR-3	All liquid and/or non-liquid waste generated on site shall be assessed and classified in accordance with NSW EPA Waste Classification Guidelines 2014	Project Manager ESAM
WR-4	Materials will be separated and stockpiled based on their classification type. To prevent mixing and cross contamination the following techniques will be employed: ▪ Stockpiles are to be labelled according to their classification / material type i.e. topsoil, capping, GSW etc ▪ Stockpile locations will be shown on the Abergeldie notice board	Supervisor



	<p>and discussed during prestart</p> <ul style="list-style-type: none"> Stockpiles (material types) will be separated using the following techniques Hard barrier such as jersey kerbs Markers including flagging and bunting Contaminated stockpiles will be stored on plastic and covered prior to rain or high winds to prevent mixing Waste materials bins i.e. steel bin, paper/cardboard will be provided onsite to promote recycling. <p>A central waste area (or areas) would be established, at which waste (including recyclables) would be stored or stockpiled. Stockpiles and bins would be appropriately labelled, managed and monitored till being removed from site.</p>	
WR-5	Imported materials will be measured to design to minimise wastage	Project Manager
WR-6	<p>All waste materials removed from site shall only be directed to an EPA Licensed waste management facility or other premises lawfully permitted to accept the materials (i.e. in accordance the resource recovery exemption and resource recovery order).</p> <p>The recycling, reuse and disposal of all surplus materials (including surplus concrete, excavated earthworks and pavement materials plus milled asphalt) is to be conducted in accordance with statutory requirements, and records maintained to demonstrate this.</p> <p>All subcontractors are also required to uphold the above requirement.</p>	Project Manager
WR-7	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the POEO Act, if such a licence is required in relation to that waste.	Project Manager Supervisor
WR-8	A waste management register will be maintained until the completion date. The register is to record the type, amount and location and date when waste is reused, recycled, stockpiled and disposed of.	Project Manager ESAM
WR-9	Receipts for waste transfer and disposal must be retained and checked to ensure all details are correct.	Project Manager ESAM
WR-10	Prior to demolition / removal of materials, materials are to be inspected for hazardous materials.	Supervisor
WR-11	The use of raw materials (noise hoarding, site fencing, etc...) will be reused or shared, between sites and between construction contractors where feasible and reasonable.	Project Manager
WR-12	Recyclable wastes, including paper at site offices, will be stored separately from other wastes.	Supervisor
WR-13	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Project Manager ESAM
WR-14	<p>All asbestos waste and waste tyres must be tracked use the EPA NSW WasteLocate online application. When the following thresholds are exceeded:</p> <ul style="list-style-type: none"> consigning, transporting or accepting tyres with a total weight of more than 200 kilograms, or 20 or more tyres, in any single load consigning, transporting or accepting more than 100 kilograms of asbestos waste, or more than 10 square metres of waste asbestos sheeting, in any single load 	Project Manager ESAM

APPENDIX A ISO 14001 CERTIFICATION



CERTIFICATE OF REGISTRATION

This is to certify that:

Abergeldie Holdings Pty Ltd

ABN 76 126 110 594

Trading as

Abergeldie Contractors Pty Ltd

ABN 47 004 533 519

Abergeldie Constructions Pty Limited

ABN 60 090 805 959

Abergeldie Mining Pty Limited

ABN 56 126 137 693

Abergeldie Rail Pty Ltd

ABN 47 130 586 551

Abergeldie Personnel Pty Ltd

ABN 34 128 796 047

Abergeldie Plant Pty Ltd

ABN 38 128 796 001

Abergeldie Complex Infrastructure Pty Ltd

ABN 47 131 697 946

Abergeldie Rehabilitation Pty Ltd

ABN 90 601 658 066

Unit 1, 5 George Young Street Regents Park NSW 2143 AUSTRALIA

operates an

ENVIRONMENTAL MANAGEMENT SYSTEM

which complies with the requirements of

ISO 14001:2015

for the following scope

The provision of project management, design, supply, construction, installation, testing and commissioning of turnkey projects and asset maintenance for power, water, stormwater, sewage, building, road/bridge and civil sectors. This covers temporary sites across Australia.

Certificate No: EMS40947

Issued: 17 September 2020

Originally Certified: 13 July 2016

Expires: 29 October 2023

Current Certification: 14 September 2020

Heather Mahon
Global Head of Technical Services
SAI Global Assurance



ISO 14001



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APPENDIX B ENVIRONMENT POLICY



ENVIRONMENTAL POLICY

Abergeldie is committed to preventing pollution and protecting the environment in which it operates.

Abergeldie demonstrates this commitment through their environmental management system that is integrated into every workplace and into each activity conducted or undertaken by Abergeldie.

To deliver on this commitment, Abergeldie shall ensure that:

- All workplaces and activities are assessed for aspects and impacts and are controlled either to eliminate the risk completely or reduce the risk to as low as reasonably practicable.
- All activities are conducted in such a way to maintain compliance to relevant and applicable Environmental laws, regulations and statutory obligations.
- Measurable objectives and targets are established for the continual improvement of our environmental performance.
- Environmental information is effectively communicated and employees are involved in the consultation process.
- All incidents, regardless of perceived severity, are reported to management to assist with developing more environmentally sound work processes and ensuring appropriate actions are implemented to prevent recurrence.
- Our Environmental Management System continues to meet ISO 14001:2015 and other governmental agency requirements.
- Relevant environmental training is provided.
- Plant and equipment is provided to allow employees to perform their assigned tasks with minimal environmental impacts.

Abergeldie as a person conducting a business of undertaking (PCBU), workers, contractors and visitors have a duty of care including the responsibility to work in accordance with environmental procedures, to take all reasonable care to minimise any environmental impacts and to consider the environmental consequences of their actions.

Abergeldie management shall remain directly responsible and accountable for the implementation of the environment management system and to provide adequate resources to assist the company in meeting their commitments.

This policy statement applies to all Abergeldie workplaces and will be regularly reviewed in light of developments, including changes to legislation, our understanding of best practice, and the organisational structure of Abergeldie.

Mark Bruzzone
Chief Executive Officer

30 June 2021

Date

APPENDIX C COA, CEMF, REMM & EPBC COMPLIANCE MATRICES

Table 65 COA Matrix

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
General	A1	The Proponent must carry out the CSSI in accordance with the terms of this approval and generally in accordance with the: (a) Sydney Metro – Western Sydney Airport Environmental Impact Statement dated 21 October 2020; and (b) Sydney Metro – Western Sydney Airport Submissions Report submitted April 2021.	Full Compliance	Yes	Yes	Noted - CEMP has been prepared.
General	A2	The CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	Full Compliance	Yes	Yes	Noted - CEMP has been prepared.
General	A3	In the event of an inconsistency between: (a) the conditions of this approval and any document listed in Condition A1, the conditions of this approval will prevail to the extent of the inconsistency; and (b) any document listed in Condition A1, the most recent document will prevail to the extent of the inconsistency. Note: For the purpose of this condition, there is an inconsistency between a term of this approval and any document if it is not possible to comply with both the term and the document.	Full Compliance	Yes	Yes	Noted - CEMP has been prepared.
General	A4	In the event that there are differing interpretations of the conditions of this approval, including in relation to a condition of this approval, the Planning Secretary's interpretation is final.	Full Compliance	Yes	Yes	Noted - CEMP has been prepared.
General	A5	The Proponent must comply with all written requirements or directions of the Planning Secretary, including in relation to: (a) the environmental performance of the CSSI; (b) any document or correspondence in relation to the CSSI; (c) any notification given to the Planning Secretary under the terms of this approval; (d) any audit of the construction or operation of the CSSI; (e) the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); (f) the carrying out of any additional monitoring or mitigation measures; and	Full Compliance	Yes	Yes	Noted - CEMP has been prepared.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(g) in respect of ongoing monitoring and management obligations, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under the terms of this approval.				
General	A6	Where the terms of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include: (a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval; (b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them; (c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that the party(s) has none or has failed to provide feedback after repeated requests; (d) outline of the issues raised by the identified party(s) and how they have been addressed; and (e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.	Full Compliance, except that Sydney Metro will make all submissions of evidence of the consultation undertaken to the Planning Secretary.	Yes	Yes	Air Quality to be has been developed and included with CEMP. Due to sign and extent of works consultation is not deem to be applicable, however Air Quality Monitoring Program will be sent to Liverpool Council for information.
General	A7	This approval lapses five (5) years after the date on which it is granted, unless work has physically commenced on or before that date.	Full Compliance	Yes	Yes	Work will commence within 5 years of the approval date.
General	A8	References in the terms of this approval to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, standards or policies in the form they are in as at the date of this approval.	Full Compliance	Yes	Yes	Noted
General	A9	Any document that must be submitted or action taken within a timeframe specified in or under the conditions of this approval may be submitted or undertaken within a later timeframe agreed with the Planning Secretary. This condition does not apply to the written notification required in respect of an incident under Condition A41.	Full Compliance, except that Sydney Metro will facilitate, and involve as necessary, the Contractor in any negotiations with the Planning Secretary on	Yes	Yes	No requests have been made yet.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
			extended timeframes for submissions for conditions and make all submissions to the Planning Secretary.			
Staging	A10	The CSSI may be constructed and operated in stages. Where staged construction and/or operation is proposed, a Staging Report must be prepared. The Staging Report must be submitted to the Planning Secretary for information no later than one (1) month before the lodgement of any CEMP or CEMP sub plan for the first of the proposed stages of construction (or if only staged operation is proposed, one (1) month before the commencement of operation of the first of the proposed stages of operation), unless otherwise agreed with the Planning Secretary.	Not Applicable	No	No	N/A
Staging	A11	The Staging Report must: (a) set out how construction of the whole of the CSSI will be staged, including details of work and other activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish; (b) if staged operation is proposed, set out how the operation of the whole of the CSSI will be staged, including details of each stage and the general timing of when operation of each stage will commence; (c) specify conditions that apply to each stage of construction and operation including how compliance with conditions will be achieved across and between each of the stages of the CSSI; (d) set out mechanisms for managing any cumulative impacts arising from the proposed staging; and (e) for the purposes of informing Conditions C2, C7 and C17, include an assessment of the predicted level of environmental risk and potential level of community concern posed by the construction activities required to construct each stage of the CSSI. With respect to (e) above, the risk assessment must use an appropriate process consistent with AS/NZS ISO 31000: 2018;	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Risk Management - Guidelines and must be endorsed by the ER. Note: 1. A Staging Report may reflect the staged construction and operation of the project through geographical activities, temporal activities or activity-based staging. 2. The risk matrix must reflect the stages of construction identified in the Staging Report				
Staging	A12	The CSSI must be staged in accordance with the Staging Report, as submitted to the Planning Secretary for information.	Full Compliance to the extent required by the Staging Report	Yes	Yes	Section 3 of the CEMP discusses how Abergeldie will comply with Staging Report.
Staging	A13	Where staging is proposed, the terms of this approval that apply or are relevant to the work or activities to be carried out in a specific stage must be complied with at the relevant time for that stage.	Full Compliance to the extent required by the Staging Report	Yes	Yes	Section 3 of the CEMP discusses how Abergeldie will comply with Staging Report.
Staging	A14	Where changes are proposed to the staging of construction or operation, a revised Staging Report must be prepared and submitted to the Planning Secretary for information before the commencement of changes to the stage of construction or the stage of operation.	Sydney Metro	Yes	Yes - already prepared by SM-WSA	N/A
Staging	A15	Where changes are proposed to the risk assessment related to the staging of construction or operation, a revised Staging Report must be submitted to the Planning Secretary for information one (1) month before the lodgement of any CEMP or CEMP sub plan associated with the stage where change in risk assessment is proposed.	Sydney Metro	Yes	No - Sydney Metro's responsibility to revise staging report/construction staging.	N/A
Staging	A16	The Proponent may submit any strategies, plans or programs required by this approval on a progressive basis, within each stage of the CSSI. Notes: 1. While any strategy, plan or program may be submitted on a progressive basis, the Proponent will need to ensure that the existing activities on site are covered by suitable strategies, plans or programs at all times; and 2. If the submission of any strategy, plan or program is to be submitted on a progressive basis, then the relevant strategy, plan or program must clearly describe the activities to which the strategy, plan or program applies, the relationship of this activity to any future activities within the stage, and the trigger	Full Compliance, except that Sydney Metro will make all submissions to the Planning Secretary.	Yes	No - Sydney Metro's responsibility to management strategies, plans or programs related to the CSSI.	Noted. CEMP and associated documents have been developed in accordance with the Staging Report

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		for updating the strategy, plan or program. 3. The staged submission of strategies, plans or programs may reflect the construction and operation of the project through geographical activities, temporal activities or activity-based staging.				
Ancillary Facilities	A17	Ancillary facilities that are not identified by description and location in the documents listed in Condition A1 can only be established and used in each case if: (a) they are located within or immediately adjacent to the Construction Boundary of the CSSI; and (b) they are not located next to sensitive land use(s) (including where an access road is between the facility and the receiver), unless the landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and (c) they have no impacts on Heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and (d) the establishment and use of the facility can be carried out and managed within the outcomes set out in the terms of this approval, including in relation to environmental, social and economic impacts. Note: This condition does not apply to any ancillary facilities or work that are exempt or complying development, established before the commencement of construction under this approval or minor ancillary facilities established under Condition A22.	Full Compliance	Yes	Yes	CEMP Section 12.2
Ancillary Facilities	A18	Before establishment of any ancillary facility (excluding exempt or complying development, minor ancillary facilities determined by the ER to have minimal environmental impact and those established under Condition A22 and those considered in an approved CEMP), the Proponent must prepare a Site Establishment Management Plan which outlines the environmental management practices and procedures to be implemented for the establishment of the ancillary facilities. The Site Establishment Management Plan must be prepared in consultation with the Relevant Council(s) and relevant government agencies. The Site Establishment Management Plan must include:	Full Compliance	Yes	Not Triggered	SEMP requirement not triggered, as the size and scale of the ancillary facilities for the Power Enabling Work can be established in accordance with the ER endorsed CEMP.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(a) a description of activities to be undertaken during establishment of the ancillary facility (including scheduling and duration of work to be undertaken at the site); (b) figures illustrating the proposed operational site layout and the location of the closest sensitive land use(s); (c) a program for ongoing analysis of the key environmental risks arising from the site establishment activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of site establishment work; (d) details of how the site establishment activities described in subsection (a) of this condition will be carried out to: (i) meet the performance outcomes stated in the documents listed in Condition A1; and (ii) manage the risks identified in the risk analysis undertaken in subsection (c) of this condition; and (e) a program for monitoring the performance outcomes, including a program for construction noise monitoring, where appropriate or required. Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each ancillary facility.				
Ancillary Facilities	A19	With the exception of a Site Establishment Management Plan expressly nominated by the Planning Secretary to be endorsed by the ER, all Site Establishment Management Plans must be submitted to the Planning Secretary for approval one (1) month before the establishment of any ancillary facilities.	Full Compliance, except that the Sydney Metro must make submissions of Site Establishment Management Plans to the Planning Secretary. The Contractor must provide the Site Establishment Management Plan to the Sydney Metro 6 weeks before the establishment of	Yes	Not Triggered	SEMP requirement not triggered, as the size and scale of the ancillary facilities for the Power Enabling Work can be established in accordance with the ER endorsed CEMP.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
			any construction ancillary facility.			
Ancillary Facilities	A20	A Site Establishment Management Plan expressly nominated by the Planning Secretary to be endorsed by the ER must be submitted to the ER for endorsement one (1) month before the establishment of that ancillary facility or as otherwise agreed with the ER.	Full Compliance, except that the Sydney Metro must make submissions of Site Establishment Management Plans to the Planning Secretary. The Contractor must provide the Site Establishment Management Plan to the Sydney Metro 6 weeks before the establishment of any construction ancillary facility.	Yes	Not Triggered	N/A
Ancillary Facilities	A21	The use of ancillary facility for construction must not commence until the CEMP required by Condition C1 relevant CEMP Sub-plans required by Condition C5 and relevant Construction Monitoring Programs required by Condition C13 have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable). Note: This condition does not apply to Condition A22 or where the use of an ancillary facility is Low Impact Work or for Low Impact Work.	Full Compliance, except that the Sydney Metro will notify the Contractor when the relevant CEMP, CEMP Sub-plans and Construction Monitoring Programs have been approved by the Planning Secretary.	Yes	Not Triggered	CEMP Section 12.2
Ancillary Facilities	A22	Lunch sheds, office sheds, portable toilet facilities and the like, can be established and used where they have been assessed in the documents listed in Condition A1 or satisfy the following criteria:	Full Compliance	Yes	Not Triggered	CEMP Section 12.2

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(a) are located within or adjacent to the Construction Boundary; and (b) have been assessed by the ER to have - (i) minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the ICNG, traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and (ii) minimal environmental impact with respect to waste management and flooding, and (iii) no impacts on biodiversity, soil and water, and Heritage items beyond those already approved under other terms of this approval.				
Boundary Screening	A23	Boundary screening must be erected around ancillary facilities that are adjacent to sensitive land use(s) for the duration that the ancillary facility is in use unless otherwise agreed with relevant affected residents, business operators or landowners.	Full Compliance	Yes	No - Boundary Screening is not required to be installed around the ancillary facilities for noise or visual amenity as there are no sensitive land-uses adjacent to the ancillary sites. Screening may be implemented for security purposes.	N/A
Boundary Screening	A24	Boundary screening required under Condition A23 must minimise visual impacts on adjacent sensitive land use(s).	Full Compliance	Yes	No - Boundary Screening is not required to be installed around the ancillary facilities for noise or visual amenity as there are no sensitive land-uses adjacent to the ancillary sites. Screening may be implemented for security purposes.	N/A
Independent Appointments	A25	All Independent Appointments required by the terms of this approval must have regard to the	Full Compliance (with A25) to	Yes	Yes	Independent appointment

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Department's guideline Seeking approval from the Department for the appointment of independent experts (DPIE, 2020) and hold current membership of a relevant professional body, unless otherwise agreed by the Planning Secretary.	facilitate and assist the Planning Secretary in any such audit. Sydney Metro must make it a term of their engagement of an Independent Appointment that the Independent Appointment facilitate and assist the Planning Secretary in any such audit.			nominations will be made by Syd Metro.
Independent Appointments	A26	The Planning Secretary may at any time commission an audit of how an Independent Appointment has exercised their functions. The Proponent must: (a) facilitate and assist the Planning Secretary in any such audit; and (b) make it a term of their engagement of an Independent Appointment that the Independent Appointment facilitate and assist the Planning Secretary in any such audit.	Sydney Metro	Yes	Yes	N/A
Independent Appointments	A27	Upon completion of an audit under Conditions A26 above, the Planning Secretary may withdraw its approval of an Independent Appointment should they consider the Independent Appointment has not exercised their functions in accordance with this approval. Note: Conditions A26 and A27 apply to all Independent Appointments including the ER and Independent Auditor.	Sydney Metro	Yes	Yes	N/A
Environmental Representative	A28	Work must not commence until an Environmental Representative (ER) has been nominated by the Proponent and approved by the Planning Secretary.	Full Compliance, except that Sydney Metro will notify the Contractor when an ER has been approved.	Yes	Yes	CEMP Section 8.4
Environmental Representative	A29	The proposed ER must be a suitably qualified and experienced person(s) who was not involved in the preparation of the documents listed in Condition A1 and is independent from the	Not Applicable	Yes	Yes	CEMP Section 8.4

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		design and construction personnel for the CSSI and those involved in the delivery of it.				
Environmental Representative	A30	The Proponent may engage more than one ER for the CSSI, in which case the functions to be exercised by an ER under the terms of this approval may be carried out by any ER that is approved by the Planning Secretary for the purposes of the SSI.	Not Applicable	Yes	Yes	CEMP Section 8.4
Environmental Representative	A31	The ER must meet the requirements of the Department's Environmental Representative Protocol (DPE, 2018).	Not Applicable	Yes	Yes	CEMP Section 8.4
Environmental Representative	A32	For the duration of the work until the commencement of operation, or as agreed with the Planning Secretary, the approved ER must: (a) receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI; (b) consider and inform the Planning Secretary on matters specified in the terms of this approval; (c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community; (d) review documents identified in Conditions A10, A18, A20, C1, C5 and C13 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so: (i) endorse the documents before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or (ii) endorse the documents before the implementation of such documents (if those documents are only required to be submitted to the Planning Secretary / Department for information or are not required to be submitted to the Planning Secretary / Department); (iii) provide a written statement to the Planning Secretary advising the documents have been endorsed; (e) for documents that are required to be submitted to the Planning Secretary / Department for information under (d)(ii) above, the documents must be submitted as soon as practicable to the Planning Secretary / Department after endorsement by the ER, unless	Full Compliance to the extent that it applies to the Principal Contractor's obligation to comply with Condition A32.	Yes	Yes	CEMP Section 8.4 and 6.5.2

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		<p>otherwise agreed by the Planning Secretary;</p> <p>(f) regularly monitor the implementation of the documents listed in Conditions A10, A18, A20, C1, C5 and C13 to ensure implementation is being carried out in accordance with the document and the terms of this approval;</p> <p>(g) as may be requested by the Planning Secretary, help plan or attend audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36;</p> <p>(h) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints received directly by the Department;</p> <p>(i) consider or assess the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities and the like as required by Condition A22; and</p> <p>(j) consider any minor amendments to be made to the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs without increasing impacts to nearby sensitive land use(s), and are consistent with the terms of this approval and the Site Establishment Management Plan, CEMP, CEMP Sub-plans and construction monitoring programs approved by the Planning Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any</p>				
Environmental Representative	A33	<p>The Proponent must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition A32 (including preparation of the ER monthly report), as well as:</p> <p>(a) the Complaints Register (to be provided on a weekly basis or as requested); and</p> <p>(b) a copy of any assessment carried out by the Proponent of whether proposed work is consistent with the approval (which must be provided to the ER before the commencement of the subject work).</p>	Full Compliance	Yes	Yes	CEMP Section 8.4 and 6.5
Notification of Commencement	A34	The Department, and relevant Councils must be notified in writing of the date of commencement of construction at least seven (7) days before the commencement of construction.	Sydney Metro	Yes	Yes	By SM-WSA
Notification of Commencement	A35	If construction of the CSSI is to be staged, the Department, Liverpool City Council and Penrith City Council must be notified	Sydney Metro	Yes	Yes	By SM-WSA

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		in writing at least seven (7) days before the commencement of each stage, of the date of the commencement of that stage.				
Auditing	A36	Independent Audits of the CSSI must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (DPIE, 2020).	Sydney Metro	Yes	Yes	By SM-WSA
Auditing	A37	Notwithstanding Condition A36, the Proponent may prepare an audit program to outline the scope and timing of each independent audit that will be undertaken during construction. If prepared, the audit program must be developed in consultation with, and approved by, the Planning Secretary prior to commencement of the first audit and implemented throughout construction.	Sydney Metro will arrange and pay for the Independent Audits and the Contractor will participate in the Independent Audit process of the CSSI. Partly TfNSW/ACI	Yes	Yes	Abergeldie will be available to be involved in independent audits.
Auditing	A38	Proposed independent auditors must be approved by the Planning Secretary before the commencement of an Independent Audit.	Sydney Metro	Yes	Yes - SM-WSA to notify Planning Secretary.	By SM-WSA
Auditing	A39	The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the Independent Audit Post Approval Requirements (DPIE, 2020), upon giving at least four (4) weeks' notice (or timing as stipulated by the Planning Secretary) to the Proponent of the date upon which the audit must be commenced.	Sydney Metro will arrange and pay for the Independent Audits and the Contractor will participate in the Independent Audit process of the CSSI. Partly TfNSW/ACI	Yes	Yes	Abergeldie will be available to be involved in independent audits.
Auditing	A40	Independent Audit Reports and the Proponent's response to audit findings must be submitted to the Planning Secretary within two (2) months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approval Requirements (DPIE, 2020), unless otherwise agreed by the Planning Secretary.	Full Compliance, except that Sydney Metro will submit Independent Audit Reports to the Planning Secretary. Partly TfNSW/ACI	Yes	Yes	Abergeldie will be available to be involved in independent audits.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Incident Notification and Reporting	A41	The Planning Secretary must be notified via phone or in writing via the Major Projects website as soon as possible and no later than 12 hours after the Proponent becomes aware of an incident. Any notification via phone must be followed up by a notification in writing via the Major Projects website within 24 hours of the initial phone call. The written notification must identify the CSSI (including the application number and the name of the CSSI if it has one) and set out the location and general nature of the incident.	Full Compliance, except that Sydney Metro will submit Independent Audit Reports to the Planning Secretary.	Yes	Yes	CEMP Section 9.3
Incident Notification and Reporting	A42	Any incident that affects or could reasonably affect the WaterNSW Pipelines corridor must also be reported to WaterNSW on the 24-hour Incident Notification Number 1800 061 069 within the same timeframes.	Not Applicable	No	No	N/A
Incident Notification and Reporting	A43	Subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix A.	Full Compliance	Yes	Yes	CEMP Section 7 Appendix N & Contract requirements for incidents
Incident Notification and Reporting	A44	The Planning Secretary must be notified in writing via the Major Projects website within seven (7) days after the Proponent becomes aware of any non-compliance with the terms of this approval.	The Principal Contractor shall provide Sydney Metro with the written notification to allow for Sydney Metro to report to the Planning Secretary.	Yes	Yes	CEMP Section 9.2
Incident Notification and Reporting	A45	A non-compliance notification must identify the CSSI (including the application number for it), set out the condition of approval that the development is non-compliant with, the way in which it does not comply and the reasons for the non-compliance (if known) and what actions have been, or will be undertaken to address the non-compliance. Note: A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Sydney Metro will raise and expect investigation and actions to be carried out by the Principal Contractor. The Principal Contractor shall provide Sydney Metro with the Incident Report required under Condition A45.	Yes	Yes	CEMP Section 9.2

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Identification of Workforce Compounds	A46	All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Full Compliance where spoil haulage is undertaken.	Yes	Yes	Section 20.2
Identification of Workforce Compounds	A47	The CSSI name, application number, telephone number, postal address and email address required under Condition B3 must be available on site boundary fencing / hoarding at each ancillary facility before the commencement of construction. This information must also be provided on the website required under Condition B11.	Full Compliance	Yes	Yes	Section 12.2.2
Community Information, Consultation and Involvement	B1	The Overarching Community Communication Strategy as provided in the documents listed in Condition A1, or updated Strategy must be implemented for the duration of the work. Should the Overarching Community Communication Strategy be updated, a copy must be provided to the Planning Secretary for information.	The Principal Contractor must meet any obligation required of them by the OCCS.	Yes	Yes	Abergeldie will comply with the obligations of the Overarching CCS.
Community Information, Consultation and Involvement	B2	A Complaints Management System must be prepared and implemented before the commencement of any work and maintained for the duration of construction and for a minimum for 12 months following completion of construction of the CSSI.	The Principal Contractor must participate in the implementation of the Complaints Management System and provide Sydney Metro with all information it requires to comply with Condition B2.	Yes	Yes	Abergeldie will participate in the implementation of the complaints management system
Community Information, Consultation and Involvement	B3	The following information must be available to facilitate community enquiries and manage complaints before the commencement of work and for 12 months following the completion of construction: (a) a 24- hour telephone number for the registration of complaints and enquiries about the CSSI; (b) a postal address to which written complaints and enquires may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; and (d) a mediation system for complaints unable to be resolved.	The Principal Contractor must participate in the implementation of the Complaints Management System and provide the Sydney Metro with all information it requires to comply with Condition B3.	Yes	Yes	Abergeldie will participate in the implementation of the complaints management system

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		This information must be accessible to all in the community regardless of age, ethnicity, disability or literacy level.				
Community Information, Consultation and Involvement	B4	<p>A Complaints Register must be maintained recording information on all complaints received about the CSSI during the carrying out of any work and for a minimum of 12 months following the completion of construction. The Complaints Register must record the:</p> <ul style="list-style-type: none"> (a) number of complaints received; (b) date and time of the complaint; (c) number of people (in the household) affected in relation to a complaint, if relevant; (d) method by which the complaint was made; (e) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; (f) issue of the complaint; (g) means by which the complaint was addressed and whether resolution was reached, with or without mediation; and (h) if no action was taken, the reason(s) why no action was taken. 	The Principal Contractor must participate in the implementation of the Complaints Management System and provide Sydney Metro with all information it requires to comply with Condition B4 until substantial portion completion.	Yes	Yes	Abergeldie will participate in the implementation of the complaints management system
Community Information, Consultation and Involvement	B5	<p>Complainants must be advised of the following information before, or as soon as practicable after, providing personal information:</p> <ul style="list-style-type: none"> (a) the Complaints Register may be forwarded to government agencies, including the Department (Department of Planning Industry and Environment, 4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150), to allow them to undertake their regulatory duties; (b) by providing personal information, the complainant authorises the Proponent to provide that information to government agencies; (c) the supply of personal information by the complainant is voluntary; and (d) the complainant has the right to contact government agencies to access personal information held about them and to correct or amend that information (Collection Statement). The Collection Statement must be included on the Proponent or development website to make prospective complainants aware of their rights under the Privacy and Personal Information 	The Principal Contractor must participate in the implementation of the Complaints Management System and provide Sydney Metro with all information it requires to comply with Condition B5.	Yes	Yes	Abergeldie will participate in the implementation of the complaints management system

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Protection Act 1998 (NSW). For any complaints made in person, the complainant must be made aware of the Collection Statement.				
Community Information, Consultation and Involvement	B6	The Complaints Register must be provided to the Planning Secretary upon request, within the timeframe stated in the request. Note: Complainants must be advised that the Complaints Register may be forwarded to Government agencies to allow them to undertake their regulatory duties.	The Principal Contractor must participate in the implementation of the Complaints Management System and provide Sydney Metro with all information it requires to comply with Condition B6 until substantial portion completion.	Yes	Yes	Abergeldie will participate in the implementation of the complaints management system
Community Information, Consultation and Involvement	B7	A Community Complaints Mediator that is independent of the design and construction personnel must be engaged by the Proponent, upon the referral of the complaint by the ER in accordance with the Overarching Community Communication Strategy.	Sydney Metro	Yes	Yes - partly	Appointed by SM-WSA.
Community Information, Consultation and Involvement	B8	The role of the Community Complaints Mediator is to provide independent mediation services for any reasonable and unresolved complaint referred by the ER where a member of the public is not satisfied by the Proponent's response. Where a Community Complaints Mediator is required, a mediator accredited under the National Mediator Accreditation System (NMAS), administered by the Mediator Standards Board must be appointed.	The Principal Contractor must facilitate the Community Complaints Mediation process and provide the Community Complaints Mediator with any information or documentation they require to meet their obligations under the CSSI approval.	Yes	Yes - partly	Abergeldie will participate in the implementation of the complaints mediation process.
Community Information,	B9	The Community Complaints Mediator will: (a) review any unresolved disputes, referred by the ER in	The Principal Contractor must	Yes	Yes - partly	Abergeldie will participate in the

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Consultation and Involvement		accordance with the Overarching Community Communication Strategy; (b) make recommendations to the Proponent to satisfactorily address complaints, resolve disputes or mitigate against the occurrence of future complaints or disputes; and (c) provide a copy of the recommendations, and the Proponent's response to the recommendations, must be submitted to the Planning Secretary within one month of the recommendations being made.	facilitate the Community Complaints Mediation process and provide the Community Complaints Mediator with any information or documentation they require to meet their obligations under the CSSI approval.			implementation of the complaints mediation process.
Community Information, Consultation and Involvement	B10	Community Complaints Mediation will not be enacted before the Complaints Management System required by Condition B2 has been executed for a complaint and will not consider issues such as property acquisition, where other dispute processes are provided for in this approval, statute or clear government policy and resolution processes are available, or matters which are not within the scope of this CSSI.	Sydney Metro	Yes	Yes - partly	Abergeldie will participate in the implementation of the complaints mediation process.
Community Information, Consultation and Involvement	B11	A website or webpage providing information in relation to the CSSI must be established before commencement of work and maintained for the duration of construction, and for a minimum of 24 months following the completion of all stages of construction of the CSSI. Up-to-date information (excluding confidential, private, commercial information or other documents as agreed to by the Planning Secretary) must be published before the relevant work commencing and maintained on the website or dedicated pages including: (a) information on the current implementation status of the CSSI; (b) a copy of the documents listed in Condition A1, and any documentation relating to any modifications made to the CSSI or the terms of this approval; (c) a copy of this approval in its original form, a current consolidated copy of this approval (that is, including any approved modifications to its terms), and copies of any approval granted by the Minister to a	The Principal Contractor will comply with B11 (a), (b) and (c) and provide a link on Sydney Metro's website to the Principal Contractors website. Any documentation, statutory approval, licence or permit required to be produced or obtained by the Principal	Yes	Yes - partly	Abergeldie will comply with the obligations of this condition in discussion and consultation with SM.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		modification of the terms of this approval, or links to the referenced documents where available; (d) a copy of each statutory approval, licence or permit required and obtained in relation to the CSSI, or where the issuing agency maintains a website of approvals, licences or permits, a link to that website; (e) a current copy of each document required under the terms of this approval, which must be published within one (1) week of its approval or before the commencement of any work to which they relate or before their implementation, as the case may be; and (f) a copy of the audit reports required under this approval. Where the information / document relates to a particular work or is required to be implemented, it must be published before the commencement of the relevant work to which it relates or before its implementation. All information required in this condition is to be provided on the website or webpage, and easy to navigate.	Contractor that is also required to be on a website under this condition, must be uploaded or linked to the Principal Contractors website.			
Construction Environmental Management	C1	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 will be implemented and achieved during construction.	Full Compliance	Yes	Yes	CEMP section 3.2
Construction Environmental Management	C2	With the exception of any CEMPs expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMPs must be submitted to the Planning Secretary for approval. Note: The Planning Secretary will consider the assessment of the predicted level of environmental risk and potential level of community concern required under Condition A11(e) when deciding whether any CEMP's may be endorsed by the ER.	The Principal Contractor, except Sydney Metro will submit the CEMP to the Planning Secretary and will confirm approval to the Principal Contractor.	Yes	No - This CEMP is not nominated to go to the Planning Secretary.	N/A
Construction Environmental Management	C3	The CEMP(s) not requiring the Planning Secretary's approval must be submitted to the ER for endorsement no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage. That CEMP must obtain the endorsement of the ER as being consistent with the conditions	The Principal Contractor, except Sydney Metro will submit the CEMP to the ER and will confirm approval to	Yes	Yes	ER Endorsement

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		of this approval and all undertakings made in the documents listed in Condition A1.	the Principal Contractor.			
Construction Environmental Management	C4	Any CEMP to be approved by the Planning Secretary must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	The Principal Contractor, except Sydney Metro will submit the CEMP to the Planning Secretary/ER and will confirm approval to the Principal Contractor.	Yes	Yes - As per staging report the AEW roadworks CEMP is to be submitted for endorsement and approval to the ER	ER Approval
Construction Environmental Management	C5	Of the CEMP Sub-plans required under Condition C1, the following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan. Details of issues raised by a government agency during consultation (as required by Condition A6) must be provided with the relevant CEMP Sub-plan when submitted to the Planning Secretary / ER (whichever is applicable). Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why. Required CEMP Sub-plan Relevant government agencies to be consulted for each CEMP Sub-plan a) Noise and Vibration - Relevant Councils and WaterNSW (in relation to its assets) b) Flora and Fauna- DPIE EES, DPI Fisheries, and Relevant Councils c) Soil and Water- DPI Fisheries, and Relevant Councils d) Non-Aboriginal heritage- Relevant Councils, WaterNSW and Heritage NSW Note: CEMP Sub-plan(s) may reflect the construction of the project through geographical activities, temporal activities or activity based staging.	The Principal Contractor, except Sydney Metro will submit the CEMP to the Planning Secretary/ER and will confirm approval to the Principal Contractor.	Not Triggered Risks will be managed in accordance with Table 4-1	No - No Sub-Plans required as stated in Staging Report. DVNIS and WRMP have been prepared for ease rather than as a result of an increased risk or requirement of the Staging Report.	N/A
Construction Environmental Management	C6	The CEMP Sub-plans must state how: (a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved; (b) the mitigation measures identified in the documents listed in Condition A1 will be implemented; (c) the relevant terms of this approval will be complied with; and	Full Compliance	Yes	No - No Sub-plans Required as per staging report.	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles.				
Construction Environmental Management	C7	With the exception of any CEMP Sub-plans expressly nominated by the Planning Secretary to be endorsed by the ER, all CEMP Sub-plans must be submitted to the Planning Secretary for approval.	The Principal Contractor, except Sydney Metro will submit the CEMP to the Planning Secretary/ER and will confirm approval to the Principal Contractor.	Yes	No - No Sub-plans Required as per staging report.	N/A
Construction Environmental Management	C8	The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1. Any of these CEMP Sub-plans must be submitted to the ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.	The Principal Contractor, except Sydney Metro will submit the CEMP to the ER and will confirm endorsement to the Principal Contractor.	Yes	No - No Sub-plans Required as per staging report.	N/A
Construction Environmental Management	C9	Any of the CEMP Sub-plans to be approved by the Planning Secretary must be submitted to the Planning Secretary with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.	The Principal Contractor, except the Sydney Metro will submit the CEMP to the Planning Secretary and will confirm approval to the Principal Contractor.	Yes	No - No Sub-plans Required as per staging report.	N/A
Construction Environmental Management	C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Planning Secretary or endorsed by the ER (whichever is applicable), unless otherwise agreed by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary or endorsed by the ER (whichever is applicable), including any minor amendments approved by the ER, must be implemented	The Principal Contractor, except Sydney Metro will confirm approval to the Principal Contractor.	Yes	Yes	CEMP and appendices will be endorsed by the ER prior to construction commencing.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		for the duration of construction.				
Construction Environmental Management	C11	In addition to the relevant requirements of the CEMP, the Flora and fauna CEMP Sub-plan must include, but not be limited to: (a) details of how the requirements of Condition E11 will be met; (b) details of a dewatering plan of farm dams including: (i) supervision of dewatering by a suitably qualified ecologist; (ii) a methodology for the transfer of native fauna species known to inhabit and/or use the dam; (iii) the location and suitability of the proposed relocation sites; and (iv) any potential impacts of relocating the fauna to the relocation sites (c) protocols for incidental finds of threatened species and ecological communities within the construction boundary.	Not Applicable	No	No	N/A
Construction Environmental Management	C12	In addition to the relevant requirements of the CEMP, the Soil and Water CEMP Sub- Plan must include but not be limited to: (a) details how the requirements of Conditions E127, E128 and E129 will be met; and (b) the unexpected contaminated finds protocol required by Condition E98.	Not Applicable	No	No	N/A
Construction Environmental Management	C13	The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies (as required by Condition A6) identified for each to compare actual performance of construction of the CSSI against the performance predicted in the documents listed in Condition A1 or in the CEMP. Where a government agency(ies) request(s) is not included, the Proponent must provide the Planning Secretary / ER (whichever is applicable) justification as to why. Required Construction Monitoring Programs Relevant government agencies to be consulted for each Construction Monitoring Program a) Noise and Vibration- Relevant Councils and WaterNSW (in relation to its assets) b) Surface water quality- DPIE Water, DPI Fisheries, and Relevant Councils c) Groundwater- DPIE Water d) Air Quality- Relevant Councils	Not Applicable	Risks will be managed in accordance with Table 4-1	Yes - partly	Air quality to be has been developed and included within relevant CEMP section . Due to size and extent of works consultation is not deem to be applicable, however Air Quality Monitoring Program will be sent to Liverpool Council for information.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Construction Monitoring Programs	C14	Each Construction Monitoring Program must provide: (a) details of baseline data available including the period of baseline monitoring; (b) details of baseline data to be obtained and when; (c) details of all monitoring of the project to be undertaken; (d) the parameters of the project to be monitored; (e) the frequency of monitoring to be undertaken; (f) the location of monitoring; (g) the reporting of monitoring results and analysis results against relevant criteria; (h) details of the methods that will be used to analyse the monitoring data; (i) procedures to identify and implement additional mitigation measures where the results of the monitoring indicated unacceptable project impacts; (j) a consideration of SMART principles; (k) any consultation to be undertaken in relation to the monitoring programs; and (l) any specific requirements as required by Conditions C15 to C16.	Not Applicable	Risks will be managed in accordance with Table 4-1	No - C13 isn't applicable to this work.	N/A
Construction Monitoring Programs	C15	The Noise and Vibration Construction Monitoring Program must include: (a) noise and vibration monitoring at representative residential and other locations (including at the worst-affected residences), subject to property owner approval, to confirm construction noise and vibration levels; (b) monitoring undertaken during the day, evening and night-time periods throughout the construction period and cover the range of activities being undertaken; (c) method and frequency for reporting monitoring results; and (d) a process to undertake real time noise and vibration monitoring. The results of the monitoring must be readily available to the construction team, the Proponent and ER. The Planning Secretary and EPA must be provided with access to the results on request.	Not Applicable	Risks will be managed in accordance with Table 4-1	No	N/A
Construction Monitoring Programs	C16	Groundwater Construction Monitoring Program must include: (a) groundwater monitoring networks at each construction excavation site predicted to intercept groundwater in the documents listed in Condition A1;	Not Applicable	Risks will be managed in accordance with Table 4-1	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(b) detail of the location of all monitoring bores with nested sites to monitor both shallow and deep groundwater levels and quality; (c) define the location of saltwater interception monitoring where sentinel groundwater monitoring bores will be installed between the saline sources of the estuary or river and that of the stations or shafts; (d) results from existing monitoring bores; (e) monitoring and gauging of groundwater inflow to the excavations, appropriate trigger action response plan for all predicted groundwater impacts upon each noted neighbouring groundwater system component for each excavation Ancillary facility; (f) trigger levels for groundwater quality, salinity and groundwater drawdown in monitoring bores and / or other groundwater users; (g) daily measurement of the amount of water discharged from the water treatment plants; (h) water quality testing of the water discharged from treatment plants; (i) management and mitigation measures and criteria including measures to address impacts on groundwater dependent ecosystems; (j) groundwater inflow to the excavations to enable a full accounting of the groundwater take from the Sydney Basin Central Groundwater Source; and (k) reporting of groundwater gauging at excavations, groundwater monitoring, groundwater trigger events and action responses; and (l) methods for providing the data collected to Sydney Water where discharges are directed to their assets.				
Construction Monitoring Programs	C17	With the exception of any Construction Monitoring Programs expressly nominated by the Planning Secretary to be endorsed by the ER, all Construction Monitoring Programs must be submitted to the Planning Secretary for approval.	Not Applicable	Risks will be managed in accordance with Table 4-1	No	N/A
Construction Monitoring Programs	C18	The Construction Monitoring Programs not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all undertakings made in the documents listed in Condition	Not Applicable	Risks will be managed in accordance with Table 4-1	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		A1. Any of these Construction Monitoring Programs must be submitted to the ER for endorsement at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.				
Construction Monitoring Programs	C19	Any of the Construction Monitoring Programs which require Planning Secretary approval must be endorsed by the ER and then submitted to the Planning Secretary for approval at least one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage.	Not Applicable	No	No	N/A
Construction Monitoring Programs	C20	Unless otherwise agreed with the Planning Secretary, construction must not commence until the Planning Secretary has approved, or the ER has endorsed (whichever is applicable), all of the required Construction Monitoring Programs and all relevant baseline data for the specific construction activity has been collected.	Full Compliance	Yes	No - C13 isn't applicable to this work.	N/A
Construction Monitoring Programs	C21	The Construction Monitoring Programs, as approved by the Planning Secretary or the ER has endorsed (whichever is applicable), including any minor amendments approved by the ER, must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Planning Secretary or the ER (whichever is applicable), whichever is the greater.	Full Compliance	Yes	No - C13 isn't applicable to this work.	N/A
Construction Monitoring Programs	C22	The results of the Construction Monitoring Programs must be submitted to the Planning Secretary, ER and relevant regulatory agencies, for information in the form of a Construction Monitoring Report at the frequency identified in the relevant Construction Monitoring Program. Note: Where a relevant CEMP Sub-plan exists, the relevant Construction Monitoring Program may be incorporated into that CEMP Sub-plan.	Full Compliance	Yes	No - C13 isn't applicable to this work.	N/A
Operational Environmental Management	D1	An Operational Environmental Management Plan (OEMP) must be prepared having regard to the Environmental Management Plan Guideline for Infrastructure Projects (Department Planning, Industry and Environment 2020). The OEMP must detail how the performance outcomes, commitments and mitigation measures made and identified in the documents listed in Condition A1 will be implemented and achieved during	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		operation. This condition (Condition D1) does not apply if Condition D2 of this approval applies.				
Operational Environmental Management	D2	An OEMP is not required for the CSSI if the Proponent has an Environmental Management System (EMS) or equivalent as agreed with the Planning Secretary, and demonstrates, to the satisfaction of the Planning Secretary, that through the EMS or equivalent: a. the performance outcomes, commitments and mitigation measures, made and identified in the documents listed in Condition A1, and specified relevant terms of this approval can be achieved; b. issues identified through ongoing risk analysis can be managed; and c. procedures are in place for rectifying any non-compliance with this approval identified during compliance auditing, incident management or any other time during operation.	Not Applicable	No	No	N/A
Operational Environmental Management	D3	Where an OEMP is required, the Proponent must include the following OEMP Sub- plans in the OEMP: Required OEMP Sub-plan - Relevant government agencies to be consulted for each OEMP Sub-plan (a) Groundwater Management - DPIE Water (b) Bushfire Management Plan - NSW Rural Fire Service (c) Flood Emergency Management Plan - EES Group, DPIE Water, SES and Relevant Council(s)	Not Applicable	No	No	N/A
Operational Environmental Management	D4	Each of the OEMP Sub-plans must include the information set out in Condition D2 of this approval.	Not Applicable	No	No	N/A
Operational Environmental Management	D5	The OEMP Sub-plans must be developed in consultation with relevant government agencies as identified in Condition D3 and must include information requested by an agency to be included in an OEMP Sub-plan during such consultation. Details of all information requested by an agency to be included in an OEMP Sub- plan as a result of consultation, including copies of all correspondence from those agencies, must be provided with the relevant OEMP Sub-Plan.	Not Applicable	No	No	N/A
Operational Environmental Management	D6	The OEMP Sub-plans must be submitted to the Planning Secretary as part of the OEMP.	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Operational Environmental Management	D7	The OEMP or EMS or equivalent as agreed with the Planning Secretary, must be submitted to the Planning Secretary for information no later than one (1) month before the commencement of operation.	Not Applicable	No	No	N/A
Operational Environmental Management	D8	The OEMP or EMS or equivalent as agreed with the Planning Secretary, as submitted to the Planning Secretary and amended from time to time, must be implemented for the duration of operation and the OEMP or EMS or equivalent must be made publicly available before the commencement of operation.	Not Applicable	No	No	N/A
Air Quality	E1	All reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during construction.	Full Compliance	Yes	yes	CEMP Section 19
Biodiversity	E2	The clearing of native vegetation must be minimised to the greatest extent practicable with the objective of reducing impacts to threatened ecological communities and threatened species habitat.	Full Compliance	Yes	Yes	CEMP Section 16
Biodiversity	E3	Impacts to plant community types must not exceed those identified in the documents listed in Condition A1 of this Exhibit, unless otherwise approved by the Planning Secretary. In requesting the Planning Secretary's approval, an assessment of the additional impact(s) to plant community types and an updated ecosystem and / or species credit requirement under Condition E4 below, if required, must be provided.	The Principal Contractor must provide Sydney Metro with any assessments of additional impacts to plant community types and updated ecosystem and/or species credit requirements. Sydney Metro will submit all requests to the Planning Secretary under Condition E3	Yes	Yes	CEMP Section 16 . Offset to be obtained by Sydney Metro.
Biodiversity	E4	Prior to impacts on the biodiversity values set out in Table 3 and Table 4, the number and classes of ecosystem credits and species credits (1 ke-for-like) must be retired. Ecosystem Credits Plant Community Type (PCT) ID and name 724: Broad-leaved Ironbark- Grey Box - Melaleuca decora grassy open forest on clay/gravel soils of the Cumberland	Sydney Metro will retire credits specified in the EIS.	Yes	Yes	CEMP Section 16 . Offset to be obtained by Sydney Metro.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Plain, Sydney Basin Bioregion -246 835: Forest Red Gum- Rough-barked Apple grassy woodland on alluvial flats of the Cumberland Plain, Sydney Basin Bioregion- 217 849: Grey Box- Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion -204 1800: Swamp Oak open forest on riverflats of Cumberland Plain and Hunter Valley -181 (Total 848) Acacia bynoeana (Bynoe's Wattle)- 31 Acacia pubescens (Downy Wattle) -54 Allocasuarina glareicola -47 Cynanchum elegans (White-flowered Wax Plant) -18 Dillwynia tenuifolia -72 Grevillea juniperina subsp . juniperina (Juniper-leaved Grevillea) -153 Grevillea parviflora subsp . parviflora (Small-flower Grevillea) -32 Marsdenia viridiflora subsp . viridiflora (Endangered population -137 Marsdenia viridiflora R . Br. subsp viridiflora Micromyrtus minutiflora -47 Pimlea curvilora var. curvilora -18 Pimlea spicata (Spiked Rice-flower) -22 Pultenaea parviflora -31 Meridolum comeovirens Cumberland Plain Land Snail -159 Myotis Macropus (Southern Myotis) -292 Total - 1,113 Table 4: Species credits required Note: Credits have been calculated using the Biodiversity Assessment Method.				
Biodiversity	E5	The requirement to retire like-for-like ecosystem credits and species credits in Condition E4 may be satisfied by payment to the Biodiversity Conservation Fund of an amount equivalent to the number and classes of ecosystem credits and species credits.	Sydney Metro	Yes	Yes	Offset to be obtained by Sydney Metro.
Biodiversity	E6	Where evidence of compliance with the Ancillary rules: Reasonable steps to seek like- for-like biodiversity credits for the purpose of applying the variation rules has been provided to the Planning Secretary, variation rules may be applied to retire the relevant ecosystem credits and species credits as set out in the BAM Biodiversity Credit Report (Variation)	Sydney Metro	Yes	Yes	Offset to be obtained by Sydney Metro.
Biodiversity	E7	Evidence of the retirement of credits in satisfaction of Condition E4 or payment to the Biodiversity Conservation Fund in	Sydney Metro	Yes	Yes	Offset to be obtained by Sydney Metro.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		satisfaction of Condition E5 must be provided to the Planning Secretary prior to commencement of works.				
Key Fish Habitat	E8	The Proponent must minimise impacts to Key Fish Habitat (KFH) as defined in Policy and Guidelines for Fish Habitat Conservation and Management (DPI, 2013 update). Residual impacts to KFH, following the implementation of habitat rehabilitation or other environmental compensation measures, must be offset at a ratio of 2:1 habitat offset requirement in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management (DPI, 2013 update) and in consultation with DPI Fisheries.	Not Applicable	No	No	N/A
Key Fish Habitat	E9	Where offsets are required in accordance with Condition E8, payment of the habitat offset requirement must be made to the DPI Fish Conservation Trust Fund prior to the commencement of Work that impacts KFH	Not Applicable	No	No	N/A
Key Fish Habitat	E10	Where offsets are required in accordance with Condition E8, the Proponent must submit to the Planning Secretary a receipt confirming payment to the DPI Fish Conservation Trust Fund within one (1) month of making the payment.	Not Applicable	No	No	N/A
Nest Boxes	E11	Nest Boxes must be installed one (1) month prior to any removal of existing tree hollows and/or the release of any captured hollow dependent fauna.	Full Compliance	Yes	No - no hollow bearing trees identified	CEMP Section 16 if found to be required
Re-use of Timber	E12	Prior to vegetation clearing, the Proponent must identify where it is practicable for the CSSI to reuse native trees and vegetation that are to be removed. If it is not possible for the CSSI to reuse removed native trees and vegetation, the Proponent must consult with the relevant council(s), NSW National Parks & Wildlife Service, Western Sydney Parklands Trust, Greater Sydney Local Land Services, Landcare groups, DPI Fisheries and any additional relevant government agencies to determine if: (a) hollows, tree trunks (greater than 25-30 centimetres in diameter and 2-3 metres in length), mulch, bush rock and root balls salvaged from native vegetation impacted by the CSSI; and (b) collected plant material, seeds and/or propagated plants from native vegetation impacted by the CSSI,	Full Compliance	Yes	Yes	CEMP Section 16

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		could be used by others in habitat enhancement and rehabilitation work, before pursuing other disposal options.				
	E13	<p>Revegetation and the provision of replacement trees must be informed by a Tree Survey undertaken during detailed design. The Tree Survey must identify the number, type and location of any trees to be removed, except for trees that are offset under Condition E4. The Tree Survey must be submitted to the Planning Secretary for information with the Place, Urban Design and Corridor Landscape Plan required under Condition E79.</p> <p>Where trees are to be removed, the Proponent must provide a net increase in the number of replacement trees at a ratio of 2:1, except trees that are offset under Condition E4. Replacement trees must have a minimum pot size consistent with the relevant authority's plans / programs / strategies for vegetation management, street planting, or open space landscaping, or as agreed by the relevant authority(ies).</p> <p>Note: For the purposes of this condition, the relevant authority is that State or local government authority that owns or manages the land on which the replacement trees will be planted.</p>	Principal Contractor is responsible for undertaking Tree Surveys during detailed design and providing these to the Sydney Metro prior to vegetation removal.	Yes	Yes	If trees are proposed to be removed, they will be documented in pre-clearing checklist, which will be provided to SM-WSA for approval prior to the removal of these trees.
Biodiversity	E14	<p>The Proponent must design the watercourse crossings and the east-west regional corridor (Patons Lane) crossing to achieve the following objectives:</p> <p>(a) design of viaducts to retain and minimise clearing/disturbance of native vegetation and maximise native plant growth under the structures;</p> <p>(i) maintain and/or improve riparian/terrestrial connectivity under the viaduct and bridge structures to maximise the corridor function;</p> <p>(ii) maximise the viaduct and bridge structures span over the riparian corridor and/or remnant native vegetation which-ever is the widest;</p> <p>(iii) minimise the clearing/disturbance of native vegetation and native riparian vegetation; and</p> <p>(iv) maximise light and moisture penetration under the viaduct and bridge structures to support native plant growth;</p> <p>(b) design of culverts and other crossings incorporate the following into the design to provide for movement of aquatic and terrestrial fauna;</p>	Not applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(i) elevated "dry" cells to encourage terrestrial movement, and recessed "wet" cells to facilitate the movement of aquatic fauna; (ii) maximise light penetration into the culvert structures; (iii) a naturalised base along the bed of the culvert; and fauna furniture' (such as rocks, logs, ropes and ledges) to facilitate fauna movement to maintain connectivity and provide fauna passage; (c) design of scour protection using natural solutions such as the revegetation of banks with local native species; and (d) details of remnant native vegetation including riparian vegetation. Note: These design objectives must form part of the Place Design and Corridor Landscape Plan required under Condition E79. The Proponent must consult with DPIE EES, DPI Fisheries and engage suitably qualified experts in fauna crossing design to achieve the outcomes of this condition.				
Flooding	E15	The CSSI must be designed and constructed with the objective of not exceeding the flood impacts presented in the documents listed in Condition A1 or with the objective of not exceeding the flood impact criteria in Table 5 whichever is greater, within and in the vicinity of the CSSI for all flood events up to and including the one (1) per cent Annual Exceedance Probability (AEP) flood event Table 5: Flood Impact Criteria Parameter Location Criteria Afflux - Land zoned as residential, industrial or commercial, and critical infrastructure (Maximum 10mm to buildings that are flood prone in existing condition, No new above floor flooding, Maximum 50mm below floor level) Roads: (Maximum 50mm), Land zoned as rural, primary production, environment or public recreation (Maximum 100mm) Velocity - All areas (Velocities are to remain below 1 metre per second, Where existing velocities exceed 1 metre per second increased by less than 10%) Flood Hazard - Residential and commercial land (No increase in the flood hazard or risk to life) Roads: (No increase in the flood hazard or risk to life. Flood Duration - Residential and commercial buildings (No	Not applicable	Yes	No - Design provided by SM-WSA/TfNSW	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		increase to duration of above floor flooding) Roads: (No more than 1 hour increase) Crown land, open space, farming, grazing and cropping land (No more than 1 hour increase. Measures identified in the documents listed in Condition A1 to limit flooding impacts or measures that achieve the same outcome must be incorporated into the detailed design of the CSSI.				
Flooding	E16	Updated modelling that incorporates these measures and is calibrated and validated with consideration of the results of the Wianamatta-South Creek Catchment Flood Assessment prepared by Infrastructure NSW as part of Stage 2 of the South Creek Sector Review must be prepared by a suitably qualified flood consultant. The modelling must identify changes in post-development flood behaviour including cumulative flood impacts associated with Western Sydney International Airport and the M12, where this information is available, prior to detailed design being finalised. Note: Independent persons are defined in the Seeking approval from the Planning Secretary for the appointment of independent experts (DPIE, 2020).	Not Applicable	No	No	N/A
Flooding	E17	Where flooding characteristics exceed the levels identified in Condition E15 above the Proponent must undertake the following: (a) consult with affected landowners for properties adversely flood affected as a result of the CSSI regarding appropriate mitigations; and (b) consult with the NSW State Emergency Service (SES) and Relevant Council(s) regarding the management of any continuous and residual flood risk from rarer flood events larger than the 1 per cent AEP and up to the probable maximum flood. In the event that the Proponent and the affected landowner cannot agree on the measures to mitigate the impact as described in Condition E15, the Proponent must engage a suitably qualified and experienced independent person to advise and assist in determining the impact and relevant mitigation measures.	Not Applicable	No	No	N/A
Flooding	E18	Flood information including flood reports, models and geographic information system outputs must be provided to the DPIE PDPS, Relevant Council(s), DPIE EES and the SES in	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		order to assist in preparing relevant documents and to reflect changes in flood behaviour as a result of Stage 1 of the CSSI. The DPIE PDPS, Relevant Council(s), DPIE EES and the SES must be notified in writing that the information is available no later than one (1) month following the completion of construction. Information requested by the DPIE PDPS, Relevant Council(s), DPIE EES or the SES must be provided no later than six (6) months following the completion of construction or within another timeframe agreed with the DPIE PDPS, Relevant Council(s), DPIE EES and the SES. The project flood models and data must be uploaded to the NSW Flood Data Portal and access must be provided to the DPIE PDPS, Relevant Council(s), DPIE EES and SES no later than one (1) month following the completion of construction.				
Heritage	E19	The Proponent must not destroy, modify or otherwise physically affect any Heritage item not identified in documents referred to in Condition A1. Unexpected heritage finds identified by the CSSI must be managed in accordance with the Unexpected Finds Protocol outlined in Conditions E34 to E36. Consideration of avoidance and redesign to protect unexpected finds of state heritage significance must be addressed where this condition applies.	Full Compliance	Yes	Yes	CEMP Section 15
Non Aboriginal Heritage	E20	The dismantling and reassembly of the jib crane at St Marys Station, if required, must only be undertaken under the supervision of a consultant experienced in the conservation of heritage machinery.	Not Applicable	No	No	N/A
Non Aboriginal Heritage	E21	The St Marys Goods Shed must not be destroyed, modified or otherwise adversely affected, except as identified in the documents listed in Condition A1.	Not Applicable	No	No	N/A
Heritage	E22	The Archaeological Research Design included in the documents listed in Condition A1 must be implemented during construction.	Not Applicable	No	No	N/A
Non Aboriginal Heritage	E23	Before commencement of archaeological excavation, the Proponent must, in consultation with Heritage NSW, nominate a suitably qualified Excavation Director, who complies with Heritage Council of NSW's Criteria for Assessment of Excavation Director (September 2019), to oversee and advise on matters associated with historical archaeology for the	Full Compliance	Yes	No - SM-WSA to nominate. No non-Aboriginal Heritage items are expected to be impacted as part of the Works.	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		approval of the Planning Secretary. The Excavation Director must be present to oversee excavation, advise on archaeological issues, advise on the duration and extent of oversight required during archaeological excavations consistent with the Archaeological Research Design and Excavation Methodology(s) identified in the documents listed in Condition A1. More than one Excavation Director may be engaged for CSSI to exercise the functions required under the conditions of this approval.			Aboriginal Cultural Heritage Clearance already undertaken by Kelleher Nightingale attached is APPENDIX L of CEMP	
Heritage	E24	Archival photographic digital recording must be undertaken for all listed heritage items which will be affected by the CSSI. The recordings must be undertaken prior to the commencement of Work which may impact the items and documented in an Archival Recording Report. The recordings must include buildings, structures and landscape features and detailed maps showing the location of features. The archival recording must be prepared in accordance with How to Prepare Archival Records of Heritage Items (NSW Heritage Office, 1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office, 2006).	Full Compliance	Yes	Yes	Archival photographic digital recording undertaken for the McGarvie-Smith Farm. See Section 15.4.1
Heritage	E25	The Archival Recording Report must be submitted to the Planning Secretary, relevant councils and Heritage NSW for information within 12 months of completing all work described in the documents listed in Condition A1 in relation to heritage items. Copies of the Archival Recording Report must also be provided to relevant local historical societies.	Full Compliance	Yes	No - SM-WSA to submit following completion of all SM-WSA works. Not TFNSW (Syd Roads) or Abergeldie repsonsibility.	N/A
Heritage	E26	Following completion of all work described in the documents listed in Condition A1 in relation to heritage items, a non-Aboriginal Archaeological Excavation Report including the details of further historical research either undertaken or to be carried out and archaeological excavations (with artefact analysis and identification of a final repository for finds) and addressing the research design, must be prepared in accordance with any guidelines and standards required by the Heritage Council of NSW and Heritage NSW.	Full Compliance	Yes	No - SM-WSA to submit following completion of all SM-WSA works. Not TFNSW (Syd Roads) or Abergeldie repsonsibility.	N/A
Non Aboriginal Heritage	E27	The non-Aboriginal Archaeological Excavation Report must be submitted to the Planning Secretary, relevant councils and Heritage NSW for information within 12 months of completing	Full Compliance	Yes	No - SM-WSA to submit following completion of all	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		all Work described in the documents listed in Condition A1 in relation to heritage items. Copies of the Report must also be provided to relevant local historical societies and local libraries.			SM-WSA works. Not TFNSW (Syd Roads) or Abergeldie responsibility.	
Aboriginal Heritage	E28	All reasonable steps must be taken so as not to harm, modify or otherwise impact Aboriginal objects or places of cultural significance except as authorised by this approval.	Full Compliance	Yes	Yes	No Aboriginal Heritage items are expected to be impacted as part of the Works.
Aboriginal Heritage	E29	The Registered Aboriginal Parties (RAPs) must be kept regularly informed about the CSSI. The RAPs must continue to be provided with the opportunity to be consulted about the Aboriginal cultural heritage management requirements of the CSSI throughout construction.	Sydney Metro	Yes	Yes	Sydney Metro will undertake
Aboriginal Heritage	E30	<p>The Aboriginal Cultural Heritage Management Plan included in the documents listed in Condition A1 must be updated to include:</p> <ul style="list-style-type: none"> (a) a methodology for the completion of pedestrian surveys for all areas within the project footprint yet to be surveyed; (b) procedures for undertaking further test excavation and, if necessary, salvage excavations prior to the commencement of works in areas subject to further test excavation; (c) mapping that clearly outlines all areas yet to be subject to survey, test excavations, and salvage excavations; (d) a procedure to update mapping following the completion of survey, test excavations, and salvage excavations that detail the archaeological works conducted across the project footprint; (e) a procedure for updating the predictive model following the identification of new Aboriginal heritage items; and (f) a procedure to report and update the effectiveness of the Aboriginal Cultural Heritage Management Plan following the completion of survey, test excavation activities or significant artefact finds. The updated Plan must be submitted to the Planning Secretary for information prior to works in areas identified for further test excavations. <p>Note: Salvage excavations in the areas identified for salvage</p>	Sydney Metro	Yes	Yes	Sydney Metro will undertake

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		in documents in Condition A1, may occur prior to additional test excavations occurring.				
Aboriginal Heritage	E31	The updated Aboriginal Cultural Heritage Management Plan must be implemented for the duration of construction.	Not Applicable	No	No	N/A
Aboriginal Heritage	E32	At the completion of Aboriginal cultural heritage test and salvage excavations, an Aboriginal Cultural Heritage Excavation Report(s) must be prepared by a suitable qualified expert. The Aboriginal Cultural Heritage Excavation Report(s), must: (a) be prepared in accordance with the Guide to Investigation, assessing and reporting on Aboriginal cultural heritage in NSW, OEH 2011 and the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales, DECCW 2010; and (b) document the results of the archaeological test excavations and any subsequent salvage excavations (with artefact analysis and identification of a final repository for finds). The RAPs must be given a minimum of 28 days to consider the report and provide comments before the report is finalised. The final report must be provided to the Planning Secretary, Heritage NSW, the relevant Councils, Gandangara LALC and Deerubbin LALC, the RAPs and local libraries within 24 months of the completion of the Aboriginal archaeological excavations (both test and salvage).	Not Applicable	No	No	N/A
Aboriginal Heritage	E33	Where previously unidentified Aboriginal objects or places of cultural significance are discovered, all work must immediately stop in the vicinity of the affected area. Works potentially affecting the previously unidentified objects must not recommence until Heritage NSW has been informed. The measures to consider and manage this process must be specified in the Unexpected Heritage Finds and Human Remains Procedure required by Condition E34 and include registration in the Aboriginal Heritage Information Management System (AHIMS).	Full Compliance	Yes	Yes	CEMP Section 15 and Appendix K
Unexpected Finds and Human Remains	E34	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds (heritage items and values) in accordance with any guidelines and standards prepared by the Heritage Council of NSW or Heritage NSW.	Full Compliance	Yes	Yes	CEMP Section 15 and Appendix K

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Unexpected Finds and Human Remains	E35	The Unexpected Heritage Finds and Human Remains Procedure must be prepared by a suitably qualified and experienced heritage specialist in consultation with the Heritage Council of NSW (with respect to non- Aboriginal cultural heritage) and in relation to Aboriginal cultural heritage, in accordance with the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) and submitted to the Planning Secretary for information no later than one (1) month before the commencement of construction.	Full Compliance	Yes	Yes	CEMP Section 15 and Appendix K
Unexpected Finds and Human Remains	E36	The Unexpected Heritage Finds and Human Remains Procedure, as submitted to the Planning Secretary, must be implemented for the duration of construction. Where archaeological investigations have been undertaken as a result of Unexpected Finds notifications then a Final Archaeological Report must be provided in accordance with Heritage Council guidance and standard requirements for final reporting under Excavation Permits. Note: Human remains that are found unexpectedly during the carrying out of work may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately. Management of human remains in NSW is subject to requirements set out in the Public Health Act 2010 (NSW) and Public Health Regulation 2012 (NSW). Nothing in these conditions prevents separate procedures for the Unexpected Heritage Finds and Human Remains Procedure.	Full Compliance	Yes	Yes	CEMP Section 15 and Appendix K
Noise and vibration	E37	A detailed land use survey must be undertaken to confirm sensitive land use(s) (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration and construction ground-borne noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area before the commencement of work which generates construction noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Detailed Noise and Vibration Impact Statements required under Condition E47.	Full Compliance	Yes	Yes	No sensitive land uses in the area. Land uses will be identified in the DNVIS.
Noise and vibration	E38	Work must only be undertaken during the following hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive;	Full Compliance	Yes	Yes	CEMP Section 12.1 and 14

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays.				
Noise and vibration	E39	Except as permitted by an EPL or approved in accordance with the Out of Hours Works Protocol required by Condition E42, highly noise intensive work that result in an exceedance of the applicable NML at the same receiver must only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one (1) hour. For the purposes of this condition, 'continuously' includes any period during which there is less than one (1) hour between ceasing and recommencing any of the work.	Full Compliance	Yes	Yes	CEMP Section 14
Noise and vibration	E40	This approval does not permit blasting.	Full Compliance	Yes	No - No blasting required for this work & not permitted in Contract	N/A
Noise and Vibration	E41	Notwithstanding Conditions E38 and E39 work may be undertaken outside the hours specified in the following circumstances: (a) Safety and Emergencies, including: (i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or (b) Low impact, including: (i) construction that causes LAeq(15 minute) noise levels: • no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s); and (ii) construction that causes: • continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), or • intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of	Full Compliance	Yes	Yes	CEMP Section 14

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		<p>Assessing Vibration: a technical guideline (DEC, 2006); or</p> <p>(c) By Approval, including:</p> <p>(i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or</p> <p>(ii) works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E42; or</p> <p>(iii) negotiated agreements with directly affected residents and sensitive land user(s); or</p> <p>(d) By Prescribed Activity, including:</p> <p>(i) tunnelling and ancillary support activities (excluding cut and cover tunnelling and surface works not directly supporting tunnelling) are permitted 24 hours a day, seven days a week; or</p> <p>(ii) grout batching at the Orchard Hills construction site is permitted 24 hours per day, seven days per week; or</p> <p>(iii) delivery of material that is required to be delivered outside of standard construction hours in Condition E38 to directly support tunnelling activities, except between the hours 10:00 pm and 7:00 am to / from the Orchard Hills ancillary facility; or</p> <p>(iv) haulage of spoil generated through tunnelling is permitted 24 hours per day, seven days per week except between the hours of 10:00 pm and 7:00 am to / from the Orchard Hills construction site; or</p>				
Out-of-Hours Work Protocol – Work not subject to an EPL	E42	<p>An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of work (not subject to an EPL) which are outside the hours defined in Conditions E38 and E39. The Protocol must be approved by the Planning Secretary before commencement of the out-of-hours work. The Protocol must be prepared in consultation with the ER. The Protocol must provide:</p> <p>(a) justification for why out-of-hours work need to occur;</p> <p>(b) identification of low and high-risk activities and an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where:</p> <p>(i) the ER review all proposed out-of-hours activities and confirm their risk levels;</p> <p>(ii) low risk activities can be approved by the ER; and</p> <p>(iii) high risk activities that are approved by the Planning</p>	Sydney Metro will submit the Out of Hours Protocol to the Planning Secretary for Approval.	Yes	Yes	CEMP Section 14

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Secretary; (c) a process for the consideration of out-of-hours work against the relevant NML and vibration criteria; (d) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods consistent with the requirements of Condition E56. The measures must take into account the predicted noise levels and the likely frequency and duration of the out- of-hours works that sensitive land user(s) would be exposed to, including the number of noise awakening events; (e) procedures to facilitate the coordination of out-of-hours work including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; and (f) notification arrangements for affected receivers for all approved out-of-hours works and notification to the Planning Secretary of approved low risk out-of-hours works. This condition does not apply if the requirements of Condition E41 are met. Note: Out-of-hours work is any work that occurs outside the construction hours identified in Condition E38 and E39.				
Noise and Vibration	E43	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria: (a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009); (b) preferred vibration criteria established using the Assessing vibration: a technical guideline (DEC, 2006) (for human exposure); (c) Australian Standard AS 2187.2 - 2006 "Explosives - Storage and Use - Use of Explosives" (for human exposure); (d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions"; and (e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on	Full Compliance	Yes	Yes	CEMP Section 14

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		structures (for structural damage). Any work identified as exceeding the noise management levels and / or vibration criteria must be managed in accordance with the Noise and Vibration CEMP Sub-plan. Note: The ICNG identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction Noise Management Level.				
Noise and Vibration	E44	All reasonable and feasible mitigation measures must be applied when the following residential ground-borne noise levels are exceeded: (a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and (b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A). The mitigation measures must be outlined in the Noise and Vibration CEMP Sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E42.	Full Compliance	Yes	Yes	CEMP Section 14
Noise and Vibration	E45	Noise generating work in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.	Full Compliance	Yes	Yes	CEMP Section 14
Noise and Vibration	E46	Industry best practice construction methods must be implemented where reasonably practicable to ensure that noise and vibration levels are minimised around sensitive land use(s). Practices may include, but are not limited to: (a) use of regularly serviced low sound power equipment; (b) at source control, temporary noise barriers (including the arrangement of plant and equipment) around noisy equipment and activities such as rock hammering and concrete cutting; (c) use of acoustic sheds to minimise tunnelling and station box excavations noise impacts; (d) use of non-tonal reversing alarms; and (e) use of alternative construction and demolition techniques.	Full Compliance	Yes	Yes	CEMP Section 14
Noise and Vibration	E47	Detailed Noise and Vibration Impact Statements (DNVIS) must be prepared for any work that may exceed	Full Compliance	Yes	Yes	CEMP Section 14

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E43 and E44 at any residence outside construction hours identified in Condition E38, or where receivers will be highly noise affected or subject to vibration levels as above those otherwise determined as appropriate by a suitably qualified structural engineer under Condition E87. The DNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for the duration of the works. A copy of the DNVIS must be provided to the ER before the commencement of the associated works. The Planning Secretary and the EPA may request a copy (ies) of the DNVIS.				
Noise and Vibration	E48	Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified before works that generate vibration commences in the vicinity of those properties. If the potential exceedance is to occur more than once or extend over a period of 24 hours, owners and occupiers must be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier. These properties must be identified and considered in the Noise and Vibration CEMP Sub-plan.	Full Compliance	Yes	No - Not required due to the distance away from the works. No risk of exceed screening criteria.	N/A Additional detail in CEMP Section 14
Noise and Vibration	E49	Where sensitive land use(s) are identified in Appendix B the highly noise affected criteria during typical case construction, at-path barrier controls such as acoustic sheds and/or noise walls, or at-property treatment, or a combination of at-path and at-property treatment implemented must be implemented to reduce typical case construction noise below the highly noise affected criteria at each relevant sensitive land use(s). Activities that would exceed highly noise affected criteria must not commence until the measures identified in this condition have been implemented, unless otherwise agreed with the Planning Secretary.	Full Compliance	Yes	No - Sensitive land use(s) areas identified in Appendix B (of Instrument of Approval SSI-10051) as exceeding the highly noise affected criteria are not located in the vicinity of the Elizabeth Drive works. i.e. Closest is located in Orchard Hills.	N/A
Noise and vibration	E50	For all construction sites where acoustic sheds are installed, the sheds must be designed, constructed and operated to	Not Applicable	No	No	N/A

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		<p>minimise noise emissions. This would include the following considerations:</p> <p>(a) all significant noise producing equipment that would be used during the night-time would be inside the sheds, where feasible and reasonable;</p> <p>(b) noise generating ventilation systems such as compressors, scrubbers, etc, would be located inside the sheds and external air intake/discharge ports would be appropriately acoustically treated; and</p> <p>(c) the doors of acoustic sheds would be kept closed during the night-time period. Where night-time vehicle access is required at sites with nearby residences, the shed entrances would be designed and constructed to minimise noise breakout.</p>				
Noise and Vibration	E51	<p>Where Condition E49 determines that at-property treatment (temporary or permanent) is the appropriate measure to reduce noise impacts, this at-property treatment must be offered to landowners of residential properties for habitable living spaces, unless other mitigation or management measures are agreed to by the landowner.</p> <p>Landowners must be advised of the range of options that can be installed at or in their property and given a choice as to which of these they agree to have installed.</p> <p>A copy of all guidelines and procedures that will be used to determine at-property treatment at their residence must be provided to the landowner.</p>	Full Compliance	Yes	No - At-property treatment has not been identified as being required for the Works.	N/A
Noise and Vibration	E52	<p>Any offer for at-property treatment or the application of other noise mitigation measures in accordance with Condition E51, does not expire until the noise impacts specified in Condition E49, affecting that property are completed, even if the landowner initially refuses the offer.</p> <p>Note: If an offer has been made but is not accepted, this does not preclude the commencement of construction under Condition E49.</p>	Full Compliance	Yes	No - At-property treatment has not been identified as being required for the Works.	N/A
Noise and Vibration	E53	<p>The implementation of at-property treatment does not preclude the application of other noise and vibration mitigation and management measures including temporary and long term accommodation.</p>	Full Compliance	Yes	No - At-property treatment has not been identified as being required for the Works.	N/A

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Noise and Vibration	E54	Vibration testing must be conducted during vibration generating activities that have the potential to impact on Heritage items to verify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and attended monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures. Such measures must include, but not be limited to, review or modification of excavation techniques.	Full Compliance	Yes	No - Not required due to the distance away from the works. No risk of exceed screening criteria.	N/A Additional detail in CEMP Section 14
Noise and Vibration	E55	The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at Heritage items.	Full Compliance	Yes	No - Monitoring at Heritage Items are not required due to the distance away from the works.	N/A Additional detail in CEMP Section 14
Noise and Vibration	E56	All work undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. The Proponent must: (a) reschedule any work to provide respite to impacted noise sensitive land use(s) so that the respite is achieved in accordance with Condition E57; or (b) consider the provision of alternative respite or mitigation to impacted noise sensitive land use(s); and (c) provide documentary evidence to the ER in support of any decision made by the Proponent in relation to respite or mitigation. The consideration of respite must also include all other approved Critical SSI, SSI and SSD projects which may cause cumulative and / or consecutive impacts at receivers affected by the delivery of the CSSI.	Full Compliance	Yes	Yes	CEMP Section 14
Noise and Vibration	E57	In order to undertake out-of-hours work outside the work hours specified under Condition E38, appropriate respite periods for the out-of-hours work must be identified in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with: (a) a progressive schedule for periods no less than three (3) months, of likely out-of-hours work; (b) a description of the potential work, location and duration of the out-of-hours work;	Sydney Metro will provide the Planning Secretary with the outcomes of community engagement, the identified respite periods and the scheduling of the likely out-of-hours	Yes	Yes	CEMP Section 14

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		<p>(c) the noise characteristics and likely noise levels of the work; and</p> <p>(d) likely mitigation and management measures which aim to achieve the relevant NMLs under Condition E43 (including the circumstances of when respite or relocation offers will be available and details about how the affected community can access these offers).</p> <p>The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour work must be provided to the ER, EPA and the Planning Secretary prior to the out-of- hours work commencing.</p> <p>Note: Respite periods can be any combination of days or hours where out-of-hours work would not be more than 5 dB(A) above the RBL at any residence.</p>	works. The Principal Contractor will provide Sydney Metro with all information and documentation it requires to provide the Planning Secretary with the outcomes of community engagement, the identified respite periods and the scheduling of the likely out-of-hours works.			
Noise and Vibration	E58	<p>The Proponent must prepare an Operational Noise and Vibration Review (ONVR) to confirm noise and vibration mitigation measures that would be implemented for the Operation of the CSSI for the ultimate service. The ONVR must be prepared as part of the iterative design development and in consultation with the EPA, relevant council(s), other relevant stakeholders and must:</p> <p>(a) identify appropriate Operational noise and vibration objectives and levels for surrounding development, including existing and potential future (as known at the time of ONVR preparation) sensitive land use(s);</p> <p>(b) confirm the operational noise and vibration predictions based on the expected final design. Confirmation must be based on an appropriately calibrated noise model;</p> <p>(c) identify sensitive landuses that are predicted to exceed:</p> <p>(i) noise criteria set out in the Rail Infrastructure Noise Guideline (EPA, 2013), Noise Policy for Industry (EPA, 2017); and</p> <p>(ii) vibration goals for human exposure for existing sensitive land use(s), as presented in Assessing Vibration: a Technical Guideline (DECC, 2006);</p>	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(d) identify all noise and vibration mitigation measures including location, type and timing of mitigation measures, with a focus on: (i) source control and design; (ii) at the receiver (if relevant); and (iii) 'best practice' achievable noise and vibration outcome for each activity; (e) describe how the final suite of mitigation measures will achieve: (i) the noise criteria outlined in the Rail Infrastructure Noise Guideline (EPA, 2013) and Noise Policy for Industry (EPA, 2017); and (ii) vibration goals for human exposure for existing sensitive land use(s), as presented in Assessing Vibration: a Technical Guideline (DECC, 2006); (f) include a consultation strategy to seek feedback from directly affected landowners on the noise and vibration mitigation measures being offered; (g) include procedures for operational noise and vibration complaints management, including investigation and monitoring (subject to complainant agreement). The ONVR must be verified by an independent acoustic expert and submitted to the Planning Secretary for approval before the implementation of any operational noise mitigation measures. The Proponent must implement the identified noise and vibration control measures and make the ONVR publicly available. Note: The design of noise barriers and the like must be undertaken in consultation with the relevant stakeholders, including affected landowners and businesses (or a representative of a business), Western Parklands City Authority and relevant council(s) as part of the Place, Urban Design and Corridor Landscape				
Noise and Vibration	E59	Operational noise mitigation measures as identified in Condition E58 that will not be physically affected by work, must be implemented within six months of submitting the ONVR, unless otherwise agreed by the Planning Secretary. Where implementation of operational noise mitigation measures are not proposed to be implemented in accordance with this requirement, the Proponent must submit to the Planning	Not applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Secretary a report providing justification as to why, along with details of temporary measures that would be implemented to reduce construction noise impacts, until such time that the operational noise mitigation measures are implemented. The report must be submitted to the Planning Secretary within six months of submitting the ONVR. Note: Not having finalised detailed design is not sufficient justification for not implementing the proposed mitigation measures.				
Noise and Vibration	E60	<p>Within 12 months of the commencement of operation of the CSSI, the Proponent must undertake monitoring of operational noise to compare actual noise performance of the CSSI against the noise performance predicted in the review of noise mitigation measures required by Condition E58. An Operational Noise and Vibration Compliance Report (ONVCR) must be prepared to document this monitoring and include, but not necessarily be limited to:</p> <ul style="list-style-type: none"> (a) noise and vibration monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under Condition E58; (b) methodology, location and frequency of noise and vibration monitoring undertaken, including monitoring sites at which CSSI noise and vibration levels are ascertained, with specific reference to locations indicative of impacts on receivers; (c) a review of the performance of the CSSI against the: <ul style="list-style-type: none"> (i) operational noise levels in terms of criteria and noise goals established in the NSW Rail Infrastructure Noise Guideline (EPA 2013) and Noise Policy for Industry (EPA, 2017); (ii) vibration goals for human exposure for existing sensitive land use(s), as presented in Assessing Vibration: a Technical Guideline (DECC, 2006); (d) details of any complaints and enquiries received in relation to Operational noise and vibration generated by the CSSI (between the date of commencement of Operation and the date the report was prepared); (e) an assessment of the performance and effectiveness of applied noise and vibration mitigation measures together with a review and if necessary, reassessment of mitigation 	Not applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		measures; (f) identification of: (i) additional measures to meet the criteria outlined in the NSW Rail Infrastructure Noise Guideline (EPA 2013) and Noise Policy for Industry (EPA, 2017), (ii) additional measures to meet the vibration goals for human exposure for existing sensitive land, as presented in Assessing Vibration: a Technical Guideline (DECC, 2006); (iii) when these measures are to be implemented; and (iv) how their effectiveness is to be measured and reported to the Planning Secretary and the EPA. The ONVCR must be submitted to the Planning Secretary and the EPA within 60 days of completing the Operational noise and vibration monitoring and made publicly available. Note: Refer to Condition B5 about how personal information will be handled.				
Traffic, Transport, and Access	E61	Wayfinding information must be incorporated on temporary hoardings to guide pedestrians around the St Marys construction site and enhance their understanding and experience of the locality and space.	Full Compliance	Yes	No - This condition is related to the St Marys precinct and is therefore not applicable to this work.	N/A
Place, Urban Design & Visual Amenity - Construction Sites	E62	The CSSI must be constructed in a manner that minimises visual impacts of construction sites including, providing temporary landscaping and vegetative screening, minimising light spill, and incorporating architectural treatment and finishes within key elements of temporary structures that reflect the context within which the construction sites are located, wherever practicable.	Full Compliance	Yes	Yes	CEMP Section 17
Design Requirements and Strategic Context	E63	The CSSI must be designed with consideration of: (a) the design objectives, principles and guidelines identified in documents listed in Condition A1; (b) the principles and objectives of the draft Connecting with Country Framework; (c) relevant land use changes, masterplans and initiatives, where this information is known and/or available; (d) existing and proposed future local context and character; and (e) transport and land use integration and system functionality in the context of precincts, to the extent it is known	Full Compliance	Yes	No - Design by SM-WSA and TfNSW.	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		and/or defined. Responses to items (a) – (e) must be reviewed by the Design Review Panel (DRP) to inform the design of permanent built works and landscape design of the CSSI. The outcome of the DRP review must be provided to the Planning Secretary prior to the submission of the Place, Urban Design and Corridor Landscape Plan (PUDCLP). Note: In accordance with Condition A10 and Condition A16, the requirements of this condition can be staged.				
Design Guidance and Standards - Lighting and Security	E64	The CSSI must be constructed and operated with the objective of minimising light spill to surrounding properties. All lighting associated with the CSSI must be consistent with the requirements of: (a) ASINZS 4282:2019 Control of the obtrusive effects of outdoor lighting, relevant Australian Standards in the series ASINZS 1158 - Lighting for Roads and Public Spaces; (b) NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports; and (c) NASF Guideline C: Managing the risk of wildlife strikes in the vicinity of airports. Mitigation measures must be provided to manage residual night lighting impacts to protect properties adjoining or adjacent to the CSSI, in consultation with affected landowners.	Full Compliance	Yes	Yes	CEMP Section 17
Design Guidance and Standards - Active Transport	E65	Designs must have regard to the Movement and Place Framework relevant guidance including the 'Walking Space Guide: Towards Pedestrian Comfort and Safety' (TfNSW 2020) and the 'Cycleway Design Toolbox: Designing for Cycling and Micromobility' (TfNSW 2020).	Not Applicable	No	No	N/A
Design Guidance and Standards - Active Transport	E66	Active transport facilities must be designed, constructed and/or rectified in accordance with the Guide to Road Design Part 6A: Paths for Walking and Cycling (Austroads, 2017) and relevant Australian Standards (AS) such as AS 1428.1-2009 Design for access and mobility. The active transport links must also incorporate relevant Crime Prevention Through Environmental Design principles.	Not Applicable	No	No	N/A
Design Review Panel and Design Review - Panel Membership	E67	The Proponent must establish an independent Design Review Panel (DRP) to provide advice and recommendations to the Proponent during the CSSI's design development and construction to facilitate quality design and place outcomes. The DRP must be formed and hold its first	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		meeting within six months of the date of this approval, or as otherwise agreed with the Planning Secretary. Note: Nothing in this approval prevents the use of an existing design panel as the Design Review Panel convened for this project where the function and composition of that panel complies with the terms of this approval.				
Design Review Panel and Design Review - Panel Membership	E68	The responsibilities of the Design Review Panel include: (a) providing advice and recommendations to the Proponent for consideration in the design development of the CSSI (b) provide advice on the application of Sydney Metro – Western Sydney Airport Submissions Report – Appendix D Design Guidelines to key design elements in relation to place making, architecture, heritage, urban and landscape design and artistic aspects of the CSSI; and (c) reviewing and endorsing any updates to the Sydney Metro – Western Sydney Airport Submissions Report – Appendix D Design Guidelines. The Panel's advice must be consistent with the CSSI as approved.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E69	The DRP must be chaired by the NSW Government Architect (or their nominee), and must be comprised of, where relevant, by suitably qualified, experienced and independent professional(s) in each of the fields of: (a) urban design and place making; (b) landscape architecture; and (c) architecture. The Panel may seek advice from suitably qualified, experienced independent professionals in other fields as required, including but not limited to sustainability, active transport and non-Aboriginal heritage. The Panel must also seek appropriate expertise to ensure Aboriginal cultural heritage and cultural values inform its advice.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E70	Panel members must be sourced from the NSW State Design Review Panel Pool, or otherwise be approved by the NSW Government Architect.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E71	Prior to forming the DRP, a Design Review Panel Terms of Reference is to be developed and endorsed by the NSW Government Architect. The Terms of Reference must be submitted to the Planning Secretary once it is endorsed by the	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		NSW Government Architect and: (a) must be generally consistent with the NSW State Design Review Panel Terms of Reference (version 5); (b) outline the frequency of DRP meetings, coordinated with the Proponent's program requirements, as outlined in Condition E76, to ensure timely advice and design adjustment; and (c) identify cessation arrangements.				
Urban Design and Placemaking	E72	The DRP must be operated and managed in accordance with the Design Review Panel Terms of Reference.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E73	The NSW Government Architect must, after consultation with the Proponent, appoint an appropriately qualified and experienced design advisor to the DRP and may appoint an alternate design advisor. The advisor must attend meetings of the Panel. The advisor may also be invited by the Panel to assist with decisions regarding the Panel's recommendations and record the Panel's advice and recommendations.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E74	The relevant council may be invited to the meetings of the Panel as observers or to provide feedback on key design elements of the CSSI.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E75	DRP advice and recommendations, as issued by the Panel, and the Proponent's response to each recommendation must be included when submitting the final PUDCLP to the Planning Secretary for information.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E76	The Proponent must provide the design development schedule to the DRP prior to its first meeting, including details of when relevant elements of the detailed design will be available for review by the Panel. The schedule must be updated every three months until the detailed design process is complete.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E77	A Place, Urban Design and Corridor Landscape Plan (PUDCLP) must be prepared to document and illustrate the permanent built works and landscape design of the CSSI and how these works are to be maintained. The PUDCLP must be: (a) prepared by a suitably qualified and experienced person(s) in consultation with the community (including the affected landowners and businesses or a representative of the businesses), Western Parklands City Authority, Western Sydney Planning Partnership and relevant council(s);	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(b) reviewed by an independent and suitably qualified and experienced person nominated by the DRP; (c) submitted to the Planning Secretary prior to the construction of permanent built surface works and/or landscaping, excluding those elements which for ecological requirements, or technical requirements, or requirements as agreed by the Planning Secretary do not allow for alternate design outcomes; and (d) implemented during construction and operation of the CSSI. Note: The PUDCLP may be developed and considered in stages to facilitate design progression and construction. Any such staging and associated approval would need to facilitate a cohesive final design and not limit final design outcomes.				
Urban Design and Placemaking	E78	The PUDCLP must document how the following matters have been considered in the design and landscaping of the project: (a) the requirements of Conditions E63 to E65, and (b) advice and recommendations from the DRP.	Not Applicable	No	No	N/A
Urban Design and Placemaking	E79	The PUDCLP must include descriptions and visualisations (as appropriate) of: (a) design of the permanent built elements of the CSSI, including stabling and maintenance and ancillary facilities, service facilities and tunnel portals; (b) plans for station precincts including but not limited to: (i) justification of the spatial scope of each station precinct plan; (ii) provision for public art and heritage interpretation installations; (iii) placemaking opportunities, having regard to placemaking initiatives in Western Sydney Aerotropolis planning documents; (iv) interchange access plans developed in consultation with the Traffic and Transport Liaison Group; (v) active transport connections and end of trip facilities, design of pedestrian and cycle access, facilities and fixtures; (vi) design of commuter car parking elements, where relevant; (c) landscaping and building design opportunities to mitigate visual impacts and minimise light spill on the nearby residences;	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		(d) the design of watercourse crossings and east-west corridor movements to give to effect of Condition E14; (e) landscaping; (i) landscape plan, hard and soft elements, for the corridor and the station precincts (ii) use of native species from the relevant native vegetation community (or communities), where identified as appropriate; (iii) water sensitive urban design initiatives (vii) management and routine maintenance standards and regimes for design elements and landscaping work (including weed management) to ensure the success of the design; (viii) measures to prevent wildlife strike risk in proximity to Western Sydney International Airport; (f) details of strategies to rehabilitate, regenerate or revegetate disturbed areas, where relevant; (g) management and routine maintenance standards and regimes for design elements and landscaping work (including weed management) to ensure the success of the design; (h) operational maintenance standards; and (i) the timing and responsibilities for implementation of elements included within the PUDCLP.				
Operational maintenance	E80	The ongoing maintenance and operation costs of urban design, open space, landscaping and recreational items and work implemented as part of this approval remain the Proponent's responsibility until satisfactory arrangements have been put in place for the transfer of the asset to the relevant authority. Before the transfer of assets, the Proponent must maintain items and work to at least the design standards established in the PUDCLP, required by Condition E79. The Planning Secretary must be advised prior to the transfer of the asset(s) to the relevant authority.	Not Applicable	No	No	N/A
Operational maintenance	E81	Should any plant loss occur during the maintenance period the plants must be replaced by the same plant species unless it is determined by a suitably qualified person that a different species is more suitable for that location.	Not Applicable	No	No	N/A
Socio-Economic Land Use and Property	E82	The CSSI must be designed and constructed with the objective of minimising impacts to, and interference with third party	Full Compliance	Yes	Yes	CEMP Section 17

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		property, and that such infrastructure and property is protected during construction.				
Socio-Economic Land Use and Property	E83	The utilities and services (hereafter "services") potentially affected by construction must be identified to determine requirements for diversion, protection and / or support. Alterations to services must be determined by negotiation between the Proponent and the service providers. Disruption to services resulting from construction must be avoided, wherever possible, and advised to customers where it is not possible.	Full Compliance	Yes	No - No utilities scope proposed.	N/A
Property, Land use and Socio-Economic Impacts	E84	A suitably qualified and experienced person must undertake condition surveys of all buildings, structures, utilities and the like identified in the documents listed in Condition A1 and the further assessment carried out under mitigation measure GW1 of the Submissions Report as being at risk of damage before commencement of any work that could impact on the subject surface / subsurface structure. The results of the surveys must be documented in a Pre-construction Condition Survey Report for each item surveyed. Copies of Pre-construction Condition Survey Reports must be provided to the relevant owners of the items surveyed in the vicinity of the proposed work, and no later than one (1) month before the commencement of the work that could impact on the subject surface / subsurface structure.	Full Compliance	Yes	No - no building(s) within the near vicinity of the works.	N/A
Property, Land use and Socio-Economic Impacts	E85	Condition surveys of all items for which condition surveys were undertaken in accordance with Condition E84 must be undertaken by a suitably qualified and experienced person after completion of the work identified in Condition E84. The results of the surveys must be documented in a Post-construction Condition Survey Report for each item surveyed. Copies of Post-construction Condition Survey Reports must be provided to the landowners of the items surveyed, and no later than three (3) months following the completion of the work that could impact on the subject surface / subsurface structure.	Full Compliance	Yes	No - no building(s) within the near vicinity of the works.	N/A
Property, Land use and Socio-Economic Impacts	E86	The Proponent, where liable, must rectify any property damage caused directly or indirectly (for example from vibration or from groundwater change) by the work at no cost to the owner. Alternatively, the Proponent may pay compensation for the property damage as agreed with the property owner. Rectification or compensation must be undertaken within 12 months of completion of the work identified in Condition E84	Full Compliance for any damage associated with the Works	Yes	No - Not applicable to the planned scope, no building within the vicinity of the works location.	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		unless another timeframe is agreed with the owner of the affected surface or sub- surface structure or recommended by the Independent Property Impact Assessment Panel (IPIAP).				
Property, Land use and Socio-Economic Impacts	E87	Appropriate equipment to monitor areas in proximity of ancillary facilities and the tunnel route must be installed during construction has stabilised with particular reference to at risk buildings, structures and utilities identified in the condition surveys required by Condition E84 and / or geotechnical analysis as required. If monitoring during construction indicate exceedance of the vibration criteria identified in the DNVIS prepared under Condition E47, or levels otherwise determined as appropriate by a suitably qualified structural engineer, then all construction affecting settlement must cease immediately and must not resume until fully rectified or a revised method of construction is established that will ensure protection of affected buildings.	Not Applicable	Yes	No - no building(s) within the near vicinity of the works.	N/A
Property, Land use and Socio-Economic Impacts	E88	An IPIAP must be established prior to tunnelling activities commencing. The Planning Secretary must be informed of the members of the IPIAP and must comprise geotechnical and engineering experts independent of the design and construction team. The IPIAP will be responsible for independently verifying condition surveys undertaken under Conditions E84 and E85, the resolution of property damage disputes and the establishment of ongoing settlement monitoring requirements.	Not Applicable	No	No	N/A
Property, Land use and Socio-Economic Impacts	E89	Either the affected property owner or the Proponent may refer unresolved disputes arising from potential and/or actual property impacts to the IPIAP for resolution. All costs incurred in the establishing and implementing of the panel must be borne by the Proponent regardless of which party makes a referral to the IPIAP. The findings and recommendations of the IPIAP are final and binding on the Proponent.	Not Applicable	No	No	N/A
Property, Land use and Socio-Economic Impacts	E90	Settlement must be monitored for any period beyond the minimum timeframe requirements of Condition E91 if directed so by the IPIAP following its review of the monitoring data from the period not less than six (6) months after settlement has stabilised, consistent with Condition E87. The results of the monitoring must be made available to the Planning Secretary upon request.	Not Applicable	No	No	N/A
Small Business Owners	E91	Small Business Owners Engagement Plan(s) must be prepared for St Marys and implemented in accordance with the	Full Compliance	Yes	No - works location not in St Marys.	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Engagement Plan(s)		Overarching Community Communication Strategy to minimise impact on small businesses directly affected by construction activities at St Marys during construction. The plan must be prepared and submitted to the Planning Secretary for information before the commencement of construction at St Marys.				
Soil and contamination	E92	Before commencement of any construction that would result in the disturbance of medium to high risk contaminated sites as identified in the documents identified in Condition A1, Detailed Site Investigations (for contamination) must be conducted to determine the full nature and extent of the contamination. The Detailed Site Investigation Report(s) and the subsequent report(s), must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Detailed Site Investigations must be undertaken in accordance with guidelines made or approved under section 105 of Contaminated Land Management Act 1997 (NSW). Note: Nothing in this condition prevents the Proponent from preparing individual Detailed Site Investigation Reports (for contamination) for separate sites.	Full Compliance	Yes	Yes	Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.
Soil and contamination	E93	Should remediation be required to make land suitable for the final intended land use, a Remedial Action Plan must be prepared, or reviewed and approved, by consultants certified under either the Environment Institute of Australia and New Zealand's Certified Environmental Practitioner (Site Contamination) scheme (CEnvP(SC)) or the Soil Science Australia Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) scheme. The Remedial Action Plan must be prepared in accordance with relevant guidelines made or approved by the EPA under section 105 of the Contaminated Land Management Act 1997 (NSW) and must include measures to remediate the contamination at the site to ensure the site will be suitable for the proposed use when the Remedial Action Plan is implemented.	Full Compliance	Yes	Yes	Contaminated Land Consultant to review RAP if required from unexpected finds.

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		Note: Nothing in this condition prevents the Proponent from preparing individual Remedial Action Plans for separate sites.				
Soil and contamination	E94	Before commencing remediation, a Section B Site Audit Statement(s) must be prepared by an NSW EPA- accredited Site Auditor that certifies that the Remedial Action Plan(s) is/are appropriate and that the site can be made suitable for the proposed use. The Remedial Action Plan(s) must be implemented and any changes to the Remedial Action Plan(s) must be approved in writing by the NSW EPA-accredited Site Auditor. Note: Nothing in this condition prevents the Proponent from engaging an NSW EPA-accredited Site Auditor to prepare individual Site Audit Statements for Remedial Action Plans for separate sites.	Full Compliance	Yes	No - no RAP required for this site.	N/A
Soil and contamination	E95	Validation Report(s) must be prepared in accordance with Consultants Reporting on Contaminated Land: Contaminated Land Guidelines (EPA, 2020) and relevant guidelines made or approved under section 105 of the Contaminated Land Management Act 1997 (NSW). Note: Nothing in this condition prevents the Proponent from preparing individual Validation Reports for separate sites.	Full Compliance	Yes	No - no RAP required for this site.	N/A
Soil and contamination	E96	A Section A1 or Section A2 Site Audit Statement (accompanied by an Environmental Management Plan) and its accompanying Site Audit Report, which state that the contaminated land disturbed by the work has been made suitable for the intended land use, must be submitted to the Planning Secretary and the Relevant Council(s) after remediation and before the commencement of operation of the CSSI. Note: Nothing in this condition prevents the Proponent from obtaining Section A Site Audit Statements for individual parcels of remediated land.	Full Compliance, except Sydney Metro will submit documents to the Planning Secretary	Yes	No - no RAP required for this site.	N/A
Soil and contamination	E97	A copy of Detailed Site Investigation Report(s), Remedial Action Plan(s), Validation Report(s), Site Audit Report(s) and Site Audit Statement(s) must be submitted to the Planning Secretary and the Relevant Council(s) for information	Full Compliance, except Sydney Metro will submit documents to the Planning Secretary	Yes	No - no RAP required for this site.	N/A
Soil and contamination	E98	An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land or asbestos (or suspected contaminated	Full Compliance	Yes	Yes	CEMP Appendix G

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		land or asbestos) be excavated or otherwise discovered during construction.				
Soil and contamination	E99	The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.	Full Compliance	Yes	Yes	CEMP Appendix G
Sustainability	E100	A Sustainability Plan must be prepared to achieve an Infrastructure Sustainability Council of Australia (ISCA) Infrastructure Sustainability rating of +75 (Version 1.2) (or equivalent level of performance using a demonstrated equivalent rating tool) or a 5- Star Green Star rating (or equivalent level of performance using a demonstrated equivalent rating tool).	Sydney Metro	Yes	No - SM-WSA advised this Condition is not required for this scope of work.	N/A
Sustainability	E101	The Sustainability Plan must be submitted to the Planning Secretary for information within six (6) months of the date of this approval and must be implemented throughout construction and operation. Note: Nothing in this condition prevents the Proponent from preparing separate Sustainability Strategies for the construction and operational stages of the CSSI.	Sydney Metro	Yes	No - SM-WSA advised this Condition is not required for this scope of work.	N/A
Sustainability	E102	A Water Reuse Strategy must be prepared, which sets out options for the reuse of collected stormwater and groundwater during construction and operation. The Water Reuse Strategy must include, but not be limited to: (a) evaluation of reuse options; (b) details of the preferred reuse option(s), including volumes of water to be reused, proposed reuse locations and/or activities, proposed treatment (if required), and any additional licences or approvals that may be required; (c) measures to avoid misuse of recycled water as potable water; (d) consideration of the public health risks from water recycling; and (e) time frame for the implementation of the preferred reuse option(s). The Water Reuse Strategy must be prepared based on best practice and advice sought from relevant agencies, as required. The Strategy must be applied during construction. Justification must be provided to the Planning Secretary if it is concluded that no reuse options prevail. A copy of the Water Reuse Strategy must be made publicly available. Note: Nothing in this condition prevents the Proponent from	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		preparing separate Water Reuse Strategies for the construction and operational stages of the CSSI.				
Traffic and Transport	E103	Construction Traffic Management Plans (CTMPs) must be prepared in accordance with the Construction Traffic Management Framework. A copy of the CTMPs must be submitted to the Planning Secretary for information before the commencement of any construction in the area identified and managed within the relevant CTMP.	Full Compliance	Yes	Yes	CEMP Section 13
Management of Heavy Vehicle Movements	E104	The locations of all Heavy Vehicles used for spoil haulage must be monitored in real time and the records of monitoring be made available electronically to the Planning Secretary and the EPA upon request for a period of no less than one (1) year following the completion of construction.	Not Applicable	No	No	N/A
Management of Heavy Vehicle Movements	E105	Local roads proposed to be used by Heavy Vehicles to directly access ancillary facilities / construction sites that are not identified in the documents listed in Condition A1 must be approved by the Planning Secretary and be included in the CTMP.	Full Compliance	Yes	No - Elizabeth Drive is a state road and local roads are not proposed to be used	N/A
Management of Heavy Vehicle Movements	E106	All requests to the Planning Secretary for approval to use local roads under Condition E105 above must include the following: (a) a swept path analysis; (b) demonstration that the use of local roads by Heavy Vehicles for the CSSI will not compromise the safety of pedestrians and cyclists of the safety of two-way traffic flow on two-way roadways; (c) details as to the date of completion of the road dilapidation surveys for the subject local roads; and (d) measures that will be implemented to avoid where practicable the use of local roads past schools, aged care facilities and child care facilities during their peak operation times; and (e) written advice from an appropriately qualified professional on the suitability of the proposed Heavy Vehicle route which takes into consideration items (a) to (d) of this condition.	Full Compliance	Yes	No - Elizabeth Drive is a state road and local roads are not proposed to be used	N/A
Management of Heavy Vehicle Movements	E107	Before any local road is used by a Heavy Vehicle for the purposes of construction of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the Relevant Road Authority(s) within three (3) weeks of completion of the survey and at no later than one (1) month before the road being used	Full Compliance	Yes	No - Elizabeth Drive is a state road and local roads are not proposed to be used	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		by Heavy Vehicles associated with the construction of the CSSI.				
Road Dilapidation	E108	If damage to roads occurs as a result of the construction of the CSSI, the Proponent must either (at the Relevant Road Authority's discretion): (a) compensate the Relevant Road Authority for the damage so caused; or (b) rectify the damage to restore the road to at least the condition it was in pre-work as identified in the Road Dilapidation Report.	Full Compliance	Yes	Yes	CEMP Section 13
Construction Parking and Access Management	E109	Vehicles associated with the project workforce (including light vehicles and Heavy Vehicles) must be managed to: (a) minimise parking on public roads; (b) minimise idling and queueing on state and regional roads; (c) not carry out marshalling of construction vehicles near sensitive user(s); (d) not block or disrupt access across pedestrian or shared user paths at any time unless alternate access is provided; and (e) ensure spoil haulage vehicles adhere to the nominated haulage routes identified in the CTMP.	Full Compliance	Yes	Yes	CEMP Section 13
Property Access	E110	Access to all utilities and properties must be maintained during works, unless otherwise agreed with the relevant utility owner, landowner or occupier.	Full Compliance	Yes	Yes	CEMP Section 13
Property Access	E111	The Proponent must maintain access to properties during the entirety of works unless an alternative access is agreed in writing with the landowner(s) whose access is impacted by the CSSI works.	Full Compliance	Yes	Yes	CEMP Section 13
Property Access	E112	Where construction of the CSSI restricts a property's access to a public road, the Proponent must, until their primary access is reinstated, provide the property with temporary alternate access to an agreed road decided through consultation with the landowner, at no cost to the property landowner, unless otherwise agreed with the landowner.	Full Compliance	Yes	Yes	CEMP Section 13
Property Access	E113	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier. Property access must be reinstated within one (1) month of the work that physically affected the access is completed or in any other timeframe agreed with the landowner or occupier.	Full Compliance	Yes	Yes	CEMP Section 13

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Property Access	E114	During construction, all reasonably practicable measures must be implemented to maintain pedestrian, cyclist and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian, cyclist and vehicular access, and parking arrangements must be developed in consultation with affected businesses and landowners and implemented before the disruption. Adequate signage and directions to businesses must be provided before, and for the duration of, any disruption.	Full Compliance	Yes	No - Parking or access to properties or businesses will not be impacted. No businesses in the vicinity of the works. Property access will not be disrupted.	N/A
Pedestrian and Cyclist Access	E115	Safe pedestrian and cyclist access must be maintained around the St Marys construction site during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, a proximate alternate route which complies with the relevant standards, must be provided and signposted before the restriction or removal of the impacted access.	Full Compliance	Yes	No - This condition is related to the St Marys precinct and is therefore not applicable to this work.	N/A
Road Traffic and Safety	E116	A Traffic and Transport Liaison Group(s) must be established in accordance with the Construction Traffic Management Framework to inform the development of CTMP.	Sydney Metro will establish the TTLG. The Principal Contractor will participate as part of the TTLG and provide the TTLG with any information or documentation it requires to meet its obligations under this approval.	Yes	Yes	CEMP Section 13
Road Safety	E117	Supplementary analysis and modelling as required by TfNSW and / or the Traffic and Transport Liaison Group(s) must be undertaken to demonstrate that construction and operational traffic can be managed to minimise disruption to traffic network operations including changes to and the management of pedestrian, bicycle and public transport networks, public transport services, and pedestrian and cyclist movements.	Full Compliance, except that Revised traffic management measures do not need to be incorporated into	Yes	Yes	CEMP Section 13

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		<p>Revised traffic management measures must be incorporated into the CTMP.</p> <p>Permanent road works included in the CSSI must be designed, constructed and operated with the objective of integrating with existing and proposed road and related transport networks and minimising adverse changes to the safety, efficiency and, accessibility of the network. Design and assessment of related traffic, parking, pedestrian and cycle accessibility impacts and changes shall be undertaken:</p> <p>(a) in consultation with, and to the reasonable requirements of the relevant Traffic and Transport Liaison Group;</p> <p>(b) in consideration of existing and future demand, connectivity (in relation to permanent changes), performance and safety requirements;</p> <p>(c) to minimise and manage local area traffic impacts;</p> <p>(d) to, where possible and appropriate, retain or reinstate parking in St Marys;</p> <p>(e) to ensure access is maintained to property and infrastructure</p> <p>(f) place and movement outcomes from precinct plans and design guidelines; and</p> <p>(g) to meet relevant design, engineering and safety guidelines, including Austroads, Australian Standards, Sydney Metro – Western Sydney Airport Submissions Report – Appendix D Design Guidelines and TfNSW requirements.</p> <p>Copies of civil, structural and traffic signal design plans shall be submitted to the Relevant Road Authority for consultation during design development and before completion of construction of the CSSI.</p>	Interchange Access Plans or Station Design and Precinct Plans.			
Road Safety	E118	<p>As part of Condition E117 the Traffic and Transport Liaison Group(s) is to identify opportunities to improve the intersection performance during operation at:</p> <p>(a) Queen Street/Great Western Highway/Mamre Road in St Marys;</p> <p>(b) Glossop Street/ Forrester Road in St Marys; and</p> <p>(c) Glossop Street / Great Western highway in St Marys.</p> <p>Any identified improvements must be implemented prior to the commencement of operation.</p>	Full Compliance	Yes	This condition is related to the St Marys precinct and is therefore not applicable to this work.	N/A
Road Safety	E119	Permanent road works, including vehicular access, signalised intersection works, and works relating to pedestrians, cyclists,	Full Compliance.	Yes	Yes	CEMP Section 13

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		and public transport users must be subject to safety audits demonstrating consistency with relevant design, engineering and safety standards and guidelines. Safety audits must be prepared in consultation with the relevant Traffic and Transport Liaison Group before the completion and use of the subject infrastructure and must be made available to the Planning Secretary upon request.				
Road Safety	E120	The CSSI must be designed and constructed with the objective of minimising impacts to, and interference with utilities infrastructure, and that such infrastructure and property is protected during construction. Utilities, services and other infrastructure potentially affected by construction must be identified before works affecting the item, to determine requirements for access to, diversion protection, and / or support. The relevant owner(s) and / or provider(s) of services must be consulted to make suitable arrangements for access to diversion, protection, and / or support of the affected infrastructure as required. The Proponent must ensure that disruption to any service is minimised and be responsible for advising local residents and businesses affected before any planned disruption of service.	Full Compliance	Yes	No - Design undertaken by SM-WSA/TfNSW	N/A
Utilities Warragamba to Prospect Water Supply Pipeline	E121	The proponent must consult with WaterNSW regarding design, construction and operational management where the proposal interacts with the Warragamba to Prospect Water Supply Pipeline, and ensure that proposed construction and operational agreements are consistent with the "Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines" and implement all practical measures to protect the Warragamba to Prospect Water Supply Pipelines infrastructure, or as otherwise agreed to by WaterNSW.	Not Applicable	No	No	N/A
Waste	E122	Waste generated during construction and operation must be dealt with in accordance with the following priorities: (a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced; (b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and (c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of.	Full Compliance	Yes	Yes	CEMP Section 20

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
Waste	E123	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, as the case may be.	Full Compliance	Yes	Yes	CEMP Section 20
Waste	E124	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Full Compliance	Yes	Yes	CEMP Section 20
Waste	E125	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	Full Compliance	Yes	Yes	CEMP Section 20
Water	E126	The CSSI must be designed and constructed so as to maintain the NSW Water Quality Objectives (NSW WQO) where they are being achieved as at the date of this approval, and contribute towards achievement of the NSW WQO over time where they are not being achieved as at the date of this approval, unless an EPL in force in respect of the CSSI contains different requirements in relation to the NSW WQO, in which case those requirements must be complied with.	Full Compliance	Yes	No - Design undertaken by SM-WSA/TfNSW	N/A
Construction requirements	E127	The Proponent must consider the Guidelines for controlled activities on waterfront land riparian corridors (Department of Industry 2018) when carrying out work within 40 metres of a watercourse, including its bed.	Full Compliance	Yes	No - the planned scope Badgerys Creek is located 350m to the north and east of the works area	N/A
Construction requirements	E128	Before undertaking any works and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with Managing Urban Stormwater: Soils and Construction Vol 1 4th ed. by Landcom, 2004 (The Blue Book).	Principal Contractor	Yes	Yes	CEMP Section 18
Construction requirements	E129	Unless an EPL is in force in respect to the CSSI and that licence specifies alternative criteria, discharges from construction wastewater treatment plants to surface waters must not exceed: (a) the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018 (ANZG (2018)) default guideline	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		values for toxicants at the 95 per cent species protection level; (b) for physical and chemical stressors, the guideline values set out in Tables 3.3.2 and 3.3.3 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 (ANZECC/ARMCANZ); and (c) for bioaccumulative and persistent toxicants, the ANZG (2018) guidelines values at a minimum of 99 per cent species protection level. Where the ANZG (2018) does not provide a default guideline value for a particular pollutant, the approaches set out in the ANZG (2018) for deriving guideline values, using interim guideline values and/or using other lines of evidence such as international scientific literature or water quality guidelines from other countries, must be used.				
Construction requirements	E130	If construction stage stormwater discharges are proposed, a Water Pollution Impact Assessment will be required to inform licensing consistent with section 45 of the POEO Act. Any such assessment must be prepared in consultation with the EPA and be consistent with the National Water Quality Guidelines, with a level of detail commensurate with the potential water pollution risk.	Full Compliance	Yes	Yes	No stormwater discharges are proposed. Run-off water leaving the site would be managed in accordance with the PESCP.
Construction requirements	E131	Drainage feature crossings (permanent and temporary watercourse crossings and stream diversions) and drainage swales and depressions must be carried out in accordance with relevant guidelines and designed by a suitably qualified and experienced person.	Full Compliance	Yes	No - No intention or requirement for watercourse crossings or stream diversions	N/A
Operational Requirements	E132	Unless an EPL is in force in respect to the CSSI and that licence specifies alternative criteria, discharges from operation water treatment plants to surface waters must not exceed: (a) the ANZG 2018 default guideline values for toxicants at the 95 per cent species protection level; (b) for physical and chemical stressors, the guideline values set out in Tables 3.3.2 and 3.3.3 of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ, 2000); and (c) for bioaccumulative and persistent toxicants, the ANZG 2018 guideline values at a minimum of 99 per cent species protection level. Where the ANZG 2018 does not provide a default guideline	Not Applicable	No	No	N/A

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		value for a particular pollutant, the approaches set out in the ANZG 2018 for deriving guideline values, using interim guideline values and/or using other lines of evidence such as international scientific literature or water quality guidelines from other countries, must be used.				
Groundwater	E133	Make good provisions for groundwater users must be provided in the event of a material decline in water supply levels, quality or quantity from registered existing bores associated with groundwater changes from either construction and/or ongoing operational dewatering caused by the CSSI.	Not Applicable	No	No	N/A
Groundwater	E134	The Proponent must submit a revised Groundwater Modelling Report to the Planning Secretary for information before bulk excavation at the relevant construction location. The Groundwater Modelling Report must include: (a) for each construction site where excavation will be undertaken, cumulative (additive) impacts from nearby developments, parallel transport projects and nearby excavation associated with the CSSI; (b) predicted incidental groundwater take (dewatering) including cumulative project effects; (c) potential impacts for all latter stages of the CSSI or detail and demonstrate why these later stages of the CSSI will not have lasting impacts to the groundwater system, ongoing groundwater incidental take and groundwater level drawdown effects; (d) actions required to minimise the risk of inflows (including in the event latter stages of the CSSI are delayed or do not progress) and a strategy for accounting for any water taken beyond the life of the operation of the CSSI; (e) saltwater intrusion modelling analysis, from saline groundwater in shale, into metro station sites; and (f) a schematic of the conceptual hydrogeological model.	Not Applicable	No	No	N/A
	Appendix A	WRITTEN INCIDENT NOTIFICATION AND REPORTING REQUIREMENTS 1. A written incident notification addressing the requirements set out below must be submitted to the Planning Secretary via the Major Projects website within seven (7) days after the Proponent becomes aware of an incident. Notification is required to be given under this condition even if the Proponent fails to give the notification required under Condition	Not Applicable	Yes	Noted	Appendix N & Contract requirements for incidents Section 7

COA Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works from Staging Report (Y/N)	Applicable EDR Works (Y/N)	CEMP Compliance Reference - Where Addressed
		<p>A41 or, having given such notification, subsequently forms the view that an incident has not occurred.</p> <p>2. Written notification of an incident must:</p> <ul style="list-style-type: none"> (a) identify the CSSI and application number; (b) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident); (c) identify how the incident was detected; (d) identify when the Proponent became aware of the incident; (e) identify any actual or potential non-compliance with conditions of approval; (f) describe what immediate steps were taken in relation to the incident; (g) identify further action(s) that will be taken in relation to the incident; and (h) identify a project contact for further communication regarding the incident. <p>3. Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Proponent must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements below, and such further reports as may be requested.</p> <p>4. The Incident Report must include:</p> <ul style="list-style-type: none"> (a) a summary of the incident; (b) outcomes of an incident investigation, including identification of the cause of the incident; (c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and (d) details of any communication with other stakeholders regarding the incident. 				

Table 66 CEMF Matrix

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Sydney Metro Environment and Sustainability Statement of Commitment	1.3	<p>The Sydney Metro Environment and Sustainability Statement of Commitment (Appendix A) which applies to all Sydney Metro projects. Principal Contractors are required to undertake their works in accordance with this document. The Statement of Commitment reflects a commitment in the delivery of the project to:</p> <ul style="list-style-type: none"> -optimise sustainability outcomes transport service quality and cost effectiveness. -develop effective and appropriate responses to the challenges of climate change carbon management resource and waste management land use integration customer and community expectation and heritage and biodiversity conservation. - be environmentally responsible by avoiding pollution enhancing the natural environment and reducing the project ecological footprint while complying with all applicable environmental laws regulations and statutory obligations. -be socially responsible by delivering a workforce legacy which benefits individuals communities the project and industry and is achieved through collaboration and partnerships. 	AEW Contractor	Yes	Yes	Section 6
Legislative and other Requirements	2	<p>The Project is characterised into components that are located outside Western Sydney International (off-airport) and components that are located within Western Sydney International (on-airport) to align with their different planning approval pathways required under State and Commonwealth legislation. In certain circumstances NSW legislative requirements may be applicable within the on-airport site. This will be reflected within the relevant Construction Environmental Manager Plan (CEMP) and sub-plans.</p> <p>Table 1.1 identifies key NSW environmental legislative requirements and their application to SMWSA construction works off- airport current as at the date of this document. Sydney Metro and its Contractors must regularly review their legislative and other requirements. (See CEMF for Table 1.1)</p>	AEW Contractor	Yes	Yes	Section 5
Planning Approvals	2.2	<p>There are three principal statutory schemes that govern the planning and assessment process for the Project which relate to works that are located outside the boundaries of Western Sydney International Airport (off-airport); and works that are located within the boundaries of Western Sydney International (on-airport).</p> <p>The off-airport components of the Project are subject to assessment and approval under the provisions of both State and potentially the</p>	AEW Contractor except the SM-WSA will seek approval for the Project and the AEW Contractor is to meet	Yes	Yes	Section 5

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		<p>Commonwealth environmental planning requirements being the Environmental Planning and Assessment Act (EP&A Act) (NSW) and the Environment Protection and biodiversity Conservation Act (EPBC Act) (Cth) respectively.</p> <p>The Project is State significant infrastructure (SSI) under section 5.12 of the EP&A Act and has sought a declaration to be critical State significant infrastructure under section 5.13 of the EP&A Act. Therefore the Project is subject to assessment and approval by the NSW Minister for Planning and Public Spaces under division 5.2 of the EP&A Act.</p> <p>Approval under the EP&A Act and EPBC Act for impacts on Matters of National Environmental Significance (MNES) and Commonwealth land is not required for the on-airport elements of the Project. The on-airport elements of the Project however trigger requirements to vary the current Airport Plan for Western Sydney International under the Airports Act 1996 (Airports Act) (Cth). The proposed variation must be referred to the Commonwealth Minister for the Environment for advice and agreement as relevant in respect of the variation before the Commonwealth Infrastructure Minister may vary the Airport Plan.</p> <p>The requirements of the relevant approvals are required to be complied with by Sydney Metro. Responsibility for implementing performance outcomes mitigation measures and conditions of approval will be allocated between Sydney Metro and Principal Contractors as appropriate.</p>	the requirements of these approvals.			
Planning Approvals	2.2	<p>Typically for projects approved under the EP&A Act Sydney Metro are required to produce a Staging Report which sets out the applicability and allocation of NSW approval requirements within the project's program of works. For the purposes of SMWSA Sydney Metro is expecting this requirement for the off-airport works as well as a requirement to prepare a Construction (Rail) Plan for the on-airport works. Sydney Metro will prepare a combined Staging Report / Construction (Rail) Plan to identify the stages of construction of the project as well as the applicability and allocation of all NSW and Commonwealth requirements for each stage including the:</p> <ul style="list-style-type: none"> • Performance outcomes identified in the planning documentation • Mitigation measures identified in the planning documentation • Any Conditions of Approval of the SSI approval • Any conditions of the Airport Plan as varied • The requirements of this CEMP. 	<p>AEW Contractor except SM-WSA will develop and obtain approval for the staging report Construction (Rail) Plan and the on-airport CEMPs.</p> <p>The AEW Contractor is to meet the requirements.</p>	Yes	Yes	CEMP prepared in accordance to the staging report.
Environment Protection Licence	2.3	Contractors for SMWSA need to review the applicability of Schedule Activities and assess the need to obtain an Environment Protection	AEW Contractor	No	N/A	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
Requirements (off-airport works)		Licence (EPL) for off-airport works associated with SMWSA. In other circumstances work may be undertaken under an existing EPL held by Sydney Trains.				
Environment Protection Licence Requirements (off-airport works)	2.3	Where required Sydney Metro Principal Contractors undertaken off-airport works will: a. Apply for and be granted an EPL from the EPA. b. Hold an EPL which covers their scope of works as necessary under the POEO Act. c. Undertake their scope of works in accordance with the conditions of the applicable EPLs as issued by the EPA. d. Work under the existing Sydney Trains EPL.	AEW Contractor	No	N/A	N/A
building Approvals (on airport works)	2.4	Following variation of the Airport Plan and prior to construction for on-airport works the Airports Act provides a regime requiring building approvals to be obtained from the Airport building Controller (AC) in respect of building activities on the airport site. WSA is required to provide its consent to any applications for building approvals. Applications for building approvals must satisfy the requirements of the Airports (building Control) Regulations 1996. once construction is complete a certificate of compliance must be issued by the AC before a building can be occupied or works used.	AEW Contractor	No	N/A	N/A
other Licences and Permits	2.5	EPBC Act Part 13 permits may be required in specific areas across the project noting that such a permit is already in place for the impacts of the Stage 1 development of the Airport Site.	AEW Contractor except where SM-WSA will develop applications and obtain Part 13 Permits.	Yes	No - Work is not on-airport.	N/A
Environmental and Sustainability Management System	3.1	a. Principal Contractors are required to have a corporate Environmental Management System certified under AS/NZS ISO 14001:2016.	AEW Contractor	Yes	Yes	Section 6
Environmental and Sustainability Management System	3.1	b. Principal Contractors are required to develop a project based Environment and Sustainability Management System (E&SMS). The E&SMS will: i. e consistent with the Principal Contractors corporate Environmental Management System and AS/NZS IS 14001:2016; ii. e supported by a process for identifying and responding to changing legislative or other requirements; iii. Include processes for assessing design or construction methodology changes for consistency against the planning approvals; iv. Include processes for tracking and reporting performance against sustainability and compliance targets;	AEW Contractor	Yes	Yes	CEMP

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		v. Include a procedure for the identification and management of project specific environmental risks and appropriate control measures; and vi. e consistent with the Sydney Metro – Western Sydney Airport Sustainability Plan and the Sydney Metro Environment and Sustainability Statement of Commitment.				
Environmental and Sustainability Management System	3.1	c. All sub-contractors encased by the Principal Contractor will be required to work under the Principal Contractor's Environment and Sustainability Management System.	AEW Contractor	Yes	Yes	CEMP 6.12
Environmental and Sustainability Management System	3.1	d. The relationship between the Sydney Metro Environment and Sustainability Management System and the Principal Contractor's Environment and Sustainability Management System is shown in Figure 1.	AEW Contractor	Yes	Yes	Noted
Sustainability Management Plan	3.2	a. Principal Contractors are required to prepare and implement a Sustainability Management Plan (SMP) relevant to the scale and nature of the Project Works.	AEW Contractor	No	N/A	Not required due to limited size and extent of works
Sustainability Management Plan	3.2	b. The SMP must as a minimum address and detail: SMP1: The relevant requirements of the TfNSW Environment and Sustainability Policy and the Sydney Metro – Western Sydney Airport Sustainability Plan SMP2: A sustainability policy statement SMP3: The sustainability management team structure including key personnel authority and roles of key personnel lines of responsibility and communication minimum skill levels of each role and interfaces with the overall project organisation structure SMP4: N/A SMP5: The carbon and energy mitigation measures as detailed in the planning approval documentation that are applicable to the Project Works SMP6: The low carbon strategies and initiatives that will be implemented to minimise the carbon emissions SMP7: The energy efficiency strategies and initiatives that will be implemented to minimise energy use SMP8: Support innovative and cost effective approaches to energy efficiency low carbon / renewable energy sources and energy procurement SMP9: N/A SMP10: The processes and methodologies (including frequency) for assurance monitoring auditing corrective action continuous improvement and reporting on sustainability performance SMP11: A process (or processes) for compliance record generation and management SMP12: The processes and methodologies which will be used to achieve the required scores under rating systems identified in	AEW Contractor	No	N/A	Not required due to limited size and extent of works

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		General Specification for Sustainability SMP13: N/A SMP14: The strategies and initiatives that will be implemented to reduce overall water use and wastewater discharge and maximise the availability and use of non-potable water sources SMP15: N/A SMP16: N/A SMP17: The strategy to reduce material use throughout the project life-cycle SMP18: The strategies and initiatives that will be implemented to maximise the use of recycled materials SMP19: The strategies and initiatives that will be implemented to recycle and reuse materials onsite SMP20: The strategies and initiatives to prioritise the use of materials with a lower environmental and social embodied impact SMP21: N/A SMP22: The strategies and initiatives to prioritise the use of low-VC low emission materials SMP23: The use of sustainably sourced and certified timber and wood products SMP24: N/A SMP25: N/A SMP26: N/A SMP27: Estimates of 'Scope 1' 'Scope 2' 'Scope 3' and total carbon emissions (Carbon Emission Targets) that incorporates direct and indirect emissions associated with electricity and fuel consumption on-site process emissions and embodied emissions for all main materials used and undertaken in accordance with IS 14064-1 IS 14064-2 & IS 14064-3. SMP28: Reporting of carbon and energy will be undertaken in accordance with the National Greenhouse and Energy Reporting Act 2007. SMP29: The strategy and initiatives to influence subcontractors and materials suppliers to adopt sustainability objectives in their works and procurement SMP30: A Sustainable Procurement Policy that must as a minimum include: - The processes and procedures that will be used to provide environmental and social improvement - The responsibilities of key project personnel with respect to the implementation of the policy - Compliance record generation and management - The processes and environmental and social criteria that will be used for the selection of Subcontractors - The processes that will be used to ensure ethical sourcing of labour and materials - Local sourcing - Where equipment materials or labour are procured from locations outside				

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		Australia the processes that will be used to ensure human rights impacts and risks are identified and mitigated as well as processes to ensure compliance with modern slavery and modern slavery reporting - Engagement with social enterprises and local businesses SMP31: The retention of records detailing the consideration of sustainability in the procurement of all materials				
Construction Workforce development and Industry Participation Plan	3.3	a. The Workforce development and Industry Participation Plan will address and detail: i. The proposed response to State and Commonwealth requirements including but not limited to: o NSW Aboriginal Participation in Construction Policy o NSW Infrastructure Skills Legacy Program o Australian Jobs Act – Australian Industry Participation Plan o Western Sydney City deal ii. Indigenous Participation Plan – National Partnerships Agreement Proposed appropriately skilled key personnel to support delivery of the workforce development and industry participation requirements; iii. Implementation approach processes and systems to ensure delivery and reporting of workforce development and industry participation priority areas: - Jobs and Industry Participation; - Skills development; - diversity and Inclusion including Aboriginal Participation; and - Inspiring Future Talent.	AEW Contractor	Yes	No - Not required due to limited size and extent of works, some policies implemented under GC21 Contract.	N/A
Construction Environmental Management Plan(s)	3.4	a. Sydney Metro will develop the Construction Environmental Management Plans (CEMPs) for the on-airport construction of the rail. These on-airport CEMPs will be developed in consultation with WSA and be consistent with existing WSA CEMPs. Figure 2 displays the relationship between the planning documentation and the environmental documentation required for SMWSA.	SM-WSA	Yes	No - Work is not on-airport.	N/A
Construction Environmental Management Plan(s)	3.4	b. Sydney Metro will submit the on-airport CEMPs to the Commonwealth for approval. The approved SMWSA on-airport CEMPs will be implemented for all on-airport rail construction works and inform the Principal Contractor's environmental documentation where working on the airport site.	SM-WSA	Yes	No - Work is not on-airport.	N/A
Construction Environmental Management Plan(s)	3.4	c. Principal Contractors are required to prepare and implement a Construction Environmental Management Plan (CEMP) relevant to the scale and nature of their off airport scope of works. The CEMP shall comprise of a main CEMP document issue specific sub plans activity specific procedures and site based control maps. The CEMP shall	AEW Contractor	Yes	Yes	CEMP

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		illustrate the relationship between other plans required by the contract in particular those that relate to design management. The CEMP will address the specific requirements of scope of works and address the off-airport environmental requirements.				
Construction Environmental Management Plan(s)	3.4	d. depending on the scope and scale of the works Sydney Metro may decide to streamline the CEMP and sub-plan requirements for off-airport works. For example depending on the risk associated with particular environmental issues it may be appropriate to remove the need for a sub plan or replace with a procedure as part of the CEMP. The CEMP and sub-plan requirements from this CEMP for each construction state / contract will be detailed in the Stain Report / Construction (Rail) Plan for the project.	SM-WSA	Yes	Yes	Note
Construction Environmental Management Plan(s)	3.4	e. Environmental documentation prepared for works within the on-airport site will be in accordance with the approved SMWSA on-airport CEMPs	AEW Contractor	No	N/A	N/A
Construction Environmental Management Plan(s)	3.4	f. The Principal Contractor CEMP will cover the requirements of the relevant planning approval documentation the conditions of all other permits and licences the Principal Contractor's corporate EMS the environmental provisions of the contract documentation and this Construction Environmental Management Framework.	AEW Contractor	Yes	Yes	CEMF Section 6
Construction Environmental Management Plan(s)	3.4	g. As a minimum the Principal Contractor CEMP will: i. Include a contract specific environmental policy; ii. Include a description of activities to be undertaken during construction; iv. For each plan under the CEMP set objectives and targets and identify measurable key performance indicators in relation to these; v. For each role that has environmental accountabilities or responsibilities including key personnel provide a tabulated description of the authority and roles of key personnel lines of responsibility and communication minimum skill level requirements and their interface with the overall project organisation structure; vi. Assign the responsibility for the implementation of the CEMP to the Environment Manager who will have appropriate experience. The Principal Contractor's Project director will be accountable for the implementation of the CEMP; vii. Identify communication requirements including liaison with stakeholders and the community; viii. Include induction and training requirements and a summary of the Training Needs Analysis required in Section 3.11(b); ix. Management strategies for environmental compliance and review of the performance of environmental controls; x. Procedures for environmental inspections and	AEW Contractor	Yes	Yes	CEMF Section 6 and 7

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		monitoring auditing and review and reporting on environmental performance including environmental compliance tracking; xi. Include an annual schedule for auditing the CEMP and Sub-Plans that is updated at least monthly; xii. Include procedures for emergency and incident management non-compliance management and corrective and preventative action; and xiii. Include procedures for the control of environmental records.				
Construction Environmental Management Plan(s)	3.4	h. The Principal Contractor CEMP and associated sub-plans will be reviewed by Sydney Metro prior to any construction works commencing. For off-airport works approved under the CSSI the independent environmental representative (see Section 3.13) will also review the CEMP. i. Where a corresponding systems document exists within the Sydney Metro Integrated Management System the Principal Contractor's procedures will be required to be consistent with any requirements in those documents.		Yes	Yes	Noted
Off-Airport Construction Environmental Management Sub-Plans	3.5	a. Subject to Sec on 3.4(b) the Principal Contractors will prepare issue specific environmental sub plans to the CEMP which address each of the relevant environmental impacts at a particular site or state of the project. Issue specific sub plans will include as a minimum: i. Spoil management; ii. Groundwater management; iii. Traffic and transport management; iv. Noise and vibration management; v. Heritage management; vi. Flora and fauna management; vii. Visual amenity management; viii. Soil and water management; ix. Air quality management; and x. Waste management. Some of these sub plans may also be informed by other environmental management documents included in the planning approval for example the Construction Traffic Management Framework or Construction Noise and Vibration Standard.	AEW Contractor	Yes	No - No sub-plans required for this work	N/A
Off-Airport Construction Environmental Management Sub-Plans	3.5	b. Additional detail on the minimum requirements for these sub plans is provided in Sections 6 to 14 of this CEMP.	AEW Contractor	Yes	No - No sub-plans required for this work	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Environmental Procedures and Control Maps	3.6	a. The Principal Contractor will prepare and implement activity specific environmental procedures. These procedures should supplement environmental management sub plans but may substitute for sub plans in agreement with Sydney Metro if a reasonable risk based justification can be made and the sub plan is not a requirement of any approval.	AEW Contractor	Yes	No - No sub-plans required for this work	Mitigation Measures included in the CEMP, subplans note required
Environmental Procedures and Control Maps	3.6	b. The procedures will include: I. A breakdown of the work tasks relevant to the specific activity and indicate responsibility for each task; II. Potential impacts associated with each task; III. A risk rating for each of the identified potential impacts; IV. Mitigation measures relevant to each of the work tasks; and V. Respons ibility to ensure the implementation of the mitigation measures.	AEW Contractor	Yes	No - No sub-plans required for this work	Mitigation Measures included in the CEMP, subplans note required
Environmental Procedures and Control Maps	3.6	c. The Principal Contractor will prepare and implement site based progressive Environmental Control Maps (ECMs) which as a minimum: i. depicting the current representation of the site; ii. Indicate which environmental procedures environmental approvals or licences are applicable; iii. Illustrate the site showing significant structures work areas and boundaries; iv. Illustrate the environmental control measures and environmentally sensitive receivers; v. Is endorsed by the Principal Contractors Environmental Manager or delegate; vi. Include all the training and competency requirements for relevant workers; and vii. e communicated to relevant workers including sin off the appropriate procedures prior to commencing works on the specific site and / or activity.	AEW Contractor	Yes	Yes	Initial ECM provided in the CEMP.
Additional Environmental Assessments	3.7	d. Where the requirement for an additional environmental assessment is identified this will be undertaken prior to undertaking any construction activities. The environmental assessment will include: i. A description of the existing surrounding environment; ii. details of the ancillary works and construction activities required to be carried out including the hours of works; iii. An assessment of the environmental impacts of the works including but not necessarily limited to traffic noise and vibration air quality soil and water ecology and heritage; iv. details of mitigation measures and monitoring specific to the works that would be implemented to minimise environmental impacts; and v. Identification of the timing for completion of the construction works and how the sites would be reinstated (including any necessary rehabilitation).	AEW Contractor	Yes	Noted	Noted

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Cumulative Impacts	3.8	a. A cumulative construction impacts management plan would be developed. The plan would detail co-ordination and consultation requirements with the following stakeholders (as relevant) would occur where required to manage the interface of projects under construction at the same time: Western Sydney Airport i. Transport for NSW ii. department of Planning Industry and Environment iii. Western Parkland City Authority (and their contractors) iv. Emergency service providers v. Utility providers	AEW Contractor except SM-WSA will develop and obtain approval of the Cumulative Impacts Plan.	Yes	No - Cumulative impacts are managed by SM-WSA	N/A
Cumulative Impacts	3.8	b. Co-ordination and consultation requirements with these stakeholders would be detailed in the plan to include: i. provision of regular updates to the detailed construction program construction sites and haul routes ii. identification of key interfaces with other construction projects iii. development of mitigation strategies to manage cumulative impacts associated with these interfaces.	AEW Contractor except SM-WSA will develop and obtain approval of the Cumulative Impacts Plan.	Yes	No - Cumulative impacts are managed by SM-WSA	N/A
Condition Surveys	3.9	e. Prior to the commencement of construct on the Principal Contractors are to offer Pre-construction building Condition Surveys in writing to the owners of buildings where there is a potential for construction activities to cause any damage (regardless of severity). If accepted the Principal Contractor will produce a comprehensive written and photographic condition report produced by an appropriate professional prior to relevant works commencing.	AEW Contractor	Yes	No - Cumulative impacts are managed by SM-WSA	N/A
Condition Surveys	3.9	f. Prior to the commencement of construction the Principal Contractor will prepare a Road dilapidation Report for all local public roads proposed to be used by heavy vehicles. dilapidation reports are to include other road infrastructure such as signs, curbs, applicable driveways and pedestrian paths.	AEW Contractor	Yes	Yes	CEMF Section 13
Register of Hold Points	3.1	a. Principal Contractors will identify hold points beyond which approval is required to proceed with a certain activity. Example activities include vegetation removal and water discharge. Hold points will be documented in relevant CEMPs	AEW Contractor	Yes	Yes	CEMF Section 6.9
Register of Hold Points	3.1	. Table 1.4 provides the structure for the register of hold points as well as a preliminary list of hold points which will be implemented.	AEW Contractor	Yes	Yes	CEMF Section 6.9
Training Awareness and Competence	3.11	a. Principal Contractors are responsible for determining the training needs of their personnel. As a minimum this will include site induction regular toolbox talks and topic specific environmental training as follows:	AEW Contractor	Yes	Yes	CEMF Section 6.11

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		i. The site induction will be provided to all site personnel and will include as a minimum: - Training purpose objectives and key issues; - Contractor's environmental and sustainability policy(s) and key performance indicators; - use diligence duty of care and responsibilities;				
Training Awareness and Competence	3.11	b. Principal Contractors will conduct a Training Needs Analysis which: i. Identifies that all staff are to receive an environmental training; ii. Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans; iii. Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements; and iv. Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events provides mechanisms to notify staff of their training requirements and identifies staff who do not attend scheduled training events or who have overdue training requirements.	AEW Contractor	Yes	Yes	CEMF Section 6.11
Emergency and Incident Response	3.12	a. Principal Contractors undertaking off-airport work in accordance with an EPL must develop and implement a Pollution Incident Response Management Plan in accordance with the requirements of the PE Act. Contractor's emergency and incident response procedures will also be consistent with any relevant Sydney Metro procedures and for on-airport works consistent with the environmental incident and emergency management requirements identified in the Western Sydney Airport Site Environmental Management Framework and will include: i. Categories for environmental emergencies and incidents; ii. Notification protocols for each category of environmental emergency or incident including notification to Sydney Metro WSA (where required for on-airport works) and notification to owners / occupiers in the vicinity of the incident. This is to include relevant contact details; iii. Identification of personnel who have the authority to take immediate action to shut down any activity or to affect any environmental control measure (including as directed by an authorised officer of any regulator or government department); iv. A process for undertaking appropriate levels of investigation for all incidents and the identification implementation and assessment of corrective and preventative actions; and v. Notification protocols of incidents to relevant regulators and	AEW Contractor	Yes	No - No EPL required for these works.	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		stakeholders including (but not limited to) the EPA PIE the AE WSA and ITRC for incidents that are made by the Contractor or Sydney Metro.				
Emergency and Incident Response	3.12	b. The Contractor will make all personnel aware of the plan and their responsibilities.	AEW Contractor	Yes	Yes	Appendix N & Contract requirements for incidents Section 7
Independent Environmental Representatives	3.13	a. Sydney Metro will engage Independent Environmental Representatives (ERs) as required under the SSI approval for off-airport works to undertake the following along with any additional roles as required: i. Review provide comment on and endorse (where required) any relevant environmental documentation to verify it is prepared in accordance with relevant environmental legislation planning approval conditions Environment Protection Licences relevant standards and this CEMF; ii. Monitor and report on the implementation and performance of the above mentioned documentation and other relevant documentation; iii. Provide independent guidance and advice to Sydney Metro and the Contractors in relation to environmental compliance issues and the interpretation of planning approval conditions; iv. e the principal point of advice for the PIE in relation to all questions and complaints concerning the environmental performance of the project; v. Ensure that environmental auditing is undertaken in accordance with all relevant project requirements; and vi. Recommend reasonable steps including 'stop works' to be taken to avoid or minimise adverse environmental impacts.	Not Applicable except that the Principal will communicate approval of the Secretary of any ER.	Yes	No - SM-WSA responsibility to engage ER	N/A
Airport Environment officer	3.14	An Airport Environment officer (AE) is responsible for the day to day regulatory oversight of compliance with the Airports (Environment Protection) Regulations 1997 (AEPRs) at Western Sydney International and will have a role in relation to the on airport works for SWMG. The responsibilities of the AE in rely on to on-airport works of SMWSA include: i. Monitoring compliance with the AEPRs ii. Facilitate an understanding of the obligations of the AEPRs iii. Ensure the best possible outcomes are achieved iv. Complete site inspections to review monitoring requirements and completion of works v. Review and comment on incidents and remedial activities vi. Issue an environment protection order in accordance with Part 7 of the AEPR	Not Applicable except that the Principal will provide communications between both parties to address AE role and that of the AEW Contractor.	No	N/A	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		vii. Issue an infringement notice in response to an offence against the AEPR.				
Roles and Responsibilities	3.15	a. In relation to Roles and Responsibilities the Principal Contractor CEMP will: i. Describe the relationship between the Principal Contractor Sydney Metro key regulatory stakeholders the independent environmental representative and the independent certifier; ii. For each role that has environmental accountabilities or responsibilities including key personnel provide a tabulated description of the authority and roles of key personnel lines of responsibility and communication minimum skill level requirements and their interface with the overall project organisation structure; iii. Provide details of each specialist environment sustainability or planning consultant who is employed by the Principal Contractor including the scope of their work; and iv. Provide an overview of the role and responsibilities of the Independent Environmental Representative the Independent Certifier and other regulatory stakeholders.	AEW Contractor.	Yes	Yes	CEMF Section 6.5
Roles and Responsibilities	3.15	b. All sub-contractors engaged by the Principal Contractor will be required to operate within the EMS documentation of that Principal Contractor.	AEW Contractor.	Yes	Yes	CEMF Section 6.12
Environmental Monitoring Inspections and Auditing	3.16	h. Issue specific environmental monitoring will be undertaken as required or as additionally required by any approval permit or licence conditions.	AEW Contractor.	Yes	Yes	CEMF Section 8.6
Environmental Monitoring Inspections and Auditing	3.16	i. The results of any monitoring undertaken as a requirement of a license or permit that is required to be published will be published on the Principal Contractor's or a project specific website within 14 days of obtaining the results.	AEW Contractor will provide the information to SM-WSA for publishing on the project website.	Yes	No - No licence required for this work	N/A
Environmental Monitoring Inspections and Auditing	3.16	j. Environmental inspections will include:	AEW Contractor.	Yes	Yes	CEMF Section 8.3
Environmental Monitoring Inspections and Auditing	3.16	Surveillance of environmental mitigation measures by the Site Foreman; and	AEW Contractor.	Yes	Yes	CEMF Section 8.3
Environmental Monitoring	3.16	Periodic inspections by the Principal Contractor's Environmental Manager (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record.	AEW Contractor.	Yes	Yes	CEMF Section 8.3

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Inspections and Auditing						
Environmental Monitoring Inspections and Auditing	3.16	k. Regular site inspections by Sydney Metro the ER for off-airport works and the AE for on-airport works will be undertaken at a frequency to be agreed with the Principal Contractor based on the risk of activity but as a minimum monthly.	SM-WSA will organise inspections in consultation with the co-operation of the AEW Contractor.	Yes	Yes	CEMF Section 8.4
Environmental Monitoring Inspections and Auditing	3.16	l. Principal Contractors must undertake internal environmental audits. The scope will include:	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	Compliance with any approval permit or licence conditions	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	Compliance with the E&SMS CEMP SMP sub-plans and procedures;	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	Community consultation and complaint response;	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	Environmental training records; and	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	Environmental monitoring and inspection results.	AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time frame of the scope of works.
Environmental Monitoring	3.16	m. Sydney Metro will also undertake periodic audits of the Principal Contractor's E&SMS and compliance with the environmental aspects of	Principal will organise with cooperation of the AEW Contractor.	Yes	Yes	CEMF Section 8.9, unlikely to occur in the time

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Inspections and Auditing		contract documentation including this CEMF. These audits would cover both on- and off-airport works.				frame of the scope of works.
Environmental Monitoring Inspections and Auditing	3.16	n. off-airport works approved under the SSI approval will be subjected to audits undertaken by the independent environmental auditor. Independent environmental audits will focus on compliance with the planning approval and the conditions of approval. The independent auditor is approved by PIE and an audit schedule will be developed in consultation with the Principal Contractor and Sydney Metro.	Principal will organise with cooperation of the AEW Contractor.	Yes	Yes	noted
Environmental Monitoring Inspections and Auditing	3.16	o. on-airport works approved under the Airport Plan as varied will be subject to environmental audits and compliance audits noting unscheduled audits may also be undertaken. The environmental audits would audit the environmental systems and on- site performance of the on-airport works of SMWSA and be undertaken on a 6 monthly basis.	SM-WSA will organise with cooperation of the AEW Contractor.	Yes	No - Work is not on-airport.	N/A
Environmental Non compliances	3.17	a. Principal Contractors will document and detail any non-compliances arising out of the above monitoring inspections and audits. Sydney Metro will be made aware of all non-compliances in a timely manner.	The AEW Contractor shall provide the Principal with the Incident Report required in a SAI360 compatible format.	Yes	Yes	Section 9
Environmental Non compliances	3.17	b Principal Contractors will develop and implement corrective actions to rectify the non-compliances and preventative actions in order to prevent a re-occurrence of the non-compliance. Contractors will also maintain a register of non-compliances corrective actions and preventative actions.	AEW Contractor.	Yes	Yes	Section 9
Environmental Non compliances	3.17	c Sydney Metro may raise non-compliances against environmental requirements. The Environmental Representative and Airport Environmental officer also have the authority to raise a non-compliance for their respective areas of work.	Principal will raise and expect investigation and actions to be carried out by the AEW Contractor.	Yes	Yes	Noted
Environmental Records and Compliance Reporting	3.18	p. Principal Contractors will maintain appropriate records of the following:	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and Compliance Reporting	3.18	Site inspections audits monitoring reviews or remedial actions;	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and	3.18	documentation as required by performance conditions approvals licences and legislation;	AEW Contractor.	Yes	Yes	Section 9

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Compliance Reporting						
Environmental Records and Compliance Reporting	3.18	Modifications to site environmental documentation (e.. CEMP sub-plans and procedures); and	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and Compliance Reporting	3.18	there records as required by this Construction Environmental Management Framework.	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and Compliance Reporting	3.18	q. Records must be accessible onsite for the duration of works.	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and Compliance Reporting	3.18	r. Records will be retained by the Principal Contractor for a period of no less than 7 years. Records will be made available in a timely manner to Sydney Metro (or their representative) upon request.	AEW Contractor.	Yes	Yes	Section 9
Environmental Records and Compliance Reporting	3.18	s. Compliance reports detailing the outcome of any environmental surveillance activity including internal and external audits (refer to Section 3.14) will be produced by the Principal Contractors Environmental Manager or delegate. These reports will be submitted to Sydney Metro at an agreed frequency.	AEW Contractor.	Yes	Yes	Section 9
Review and Improvement of the Environment & Sustainability Management Systems	3.19	t. Principal Contractors will ensure the continual review and improvement of the management systems. This will generally occur in response to: i. Issues raised during environmental surveillance and monitoring; ii. ii. Expanded scope of works; iii. Environmental incidents; and iv. Environmental non-conformances	AEW Contractor.	Yes	Yes	Section 10
Review and Improvement of the Environment & Sustainability Management Systems	3.19	u. A formal review of the management systems by the Principal Contractor's Senior Management Team will also occur on an annual basis as a minimum. This review shall generate actions for the continual improvement of the systems and supporting management plans.	AEW Contractor.	Yes	Yes	Section 10
Stakeholder and Community Involvement overview	4.1	v. Throughout construction Sydney Metro and the Principal Contractors will work closely with stakeholders and the community to ensure they are well informed regarding the construction works.	AEW Contractor.	Yes	Yes	Section 11

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
Stakeholder and Community Involvement overview	4.1	w. Stakeholders and the community will be informed of significant events or changes that affect or may affect individual properties residences and businesses. These will include: i. Significant milestones; ii. Design changes; iii. Changes to traffic conditions and access arrangements for road users and the affected public; and iv. Construction operations which will have a direct impact on stakeholders and the community including noisy works interruptions to utility services or construction work outside of normal work hours.	The Principal Contractor must meet any obligation required of them by the CCS.	Yes	Yes	Section 11
Community Communication Strategy	4.2	a. An overarching Community Communication Strategy (CCS) has been developed for SMWSA. The CCS incorporates both on and off-airport works with the on-airport components being developed in consultation with WSA.	The Principal Contractor must meet any obligation required of them by the CCS.	Yes	Yes	Section 11
Community Communication Strategy	4.2	x. Each Principal Contractor would be responsible for implementing their own Community Communication Strategy prepared in accordance with this overarching strategy.	The Principal Contractor must meet any obligation required of them by the CCS.	Yes	Yes	Section 11
Community Communication Strategy	4.2	y. Key elements of the Community Communication Strategy which will be implemented at appropriate times in the construction process include: i. Notification (including targeted letterbox drops and email) of any works that may disturb local residents and businesses (such as noisy activities and night works) at least seven days prior to those works commencing; ii. Notification (including targeted letterbox drops and email) of works that may affect transport (such as road closures changes to pedestrian routes and changes to bus stops); iii. Traffic alerts (via email) to all key traffic and transport stakeholders advising of any changes to access and local traffic arrangements (at least seven days prior to significant events); iv. Print and radio advertisements regarding major traffic changes; v. 24-hour toll-free community project information phone line; vi. Complaints management process; vii. Community information sessions as required; viii. Regular updates to the Sydney Metro website (sydneymetro.info) including uploading of all relevant documents and contact details for the stakeholder and community relations team; ix. Provision of information to the Sydney Metro Community Information Centre including community newsletters information brochures and fact	The Principal Contractor must meet any obligation required of them by the CCS.	Yes	Yes	Section 11

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		sheets and interactive web-based activities; x. Clear signage at the construction sites; xi. Regular newspaper advertisements in local and metropolitan papers; xii. Regular inter-agency group meetings; xiii. Community business and stakeholder satisfaction surveys and feedback forms; xiv. Translator and interpreter services; and xv. The Principal Contractor's Community Relations Team will liaise with the Sydney Metro Project Communications team as the point of contact for the community.				
Complaint Handlin	4.3	a. Community liaison and complaints handling will be undertaken in accordance with the Construction Complaints Management System and will include: i. Principal Contractors will deal with complaints in a responsive manner so that stakeholders' concerns are managed effectively and promptly; and ii. A verbal response will be provided to the complainant as soon as possible and within a maximum of two hours from the time of the complaint (unless the complainant requests otherwise). A detailed written response will then be provided if required to the complainant within one week. iii. Community liaison and complaints handling for construction of on-airport works will be undertaken in accordance with the Integrated Complaint Handlin Procedure. This Procedure will include a single integrated complaint handling telephone line and email address for all works on the airport site which will be managed so that any contact made by a stakeholder will be directed to the relevant party responsible for those works so that stakeholder's concerns are managed effectively and promptly.	The Principal Contractor must participate in the implementation of the Complaints Management System and provide Sydney Metro with all information it requires to comply	Yes	Yes	Section 11
Urban design of temporary works	4.4	a. Principal Contractors will ensure as a minimum: i. Temporary construction works consider urban design and visual impacts including: -Artwork graphics and images to enhance the visual appearance of temporary works in high visibility locations; -Project information to raise awareness on benefits explain the proposed works at each site and provide updates on construction progress; -Community information including contact numbers for enquiries / complaints; -Signage and information to mitigated impacts on local businesses which may be obscured by the construction site; -Sydney Metro advertising / public awareness campaigns; and	AEW Contractor	Yes	Yes	Section 11.8

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		-Loos / branding including Sydney Metro NSW and Commonwealth Government and Contractor branding. ii. The design of all temporary works will require Sydney Metro approval in relation to urban design and visual impacts and Sydney Metro will stipulate the design of hording artwork including: -Sydney Metro advertising / public awareness campaigns; and -Loos / branding including Sydney Metro NSW and Commonwealth Government and Contractor branding.				
Urban design of temporary works	4.4	b. Construction hoardings scaffolding and acoustic sheds will be regularly inspected and kept clean and free of dust build up. Graffiti on construction hoardings scaffolding or acoustic sheds will be removed or painted over promptly.	AEW Contractor	Yes	Yes	Section 17
Urban design of temporary	4.4	c. The principles of Crime Prevention through Environmental Design (CPTED) will be applied to all works including temporary works that have a public interface.	AEW Contractor	Yes	Yes	Section 17
business and property	4.5	a. Principal Contractors will proactively work with potentially affected stakeholders to identify the likely impacts and put in place measures to minimise impacts.	AEW Contractor	Yes	Yes	Section 11
business and property impacts	4.5	z. Construction works will be undertaken to meet the following objectives: I. Minimise the potential impact of the project to businesses affected by construction works; II. Ensure businesses are kept informed of the project and consulted in advance of major works or factors that are likely to have a direct impact; III. Consult with all business directly affected by changes to access arrangements regarding specific requirements at least two weeks prior to those changes coming into effect; and IV. Ensure that business stakeholder enquiries and complaints regarding the project are managed and resolved effectively.	AEW Contractor	Yes	Yes	Section 11
business and property impacts	4.5	bathe Community Communication Strategy (Section 4.2) will document key issues relating to business impacts by locality with a particular focus on proactive consultation with affected businesses. Including I. Identification of specific businesses which are sensitive to construction activity disturbances; II. Summary of the commercial character of the locality its general trading profile (daily and annually) and information gained from the business profile such as: -operating hours -Main delivery times -Reliance on foot traffic -Any signage or advertising that may be impacted	The Principal Contractor must meet any obligation required of them by the CCS.	Yes	Yes	Section 11

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		-Customer origin; and -there information specific to the business that will need to be considered in construction planning. iii. refine the roles and responsibilities in relation to the control and monitoring of business disturbance iv. Identification of locality specific standard business mitigation measures which would be implemented; v. Maps and diagrams to illustrate the information for easy identification of measures which would be implemented; vi. description of the monitoring auditing and reporting procedures; vii. Procedure for reviewing performance and implementing corrective actions; viii. description of the complaints handling process; and ix. Procedure for community consultation and liaison.				
Working hours	5.1	a. Standard working hours are between 7am – 6pm on weekdays and 8am – 1pm on Saturdays.	AEW Contractor	Yes	Yes	Section 12
Working hours	5.1	b. Works which can be undertaken outside of standard construction hours without any further approval include: Those which have been described and assessed in the environmental assessments. For example tunnelling and underground excavations and supporting activities or works within Western Sydney International i. Works which are determined to comply with the relevant Noise Management Level at sensitive receivers; ii. The delivery of materials outside of approved hours as required by the Police or other authorities (including Transport for NSW) for safety reasons; iii. Where it is required to avoid the loss of lives property and / or to prevent environmental harm in an emergency; and iv. Where written agreement is reached with all affected receivers.	AEW Contractor	Yes	Yes	Section 14
Working hours	5.1	c. Where off-airport works are being undertaken under an Environmental Protection Licence Principal Contractors may apply for EPA approval to undertake works outside of normal working hours.	AEW Contractor	Yes	No - EPL not required for this scope.	N/A
Construction Traffic Management	5.2	a. The management of traffic impacts due to construction is addressed in the Construction Traffic Management Framework (CTMF) which sets out system requirements for management plans and other associated documentation. This document applies to Principal Contractors and forms part of the contract documentation.	AEW Contractor	Yes	Yes	Section 13
Construction Traffic Management	5.2	b. The Construction Traffic Management Framework (CTMF) sets out the approach to maintain traffic impacts during the construction of the Sydney Metro projects. The CTMF also outlines contractor requirements with	AEW Contractor	Yes	Yes	Section 13

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		reference to third party agreements. Principal Contractors are required to produce these documents in accordance with the CTMF.				
Construction Traffic Management	5.2	c. For on-airport works the Sydney Metro Western Sydney Airport Traffic and Access CEMP will detail all the management objectives and will be consistent with the WSA Traffic and Access CEMP including all appendices to the CEMP	AEW Contractor. SM-WSA will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	No - Work is not on-airport.	N/A
Site Layout	5.3	a. Principal Contractors will consider the following in the layout of construction sites: i. The location of noise intensive works and 24 hour activities in relation to noise sensitive receivers; ii. The location of site access and egress points in relation to noise and light sensitive receivers especially for sites proposed to be utilised 24 hours per day; iii. The use of site buildings to shield noisy activities from receivers; iv. The use of noise barriers and / or acoustic sheds where feasible and reasonable for sites proposed to be regularly used outside of daytime hours; and v. Aim to minimise the requirement for reversing especially of heavy vehicles.	AEW Contractor	Yes	Yes	Section 12
Reinstatement	5.4	a. Where measures for reinstatement are not stipulated in the contracts mitigation measures for reinstatement of construction and ancillary lands will be produced in consultation with Sydney Metro the landowner and stakeholders.	AEW Contractor in consultation with the Principal.	Yes	Yes	Section 18
Reinstatement	5.4	b. Mitigation measures required for reinstatement will be incorporated into the CEMP and will include as a minimum: i. Principal Contractors will clear and clean all working areas and accesses at project completion; ii. At the completion of construction all plant temporary buildings or vehicles not required for the subsequent state of construction will be removed from the site; iii. All land including roadways footpaths loading facilities or other land having been occupied temporarily will be returned to their pre-existing condition or better; and iv. Reinstatement of community spaces infrastructure and services will occur as soon as possible after completion of construction.	AEW Contractor	Yes	Yes	Section 18
Spoil Management objectives	6.1	a. The following spoil management objectives will apply to the construction of the project: i. Minimise spoil generation where possible;	AEW Contractor	Yes	Yes	Section 18

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		ii. The project will mandate 100% reuse or recycling (on or off-site) of usable spoil; iii. Spoil will be managed with consideration to minimising adverse traffic and transport related issues; iv. Spoil will be managed to avoid contamination of land or water; v. Spoil will be managed with consideration of the impacts on residents and other sensitive receivers; and vi. Site contamination will be effectively managed to limit the potential risk to human health and the environment.				
Spoil Management objectives	6.2	a. Principal Contractors will develop and implement a Spoil Management Plan for their scope of works. The Spoil Management Plan will include as a minimum: i. The spoil mitigation measures as detailed in the planning approval documentation; ii. The responsibilities of key project personnel with respect to the implementation of the plan; iii. Procedures and methodologies for the haulage and disposal locations storage and stockpiling arrangements including those for virgin excavated natural material contaminated and unsuitable material; iv. Procedures for the testing excavation classification handling and reuse of spoil; v. Measures that will be implemented to both reduce spoil quantities and maximise the beneficial reuse of spoil which will be generated during the performance of the Contractor's Activities including how spoil generation is minimised through the design development process; vi. details links or references to where traffic movements in relation to spoil are described and measures that will be implemented to minimise traffic and noise impacts associated with haulage and disposal of spoil; vii. quantities for reuse of spoil within the Construction Site or Western Sydney International for beneficial reuse of spoil off site and for spoil disposal; viii. Processes and procedures for the management of the environmental and social impacts of spoil transfer and reuse; ix. A register of spoil receipt sites that includes the site or project name location capacity site owner and which tier the site is classified as under the spoil reuse hierarchy; x. Spoil management monitoring requirements; and xi. Compliance record generation and management.	AEW Contractor	Yes	Yes	Section 18 incorporates these requirements and Section 20

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Spoil Management Implementation	6.2	b. Spoil management measures will be included in regular inspections undertaken by the Contractor and compliance records will be retained. These will include: i. Records detailing the beneficial re-use of spoil either within the project or at off-site locations; and ii. Waste dockets for any spoil disposed of to landfill sites	AEW Contractor	Yes	Yes	Section 18
Spoil Mitigation	6.3	a. Examples of spoil mitigation measures include: i. Implementing the spoil re-use hierarchy; ii. Handlin spoil to minimise potential for air or water pollution; and iii. Minimise traffic impacts associated with spoil removal.	AEW Contractor	Yes	Yes	section 20
Groundwater Management objectives	7.1	a. The following groundwater management objectives will apply to construction: i. Reduce the potential for drawdown of surrounding groundwater resources; ii. Prevent the pollution of groundwater through appropriate controls; and iii. Reduce the potential impacts of groundwater dependent ecosystems. iv. For on-airport works the Sydney Metro Western Sydney Airport Soil and Water CEMP will detail all the groundwater management objectives and will be consistent with the WSA Soil and Water CEMP including all appendices to the CEMP.	AEW Contractor	Yes	No - not applicable to scope	N/A
Groundwater Management objectives	7.2	a. For off-airport works the following content may be provided within other sub plans such as the Soil and Water Management Plan and Flora and Fauna Management Plan. Groundwater management of on-airport works will be implemented through the groundwater management plan approved as part of the SMWSA Soil and Water CEMP. In particular the groundwater quality criteria will be in accordance to the WSA Soil and Groundwater CEMP Appendix G.	AEW Contractor	Yes	No - not applicable to scope	N/A
Groundwater Management Implementation	7.2	b. Principal Contractors will develop and implement a Groundwater Management Plan for off-airport works. The Groundwater Management Plan will include as a minimum: i. The groundwater mitigation measures as detailed in the planning approval documentation; ii. The requirements of any applicable licence conditions; iii. details of proposed extraction use and disposal of groundwater and measures to mitigated potential impacts to groundwater sources incorporating monitoring impact trier definition and response actions for all groundwater sources potentially impacted by SMWSA; iv. Evidence of consultation with the relevant government agencies such as PIE for off-airport works or land;	AEW Contractor	Yes	No - not applicable to scope	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		v. The responsibilities of key project personnel with respect to the implementation of the plan; vi. Procedures for the treatment testing and discharge of groundwater from the site; vii. Compliance record generation and management; and viii. details of groundwater monitoring if required.				
Groundwater Mitigation	7.3	a. The on-airport Soil and Water CEMP (with the groundwater management plan) and the off-airport Groundwater Management Plan will include the following groundwater mitigation measures as well as relevant Conditions: i. Implementing all feasible and reasonable measures to limit groundwater inflows to stations and crossovers; and ii. Undertaking groundwater monitoring during construction (levels and quality) in areas identified as 'likely' and 'potential' groundwater dependent ecosystems.	AEW Contractor / SM-WSA will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	No - not applicable to scope	N/A
Construction Noise and Vibration Management objectives	8.1	a. The following noise and vibration management objectives will apply to construction: i. Minimise unreasonable noise and vibration impacts on residents and businesses; ii. Avoid structural damage to buildings or heritage items as a result of construction vibration; iii. Undertake active community consultation; iv. Maintain positive cooperative relationships with schools childcare centres local residents and building owners; and v. For on-airport works the Sydney Metro Western Sydney Airport Noise and Vibration CEMP will detail all the noise and vibration management objectives and will be consistent with the WSA Noise and Vibration CEMP including all appendices to the CEMP.	AEW Contractor / SM-WSA will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 14
Construction Noise and Vibration Management Implementation	8.2	a. On-airport management of noise and vibration will be achieved through the implementation of the SMWSA Noise and Vibration CEMP and Principal Contractors will develop and implement a Construction Noise and Vibration Management Plan for all off airport works consistent with the Interim Construction Noise Guidelines (department of Environment and Climate Change 2009). other plans will include as a minimum: i. Identification of work areas site compounds and access points; ii. Identification of sensitive receivers and relevant construction noise and vibration goals; iii. be consistent with and include the requirements of the noise and vibration mitigation measures as detailed in the planning approval documentation and the Sydney Metro Construction Noise and Vibration	AEW Contractor / SM-WSA will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 14 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		Standard (CNVS) including the provision of respite; iv. details of construction activities and an indicative schedule for construction works including the identification of key noise and/or vibration generating construction activities (based on representative construction scenarios) that have the potential to generate noise or vibration impacts on surrounding sensitive receivers in particular residential areas; v. Identification of feasible and reasonable procedures and mitigation measures to ensure relevant vibrations and blasting criteria are achieved including a suitable blast program; vi. The requirements of any applicable licence or approval (for example EPL); vii. Additional requirements in relation to activities undertaken 24 hours of the day 7 days per week; viii. Pre-construction compliance requirements and hold points; ix. The responsibilities of key project personnel with respect to the implementation of the plan; x. Noise monitoring requirements; xi. Compliance record generation and management; and xii. An out of Hours Works Protocol applicable to all construction methods and sites.				
Construction Noise and Vibration Management Implementation	8.2	b. detailed Construction Noise and Vibration Impact Statements will be prepared for noise-intensive construction sites and or activities to ensure the adequacy of the noise and vibration mitigation measures. Specifically Construction Noise and Vibration Impact Statements will be prepared for works proposed to be undertaken outside of standard construction hours and to support applications to undertake out of hours works (this includes variations of EPLs and applications to relevant agencies).	AEW Contractor	Yes	Yes	Section 14.12
Construction Noise and Vibration Management Implementation	8.2	c. Noise and vibration monitoring would be undertaken for construction as specified in the CNVS.	AEW Contractor	Yes	Yes	Section 14.15
Construction Noise and Vibration Management Implementation	8.2	d. The following compliance records would be kept by Principal Contractors: i. Records of noise and vibration monitoring results against appropriate NMLs and vibration criteria; and ii. Records of community enquiries and complaints and the Contractor's response.	AEW Contractor	Yes	Yes	Section 14.15 and 14.16

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Construction Noise and Vibration Mitigation	8.3	a. All feasible and reasonable mitigation measures would be implemented in accordance with the CNVS. The on-airport Noise and Vibration CEMP and the off-airport Noise and Vibration Management Plan will include the following noise and vibration mitigation measures as well as relevant Conditions: i. Construction hours will be in accordance with the working hours specified in Section 5.1; ii. Hoarding and enclosures will be implemented where required to minimise airborne noise impacts; and iii. The layout of construction sites will aim to minimise airborne noise impacts to surrounding receivers iv. Provision of respite periods.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 14 incorporates these requirements.
Heritage Management objectives	9.1	a. The following heritage management objectives will apply to construction: i. Embed significant heritage values through any architectural design education or physical interpretation; ii. Minimise impacts on items or places of heritage value; iii. Avoid accidental impacts on heritage items; iv. Maximise worker's awareness of indigenous and non-indigenous heritage; and v. For on-airport works the Sydney Metro Western Sydney Airport Aboriginal Cultural Heritage CEMP and the European and there Heritage CEMP will detail all the heritage management objectives and will be consistent with the WSA Aboriginal Cultural Heritage CEMP and European and there Heritage CEMP including all appendices to these CEMP documents.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 15
Heritage Management Implementation	9.2	a. on-airport management of Aboriginal cultural heritage and European heritage will be achieved through the implementation of the SMWSA Aboriginal Cultural Heritage and the European and there Heritage CEMPs. Principal Contractors will develop and implement a Heritage Management Plan for all off-airport works. Plans will include as a minimum: i. Evidence of consultation with Registered Aboriginal Parties and the NSW Heritage Council; ii. Identify initiatives that will be implemented for the enhancement of heritage values and minimisation of heritage impacts including procedures and processes that will be used to implement and document heritage management initiatives; iii. The heritage mitigation measures as detailed in the planning approval documentation; iv. The responsibilities of key project personnel with respect to the	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 15 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		implementation of the plan; v. Procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design; vi. Procedures for undertaking salvage or excavation of heritage relics or sites (where relevant) consistent with and any recordings of heritage relics prior to works commencing that would affect them; vii. details for the short and / or long term management of artefacts or movable heritage; viii. details of management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations archival recordings and/or measures to protect unaffected sites during construction works in the vicinity); ix. Procedures for unexpected heritage finds including procedures for dealing with human remains; x. Heritage monitoring requirements; and xi. Compliance record generation and management.				
Heritage Management Implementation	9.2	b. The Contractor's regular inspections will include checking of Aboriginal and non Aboriginal heritage mitigation measures.	AEW Contractor	Yes	Yes	Section 15 and Section 8
Heritage Management Implementation	9.2	c. Compliance records will be retained by the Contractor. These will include: i. Inspections undertaken in relation to heritage management measures; ii. Archival recordings undertaken of any heritage item; iii. Unexpected finds and stop work orders; and iv. Records of any impacts avoided or minimised through design or construction methods.	AEW Contractor	Yes	Yes	Section 15 and Section 8
Heritage Mitigation	9.3	a. The on-airport Aboriginal Cultural Heritage and European and there Heritage CEMPs and the off-airport Heritage Management Plan will include the following mitigation measures as well as relevant Conditions: i. Induction courses for site workers will include training in the identification of Aboriginal artefacts and management of Aboriginal heritage values. ii. Any heritage item not affected by the works will be retained and protected throughout construction; iii. during construction undertake professional archaeological investigation excavation and reporting of any historical Indigenous heritage sites of state significance which will be affected. Reporting may be completed as construction progresses; iv. Undertake archival recordings of all non-Indigenous heritage items affected by the works prior to commencement of works; and	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 15 and Section 8

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		v. Implement unexpected heritage find procedures for Indigenous and non Indigenous heritage items.				
Flora and Fauna Management objectives	10.1	e. The following flora and fauna management objectives will apply to construction: i. Minimise impacts on flora and fauna; ii. design waterway modifications and crossings to incorporate best practice principles; iii. Retain and enhance existing flora and fauna habitat wherever possible; iv. Appropriately manage the spread of weeds and plant pathogens; and v. For on-airport works the Sydney Metro Western Sydney Airport biodiversity CEMP will detail all fauna and flora management objectives and will be consistent with the WSA biodiversity CEMP including all appendices to the biodiversity CEMP.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 16
Flora and Fauna Management Implementation	10.2	a. on-airport management of flora and fauna will be achieved through the implementation of the SMWSA biodiversity CEMP and Principal Contractors will develop and implement a Flora and Fauna Management Plan for all off-airport works. other plans will include as a minimum: i. The biodiversity mitigation measures as detailed in the planning approval documentation; ii. The responsibilities of key project personnel with respect to the implementation of the plan; iii. Procedures for the clearing of vegetation and the relocation of flora and fauna; iv. details on the locations monitoring program and use of nest boxes by fauna; v. Procedures for the demarcation and protection of retained vegetation including all vegetation outside and adjacent to the construction footprint and the protection of retained vegetation within the environmental conservation zone on the airport site; vi. Plans for impacted and adjoining areas showing vegetation communities; important flora and fauna habitat areas; locations where threatened species populations or ecological communities have been recorded; vii. Vegetation management plan(s) for sites where native vegetation is proposed to be retained; viii. Identification of measures to reduce disturbance to sensitive fauna; ix. Rehabilitation details including identification of flora species and sources and measures for the management and maintenance of rehabilitated areas (including duration of the implementation of such	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 16 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMP Compliance Reference Where Addressed
		measures); x. Weed and disease management measures focusing on early identification of invasive weeds and diseases. Protocols to address the effective management of these risks; xi. A procedure for dealing with unexpected threatened species identified during construction including cessation of work and notification to the relevant government department for both on- and off-airport works. The procedure shall define how appropriate mitigation measures (including relevant relocation measures) and updating of ecological monitoring or off-set requirements; xii. details on the methodology for vegetation mapping and survey; xiii. Ecological monitoring requirements; and xiv. Compliance record generation and management.				
Flora and Fauna Management Implementation	10.2	b. Principal Contractors would undertake the following ecological monitoring as a minimum: i. A pre-clearing inspection will be undertaken prior to any native vegetation clearing by a suitable qualified ecologist and the Contractor's Environmental Manager (or delegate). The pre-clearing inspection will include as a minimum: Identification of hollow bearing trees or other habitat features; Identification of any threatened flora and fauna; A check on the physical demarcation of the limit of clearing; An approved erosion and sediment control plan for the worksite; and The completion of any other pre-clearing requirements required by any project approvals permits or licences. ii. The completion of the pre-clearing inspection will form a Hold Point requiring sign-off from the Contractor's Environmental Manager (or delegate) and a qualified ecologist; and iii. A post clearance report including any relevant Geographical Information System files will be produced that validates the type and area of vegetation cleared including confirmation of the number of hollows impacted and the corresponding nest box requirements to offset these impacts.	AEW Contractor	Yes	Yes	Section 16 Appendix O
Flora and Fauna Management Implementation	10.2	c. The Principal Contractor's regular inspections will include a check on the ecological mitigation measures and project boundary fencing.	AEW Contractor	Yes	Yes	Section 16 and section 8
Flora and Fauna Management Implementation	10.2	d. The following compliance records would be kept by the Principal Contractor: i. Records of pre-clearing inspect undertaken; unrecords of the release of the pre-clearing hold point; and iii. Records of ecological inspections undertaken.	AEW Contractor	Yes	Yes	Section 16 and section 8 Appendix O

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Flora and Fauna Management Implementation	10.3	a. The on-airport biodiversity CEMP and the off-airport Flora and Fauna Management Plan will include the following flora and fauna mitigation measures as well as any relevant Conditions: i. Areas to be retained and adjacent habitat areas will be fenced off prior to works to prevent damage or accidental over clearing; ii. Clearing will follow a two-state process as follows: s Non-habitat trees will be cleared first after sin-off of the pre-clearing inspection; and s Habitat trees will be cleared no sooner than 48 hours after non-habitat trees have been cleared. A suitably qualified ecologist will be present on site during the clearing of habitat trees. Felled habitat trees will be left on the round for 24 hours or inspected by the ecologist prior to further processing. iii. Weed management is to be undertaken in areas affected by construction prior to any clearing works. ff-airport weed management will be undertaken in accordance with the NSW Noxious Weeds Act 1993. n-airport weed management will also be undertaken in accordance with the NSW Noxious Weeds Act 1993 and the NSW biosecurity Act 2015 which is consistent with the approach adopted in the Western Sydney Airport Weed and disease Management Plan (Appendix C of the Western Sydney Airport biodiversity CEMP).	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 16 incorporates these requirements.
Visual Amenity Management objectives	11.1	a. The following visual and landscape management objectives will apply to the construction of the project: i. Minimise impacts on existing landscape features as far as feasible and reasonable; ii. Ensure the successful implementation of the Landscape design; iii. Reduce visual impact of construction to surrounding community; and iv. For on-airport works the Sydney Metro Western Sydney Airport Visual and Landscape CEMP will detail all the visual amenity and landscaping management objectives and will be consistent with the WSA Visual and Landscape CEMP including all the appendices to the CEMP.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 17
Visual Amenity Management objectives	11.2	a. on-airport management of visual and landscaping will be achieved through the implementation of the SMWSA Visual and Landscape CEMP and Principal Contractors will develop and implement a Visual Amenity Management Plan for all the off-airport temporary works which will include as a minimum: i. The visual mitigation measures as detailed in the planning approval documentation for construction; ii. Input from an experienced Landscape or Urban designer; iii. The maintenance of outward facing elements of site hoarding or noise	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 17 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		barriers including the removal of graffiti and weeds; iv. Apply the principles of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant safety design requirements and detail mitigation measures to minimise lighting impacts on sensitive receivers for all permanent temporary and mobile light sources; v. Identify the processes and procedures that will be used for the incorporation of the principles of Crime Prevention Through Environmental design (CPTED) in the design and construction of any temporary site facilities; and vi. Compliance record generation and management.				
Visual Amenity Management Implementation	11.2	b. Visual and landscape measures will be incorporated into the Principal Contractor's regular inspections including checking the health of retained vegetation around site boundaries checking the condition of any site hoarding and acoustic sheds and checking the position and direction of any sight lighting.	AEW Contractor	Yes	Yes	Section 17
Visual Amenity Management Implementation	11.2	c. The Contractor will retain compliance records of any inspections undertaken in relation to visual and landscape measures.	AEW Contractor	Yes	Yes	Section 17
Visual Amenity Management Mitigation	11.3	a. The on-airport Visual and Landscape CEMP and the off-airport Visual Management Plan will include the following visual amenity mitigation measures as well as relevant Conditions: i. Wherever feasible and reasonable vegetation around the perimeter of the construction sites will be maintained; ii. Existing vegetation not affected by the construction works will be retained; iii. Temporary construction works will be designed with consideration of urban design and visual amenity as per Section 4.4; and iv. Temporary site lighting for security purposes or night works will be installed and operated in accordance with AS4282:1997 Control of the obtrusive Effect of outdoor Lighting.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 17 incorporates these requirements.
Soil and Water Management objectives	12.1	a. The following soil and water management objectives will apply to construction: i. Minimise pollution of surface water through appropriate erosion and sediment control; ii. Minimise leaks and spills from construction activities; iii. Maintain existing water quality of surrounding surface watercourses; iv. Source construction water from non-potable sources where feasible and reasonable; and v. For on-airport works the Sydney Metro Western Sydney Airport Soil and	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 18

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		Water CEMP will detail all the soil and water management objectives and will be consistent with the WSA Soil and Water CEMP including all appendices to the CEMP.				
Soil and Water Implementation	12.2	<p>a. n-airport management of soil and water will be achieved through the implementation of the SMWSA Soil and Water CEMP and Principal Contractors will develop and implement a Soil and Water Management Plan for all off-airport works. other plans will include as a minimum:</p> <p>i. The soil and water mitigation measures as detailed in the planning approval documentation and sustainability requirements;</p> <p>ii. details of construction activities and their locations which have the potential to impact on water courses storage facilities stormwater flows and groundwater;</p> <p>iii. Surface water and ground water impact assessment criteria consistent with the principles of the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines for off-airport works and the Airports (Environment Protection) Regulations 1997 for on-airport works (with due consideration of the ANZECC guidelines);</p> <p>iv. Management measures to be used to minimise surface and groundwater impacts including identification of water treatment measures and discharge points details of how spoil and fill material required by the project will be sourced handled stockpiled reused and managed; erosion and sediment control measures; salinity control measures and the consideration of flood events;</p> <p>v. A contingency plan consistent with the NSW Acid Sulphate Soils Manual (EPA 1998) to deal with the unexpected discovery of actual or potential acid sulphate soils both on and off-airport lands. The plan must including procedures for the investigation handling treatment and management of such soils and water seepage;</p> <p>vi. Management measures for contaminated material (soils water and building materials) and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material including asbestos during construction;</p> <p>vii. A description of how the effectiveness of these actions and measures would be monitored during the proposed works clearly indicating how often this monitoring would be undertaken the locations where monitoring would take place how the results of the monitoring would be recorded and reported and if any exceedance of the criteria is detected how any non-compliance can be rectified;</p> <p>viii. The requirements of any applicable licence conditions;</p>	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 18 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		ix. The responsibilities of key project personnel with respect to the implementation of the plan; x. Procedures for the development and implementation of Progressive Erosion and Sediment Control Plans; xi. Identification of locations where site specific Stormwater and Flooding Management Plans are required; and xii. Compliance record generation and management.				
Soil and Water Implementation	12.2	b. Principal Contractors will develop and implement Progressive Erosion and Sediment Control Plans (ESCPs) for all active worksites in accordance with Maintain Urban Stormwater: Soils & Construction Volume 1 (Landcom 2004) (known as the "Blue book"). The ESCPs will be approved by the Contractor's Environmental Manager (or delegate) prior to any works commencing (including vegetation clearing) on a particular site. Copies of the approved ESCP will be held by the relevant Contractor personnel including the Engineer and the Site Foreman.	AEW Contractor	Yes	Yes	Section 18
Soil and Water Implementation	12.2	c. ESCPs will detail all required erosion and sediment control measures for the particular site at the particular point in time and be progressively updated to reflect the current site conditions. Any amendments to the ESCP will be approved by the Contractor's Environmental Manager (or delegate).	AEW Contractor	Yes	Yes	Section 18
Soil and Water Implementation	12.2	d. Principal Contractors will develop and implement Stormwater and Flooding Management Plans for the relevant construction sites. These plans will identify the appropriate design standard for flood mitigation based on the duration of construction proposed activities and flood risks. The plan will develop procedures to ensure that threats to human safety and damage to infrastructure are not exacerbated during the construction period.	AEW Contractor	Yes	No - As report in the EIS (Chapter 14), the site is located outside of the 1% and 5% AEP peak flood area. The 1 in 100-year flood extent of Badgerys Creek is located to the north and east of the works area	N/A

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Soil and Water Implementation	12.2	e. Principal Contractors will undertake the following soil and water monitoring as a minimum: i. Weekly inspections of the erosion and sediment control measures. Issues identified would be rectified as soon as practicable; ii. Additional inspections will be undertaken following significant rainfall events (greater than 20 mm in 24 hours); and iii. All water will be tested (and treated if required) prior to discharge from the site in order to determine compliance with the appropriate approvals and licencing. No water will be discharged from the site without written approval of the Contractor's Environmental Manager (or delegate). This is to form a HL PINT.	AEW Contractor	Yes	Yes	Section 18
Soil and Water Implementation	12.2	f. The following compliance records will be kept by the Principal Contractors: i. Copies of current ESCPs for all active construction sites; ii. Records of soil and water inspections undertaken; iii. Records of testing of any water prior to discharge; and iv. Records of the release of the hold point to discharge water from the construction site to the receiving environment.	AEW Contractor.	Yes	Yes	Section 18
Soil and Water Implementation	12.2	. The following water resources management objectives will apply to the construction of the project: i. Minimise demand for and use of potable water; ii. Maximise opportunities for water re-use from captured stormwater wastewater and groundwater; iii. Examples of measures to minimise potable water consumption include: Water efficient controls fixtures and fittings in temporary facilities; Collecting treating and reusing water generated in tunnelling operations concrete batching and casting facility processes; Using recycled water or treated water from onsite sources in the formulation of concrete; Harvesting and reusing rainwater from roofs of temporary facilities; Using water from recycled water networks; Collecting treating and reusing groundwater and stormwater; Using water efficient construction methods and equipment; and Providing designated sealed areas for equipment wash down.	AEW Contractor.	Yes	Yes	Section 18
Soil and Water Mitigation	12.3	a. The on-airport Soil and Water CEMP and the off-airport Soil and Water Management Plan will include the following surface water and flooding mitigation measures as well as any relevant Conditions: i. Clean water will be diverted around disturbed site areas stockpiles and contaminated areas; ii. Control measures will be installed downstream of works stockpiles and	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 18 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		other disturbed areas; iii. Exposed surfaces will be minimised and stabilised / revegetated as soon feasible and reasonable upon completion of construction; iv. dangerous flood and hazardous materials storage will be within bunded areas with a capacity of 110 per cent of the maximum single stored volume; v. Chemicals will be stored and handled in accordance with relevant Australian standards such as: o AS 1940:2004 The storage and handling of flammable and combustible liquids o AS/NZS 4452:1997 The storage and handling of toxic substances o AS/NZS 5026:2012 The storage and handling of Class 4 dangerous floods o AS/NZS 1547:2012 on-site domestic wastewater management vi. Spill kits will be provided at the batch plants storage areas and main work sites; vii. A protocol will be developed and implemented to respond to and remedy leaks or spills. viii. A remedial action plan and unexpected finds protocol would be established to facilitate the quarantining isolation and remediation of contamination identified throughout the construction programme. Any asbestos identified on site would be managed in accordance with applicable regulatory requirements				
Air Quality Management objectives	13.1	a. The following air quality management objectives will apply to construction: i. Minimise gaseous and particulate pollutant emissions from construction activities as far as feasible and reasonable; ii. Identify and control potential dust and air pollutant sources; and iii. For on-airport works the Sydney Metro Western Sydney Airport Air Quality CEMP will detail all the air quality management objectives and will be consistent with the WSA Air Quality CEMP including all appendices to the CEMP.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 19
Air Quality Management Implementation	13.2	a. on-airport management of soil and water will be achieved through the implementation of the SMWSA Soil and Water CEMP and Principal Contractors will develop and implement an Air Quality Management Plan for all off-airport works. other plans will include as a minimum: i. The air quality mitigation measures as detailed in the planning approval documentation; ii. The requirements of any approval and applicable licence conditions; iii. Site plans or maps indicating locations of sensitive receivers and key air	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Noted	Noted	Section 19 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
		quality / dust controls; iv. The responsibilities of key project personnel with respect to the implementation of the plan; v. Air quality and dust monitoring requirements; and vi. Compliance record generation and management				
Air Quality Management Implementation	13.2	b. Air quality and dust monitoring will involve the following as a minimum: i. Meteorological conditions will be monitored and appropriate responses will be organised and undertaken periodically by the Principal Contractor; ii. Regular visual monitoring of dust generation from work zones; and iii. Monitoring emissions from plant and construction vehicles to ensure they have appropriate emission controls and are been maintained correctly.	AEW Contractor	Yes	Yes	Section 19
Air Quality Management Implementation	13.2	c. The following compliance records will be kept by the Principal Contractor: i. Records of any meteorological condition monitoring; ii. Records of any management measures implemented as a result of adverse windy weather conditions; and iii. Records of air quality and dust inspections undertaken.	AEW Contractor	Yes	Yes	Section 19
Air Quality Mitigation	13.3	a. The on-airport Air Quality CEMP and the off-airport Air Quality Management Plan will include the following air quality mitigation measures as well as any relevant Conditions: i. Plant and equipment will be serviced and maintained in flood working order to reduce unnecessary emissions from exhaust fumes; ii. Plant and equipment to be switched off engines when not in use; iii. The avoidance the use of diesel or petrol powered generators and instead using mains electricity or battery powered equipment where practicable; iv. Appropriate vehicle speeds on sealed and unsealed roads; v. development and implementation of a construction logistics plan to manage the sustainable delivery of floods and materials; vi. Implementing measures to support and encourage sustainable travel for construction workers to and from the construction sites; vii. Water suppression will be used for active earthwork areas stockpiles unsurfaced haul roads and loads of soil being transported to reduce wind blown dust emissions; viii. Wheel-wash facilities or rumble rids will be provided and used near the site exit points as appropriate; and ix. must extraction and filtration systems will be installed for tunnel excavation works and deep excavation with limited surface exposure.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 19 incorporates these requirements.

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Waste objectives	14.1	a. The following waste objectives will apply to construction: i. Minimise waste throughout the project life-cycle; ii. Waste management strategies for off-airport works will be implemented in accordance with the Waste Avoidance and Resource Recovery Act 2001 management hierarchy as follows: s Avoidance of unnecessary resource consumption; s Resource recovery (including reuse reprocessing recycling and energy recovery); and s disposal. iii. Consistent with the Western Sydney Airport Waste and Resource Construction Environmental Management Plan waste management strategies for on airport works will also be aligned with the NSW Waste Avoidance and Resource Recovery Strategy under the NSW Waste Avoidance and Resource Recovery Act 2001; and iv. For on-airport works the Sydney Metro Western Sydney Airport Waste and Resources CEMP will detail all the waste management objectives and will be consistent with the WSA Waste and Resources CEMP including all appendices to the CEMP.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 20
Waste objectives	14.1	b. Targets for the recovery recycling or reuse of construction waste and beneficial reuse of spoil will be provided by the Principal Contractor.	AEW Contractor	Yes	Yes	Section 20
Waste Implementation	14.2	a. n-airport management of waste and resources will be achieved through the implementation of the SMWSA Waste and Resources CEMP and Principal Contractors will develop and implement a Waste Management Plan for all off-airport works. other plans will include as a minimum: i. The waste management mitigation measures as detailed in the planning approval documentation; ii. The responsibilities of key project personnel with respect to the implementation of the plan; iii. Waste management monitoring requirements; iv. A procedure for the assessment classification management and disposal of waste in accordance with Waste Classification Guidelines; and v. Compliance record generation and management.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 20 incorporates these requirements.
Waste Implementation	14.2	b. Principal Contractors will undertake the following waste monitoring as a minimum: i. Weekly inspections will include checking on the waste storage facilities on site; and ii. All waste removed from the site will be appropriately tracked from 'cradle to grave' using waste tracking dockets.	AEW Contractor.	Yes	Yes	Section 20

CEMF Condition Classification	CEMF Section Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	CEMF Compliance Reference Where Addressed
Waste Implementation	14.2	c. Principal Contractors will report all necessary waste and purchasing information to Sydney Metro as required for Sydney Metro to fulfil their WRAPP reporting requirements.	AEW Contractor.	Yes	Yes	Section 20
Waste Implementation	14.2	d. Compliance records will be retained by the Principal Contractors in relation to waste management including records of inspections and waste dockets for all waste removed from the site.	AEW Contractor.	Yes	Yes	Section 20
Waste Mitigation	14.3	a. The on-airport Waste and Resources CEMP and the off-airport Waste Management Plan will include the following waste management mitigation measures as well as relevant Conditions: i. A central waste area (or areas) would be established at which waste (including recyclables) would be stored or stockpiled. Stockpiles and bins would be appropriately labelled managed and monitored till being removed from site; ii. All waste materials removed from the sites will be directed to an appropriately licensed waste management facility; iii. The use of raw materials (noise hoarding site fencing etc...) will be reused or shared between sites and between construction contractors where feasible and reasonable; and iv. Recyclable wastes including paper at site offices will be stored separately from other wastes.	AEW Contractor /Principal will manage the development and approval of the SM WSA on-airport CEMPs.	Yes	Yes	Section 20 incorporates these requirements.

Table 67 REMM Matrix

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Transport-Construction	T1	Construction Traffic Management Plans would be prepared in accordance with the Construction Traffic Management Framework	AEW Contractor	Yes	Yes	Section 13.3
Transport-Construction	T2	The Construction Traffic Management Plan for St Marys would be developed to ensure existing transport interchange infrastructure continues to operate effectively within the St Marys station precinct would be developed in consultation with the Traffic and Transport Liaison Group.	Not Applicable	No	N/A	N/A
Transport-Construction	T3	Coordination with Western Sydney Airport and Transport for NSW would be undertaken through the Traffic and Transport Liaison Group to manage potential cumulative construction traffic impacts with M12 Motorway and Elizabeth Drive	The Principal will establish the TTLG. The AEW Contractor will participate as part of the TTLG and provide the TTLG with any information or documentation it requires to meet its obligations under this approval.	Yes	Yes	Section 13.3
Transport-Construction	T4	Road Safety Audits would be carried out to address vehicular access and egress, and pedestrian, cyclist and public transport safety. Road Safety Audits would be carried out as per the guidelines outlined in Section 10 of the Construction Traffic Management Framework	AEW Contractor	Yes	Yes	Section 13.3
Transport-Construction	T5	Maintain access for pedestrians and cyclists around construction sites as per the guidelines outlined in the Construction Traffic Management Framework. Appropriate signage and line marking would be provided to guide pedestrians and cyclists past construction sites and on the surrounding network to allow access to be maintained	AEW Contractor	Yes	Yes	Section 13.3
Transport-Construction	T6	Access for construction vehicles to be planned as per the guidelines outlined in the Construction Traffic Management Framework. Construction site traffic would be managed to minimise movements during peak periods. Vehicle access to and from construction sites would be managed to maintain pedestrian, cyclist and motorist safety	AEW Contractor	Yes	Yes	Section 13.3

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Transport-Construction	T7	Temporary relocation of bus stops and bus layovers at the Station Street car park in St Marys would be implemented prior to the commencement of construction works that impacts on the existing bus facilities. The temporary relocation of bus stops and the bus layover at St Marys would be carried out in consultation with the Traffic and Transport Liaison Group which includes Transport for NSW, Penrith City Council and bus operators. Wayfinding and customer information would guide customers to temporary bus stop locations	Not Applicable	No	N/A	N/A
Transport-Construction	T8	Transport for NSW would be consulted to discuss opportunities for their delivery of intersection upgrades at Mamre Road/M4 Western Motorway on and off ramps prior to the peak year of construction	AEW Contractor	Yes	No - The scope of work at Elizabeth Drive is not part of the delivery of intersection upgrades at Mamre Rd/M4 and therefore not relevant to this condition.	N/A
Transport-Construction	T9	A construction worker car-parking strategy for St Marys would be prepared in consultation with Penrith City Council and Transport for NSW prior to the commencement of construction works. The strategy would seek to: . minimise overall demand for construction worker car-parking through initiatives such as use of other project construction worksites in combination with shuttle buses, car-pooling and encouraging the use of public transport . minimise potential use of on-street car-parking by construction workers The construction worker car-parking strategy would be implemented throughout construction.	Not Applicable	No	N/A	N/A
Transport-operation	OT1	Interchange access plans would be prepared, in consultation with the Traffic and Transport Liaison Group, to ensure adequate pedestrian and cycle facilities and other transport interchange infrastructure is provided at each station precinct, in	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		consultation with relevant authorities including Western Parkland City Authority				
Transport-operation	OT2	The project would be designed such that access to properties and existing infrastructure neighbouring the proposed stations would be maintained	Not Applicable	No	N/A	N/A
Transport-operation	OT3	Consultation and coordination would be undertaken with Transport for NSW through the Traffic and Transport Liaison Group to align proposed road and intersection upgrades with the year of opening, to enable safe and efficient interchanges between transport modes	Not Applicable	No	N/A	N/A
Transport-operation	OT4	An operational car parking strategy for St Marys would be prepared in consultation with Penrith City Council and Transport for NSW prior to commencement of operation. The strategy would include consideration of measures that could be implemented to address any parking impacts as a result of the project.	Not Applicable	No	N/A	N/A
Noise and vibration - construction	NV1	Where acoustic sheds are installed, the internal lining and type of material used in the construction of the sheds would be considered during design development and construction planning to ensure appropriate attenuation is provided	Not Applicable	No	N/A	N/A
Noise and vibration - construction	NV2	To avoid potential vibration impacts to the Warragamba to Prospect Water Supply Pipelines, a detailed construction vibration assessment would be undertaken in accordance with the Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines (WaterNSW, 2020) and would consider the following requirements: 1) confirm velocity limits for construction activities and the impact the works will have on WaterNSW assets 2) excavation methods would be undertaken in accordance with German Standard DIN 4150-3:2016 (2.5 mm/s PPV) 2) vibration monitoring would be undertaken prior to and during construction for high risk construction activities	AEW Contractor	Yes	No - Work location not near the water supply pipelines.	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		3) vibration monitoring reports would be provided to WaterNSW				
Noise and vibration - Operation	ONV1	An Operational Noise and Vibration Review would be prepared during design development to confirm the mitigation measures required to manage: 1) airborne and ground-borne noise impacts from rail operations 2) airborne noise impacts from the stabling and maintenance facility 3) airborne noise impacts from fixed industrial sources, including stations and services facilities. The Operational Noise and Vibration Review would consider existing and potential future land use to establish Project Noise Trigger Levels. The EPA would be consulted during preparation of the Operational Noise and Vibration Review.	Not Applicable	No	N/A	N/A
Biodiversity-construction	FF1	The Biodiversity Construction Environmental Management Plan (on-airport) and Flora and Fauna Management Plan (off-airport) would be prepared by a suitably qualified and experienced person to minimise and manage the clearing of native vegetation and habitat by: 1) seeking to locate site offices, site compounds and ancillary facilities in areas where there are limited biodiversity values (e.g. cleared land) 2) delaying the removal of vegetation until absolutely necessary 3) avoiding the removal of hollow-bearing trees, where possible 4) using a qualified surveyor and suitably qualified ecologist to mark out exclusion zones and clearing/project boundaries prior to construction 5) providing contractors with regularly updated sensitive area maps (showing clearing boundaries and exclusion zones) 6) investigating opportunities for salvage and storage of felled native trees for potential use in landscape design. The Biodiversity Construction Environmental Management Plan (on-airport) and Flora and Fauna Management Plan (off-airport) would be implemented throughout construction.	AEW Contractor, except the Principal will prepare the On airport Biodiversity Construction Environmental Management Plan.	Yes	No - Incorporated FFMP into CEMP.	N/A
Biodiversity-construction	FF2	A Nest Box Strategy would be prepared to minimise habitat loss to hollow-dependent fauna in	AEW Contractor	Yes	No - No Habitat trees expected to	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		accordance with the Flora and Fauna Management Plan and would include the following requirements: 1) hollow-bearing trees would be marked/tagged and mapped prior to their removal. The size, type, number and location of nest boxes required would be based on the results of the pre-clearing survey 2) about 70 per cent of nest boxes would be installed about one month prior to any vegetation removal to provide alternate habitat for hollow-dependent fauna displaced during clearing			be removed. If a hollow is identified during preclearing inspection, advice from ecologist will be sought regarding the requirement for nest box installation	
Biodiversity-construction	FF3	Works on-airport would be undertaken in accordance with the nest box strategy included in the Western Sydney Airport Habitat Management subplan and in consultation with Western Sydney Airport	AEW Contractor	Yes	No - Work not on-airport.	N/A
Biodiversity-construction	FF4	A targeted microbat survey (including Eastern Coastal Free-tailed Bat, Large Bent-winged bat and Eastern False Pipistrelle) of dwellings and structures proposed for demolition, removal or modification would be undertaken in accordance with 'Species credit' threatened bats and their habitats NSW survey guide for the Biodiversity Assessment Method (OEH, 2018) prior to disturbance Other human-made structures such as culverts and other under-road structures within the construction footprint would be surveyed for threatened microbats (e.g. particularly the Southern Myotis) in accordance with the Biodiversity Assessment Method (OEH, 2018). If threatened microbats are detected, a Microbat Management Plan would be developed as part of the Biodiversity Construction Management Plan and implemented by a suitably qualified bat specialist	AEW Contractor	Yes	No - no structures proposed for demolition	N/A
Biodiversity-construction	FF5	Works on-airport would be managed in accordance with the Western Sydney Airport Microbat Management Plan and in consultation with Western Sydney Airport	AEW Contractor	No	No - Work not on-airport.	N/A
Biodiversity-construction	FF6	During construction, shading and artificial light impacts would be minimised in areas adjoining remnant bushland that is in intact condition	AEW Contractor	Yes	No - no adjacent bushland, work located on road	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
					corridor and farm.	
Biodiversity-construction	FF7	Fish passage and fish habitat associated with Cosgrove Creek and Blaxland Creek would be protected in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management (DPI (Fisheries NSW), 2013)	Not Applicable	No	No	N/A
Biodiversity-construction	FF8	A Dewatering Plan would be prepared and implemented for the dewatering of rural dams which are impacted as a result of the construction of the project. This would include measures to manage the transfer of native aquatic fauna, if required, prior to dewatering and removing of dams.	AEW Contractor	Yes	No - dewatering not occurring	N/A
Biodiversity-construction	FF9	A Dewatering Plan would be prepared and implemented for the dewatering of rural dams which are impacted as a result of the construction of the project. This would include measures to manage the transfer of native aquatic fauna, if required, prior to dewatering and removing of dams. The plan would be consistent with the Western Sydney Airport Biodiversity Construction Environmental Management Plan (2019) (on-airport).	AEW Contractor	Yes	No - dewatering not occurring	N/A
Biodiversity-construction	FF10	The impact of Key Threatening Processes as a result of the project would be managed and minimised where possible through: 1) implementation of weed management measures to prevent the introduction and spread of weeds including exotic vines and scramblers, <i>Olea europaea</i> (African Olive), <i>Chrysanthemoides monilifera</i> , <i>Lantana camara</i> , and exotic perennial grasses 2) implementation of pathogen management measures to prevent the introduction and spread of pathogens including amphibian chytrid, <i>Phytophthora</i> spp., and Exotic Rust Fungi of the order Pucciniales 3) implementation of management measures to protect the riparian zone to ensure fish passage and protect fish habitat in accordance with the Policy and Guidelines for Fish Habitat Conservation and Management (DPI (Fisheries NSW), 2013), and	AEW Contractor	Yes	Yes	Section 16

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		minimisation of vegetation removal within the riparian zone where possible				
Biodiversity-construction	FF11	A native vegetation seed collection and salvage program would be developed prior to the commencement of construction and implemented during construction. The seed collection and salvage program would aim to target native species prioritising the Cumberland Plain Woodland species to be utilised in landscaping for the project where possible. Opportunities for use of collected and salvaged seed outside of the project would also be investigated.	SM-WSA would manage the process with the cooperation of the AEW Contractor	Yes	No - Not applicable to scope of the Elizabeth drive due to the short duration and limited seed collection sites.	N/A
Biodiversity operation	OFF1	Wildlife connectivity would be maintained (where possible) through the installation of viaduct/bridge structures designed in accordance with the following: 1) Height and width of the area under a bridge to be maximised for all species, noting a minimum height of approximately 3 metres of dry passage will provide connectivity for most terrestrial species 2) Bridges wide enough to encompass water flow, stream bank and riparian vegetation, preferably on both sides of the water course 3) For small and medium sized mammals, provide fauna furniture as shelter (e.g. vegetation, logs, rocks, leaf-litter, refuge pipes, escape poles, roofing tiles, and roofing iron) 4) Height and carriageway separation designed to allow sufficient light and moisture to enhance growth of vegetation under the structure 5) If used for multiple purposes (e.g. pathways or access roads) aim to provide the 3 metre of natural passage for fauna 6) Relocation or adjustment of the stream bed avoided where possible 7) The structure to tie in with the natural hydrology of the surrounding habitat such that the width, depth and gradient of the watercourse are maintained in the structure 8) Consistent with the Policy and Guidelines for Fish Friendly Waterway Crossings (DPI (Fisheries NSW), 2013)	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Biodiversity operation	OFF2	The design of viaduct structures over the wildlife/riparian corridors at Blaxland Creek, the unnamed tributary south of Patons Lane and Cosgroves Creek would seek to: 1) maximise the span over the wildlife/riparian corridor 2) minimise native vegetation removal within the wildlife/riparian corridors 3) maintain opportunities for fauna movement along the wildlife/riparian corridors and 4) provide opportunities to enhance fauna movement where possible	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	NAH1	Potential moveable heritage items would be identified and assessed and a significant fabric salvage schedule would be prepared by an appropriately qualified and experienced heritage specialist for St Marys Railway Station, Bringelly RAAF Base, McGarvie-Smith Farm, and McMasters Farm. Significant fabric would only be salvaged if it can be salvaged in such a way that it can be reused and is likely to be able to be reused	AEW Contractor	Yes	No - Not triggered as no Potential Moveable heritage items are located in the worksite	Section 15
Non-Aboriginal heritage - construction	NAH2	Heritage advice would be sought to develop solutions to manage potential ground movement impacts to the St Marys Goods Shed	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	NAH3	Archival recording of heritage items which would be impacted or that would have their setting altered, would be carried out in accordance with the NSW Heritage Office's Photographic Recording of Heritage Items Using Film or Digital Capture (2006). The following items would be archivally recorded: 1) St Marys Railway Station 2) Luddenham Road Alignment 3) McMaster Farm 4) McGarvie-Smith Farm 5) Kelvin Park Group (the State Heritage listed curtilage) 6) Bringelly RAAF Base	Not Applicable in the staging report however is applicable to the AEW Contractor	Yes	Yes	Section 15 M12 have completed Archival recording for the McGarvie-Smith Farm.
Non-Aboriginal heritage - construction	NAH4	Not Used	Not Used	Not Used	Not Used	Not Used

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Non-Aboriginal heritage - construction	NAH5	Archaeological investigations would be undertaken in accordance with recommendations in the non-Aboriginal Archaeological Research Design	AEW Contractor	Yes	No - not applicable to the project scope, investigations completed by others for this project location.	N/A
Non-Aboriginal heritage - construction	NAH6	The following heritage items would be monitored for potential vibration impacts during construction: 1) St Marys Railway Station Group 2) Queen Street Post-War Commercial Building 3) St Marys Munitions Workers Housing 4) McGarvie Smith Farm 5) McMaster Farm	Not Applicable in the staging report however is applicable to the AEW Contractor	Yes	No - no vibration will not impact heritage items as further than 450m from the work site.	N/A
Non-Aboriginal heritage - construction	NAH7	If required, the St Marys Station jib crane would be temporarily relocated prior to construction commencing in the vicinity of this item, safely stored and appropriately maintained and reinstated. If relocation is required, a detailed methodology for the removal and reinstatement of the jib crane would be prepared in consultation with an appropriately qualified heritage advisor	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	NAH8	A dilapidation survey of the Warragamba to Prospect Water Supply Pipelines would be undertaken prior to construction commencing in the vicinity of this item	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	NAH9	If suspected human remains or unexpected items of potential heritage significance are discovered within the on-airport area, all activity would cease and the unexpected/chance finds requirements specified in the Western Sydney Airport European and Other Heritage Construction Environmental Management Plan would be followed	AEW Contractor	Yes	No - work is not located on-airport.	N/A
Non-Aboriginal heritage - construction	ONAH1	Design development for the project would endeavour to minimise adverse impacts to heritage buildings, elements, fabric, and heritage significant settings and view lines that contribute to the overall heritage significance of heritage items	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	ONAH2	The architectural design for the project would take account local heritage context and be sympathetic to local heritage character. This would include using sympathetic building materials, colours and	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		finishes Design should aim to minimise visual impacts by ensuring that significant elements are not obstructed or overshadowed Design should adhere to the Principal – Western Sydney Airport Design Guidelines The Design Review Panel and Heritage Working Group would be consulted in regard to the design, form and material of new built structures that may impact heritage items				
Non-Aboriginal heritage - construction	ONAH3	Consultation with the Heritage Council and with relevant stakeholders would occur for the design of works that have the potential to impact State significant items including St Marys Railway Station	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	ONAH4	A heritage interpretation strategy would be prepared for the project identifying key stories and interpretive opportunities related to non Aboriginal heritage. The strategy would address historic and contemporary heritage and community values and would identify innovative and engaging opportunities for interpretation	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	ONAH5	A conservation management plan would be prepared for St Marys Railway Station, in accordance with NSW Heritage Council guidelines. The plan would address any changes to the station, including updated assessment of significance of elements and recommendations on curtilage changes. It would also provide site specific exemptions and management policies	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	ONAH6	Heritage inventory registers for heritage items modified by the project would be updated to document their change in condition following the completion of construction works for the project	Not Applicable	No	N/A	N/A
Non-Aboriginal heritage - construction	ONAH7	An appropriately qualified and suitably experienced heritage architect would be engaged to provide input into design development at St Marys Station	Not Applicable	No	N/A	N/A
Aboriginal heritage - construction	AH1	Aboriginal stakeholder consultation would continue to be carried out in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (NSW Office of Environment and Heritage, 2010). Registered Aboriginal Parties would be provided with opportunities to participate	AEW Contractor - Partial	Yes	Yes	Section 15

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		in survey and testing in unverified areas of Aboriginal archaeological sensitivity, archaeological salvage works and unexpected find assessments (if required).				
Aboriginal heritage - construction	AH2	Areas of unverified Aboriginal archaeological sensitivity would be subject to archaeological survey and test excavation pre-construction in accordance with the Aboriginal Cultural Heritage Management Plan	AEW Contractor, except SM-WSA will prepare the Aboriginal Cultural Heritage Management Plan.	Yes	No - UVA1 and UVA2 are not in the work boundary.	Section 15
Aboriginal heritage - construction	AH3	Not Used	Not Used	Not Used	Not Used	Not Used
Aboriginal heritage - construction	AH4	Not Used	Not Used	Not Used	Not Used	Not Used
Aboriginal heritage - construction	AH5	All Aboriginal objects recovered from the construction footprint as a result of test excavation and salvage works would be appropriately secured and under the care of the archaeological consultant while options for their long-term management, as determined through consultation with Registered Aboriginal Parties, are being investigated.	AEW Contractor	Yes	No - no test excavations required for the project scope.	N/A
Aboriginal heritage - construction	AH6	Aboriginal Heritage Information Management System site cards would be produced for all newly identified sites other than those identified on Commonwealth land. These should be submitted to the Aboriginal Heritage Information Management System Registrar as soon as practicable within one month of being identified. Newly identified sites within the boundaries of Defence Establishment Orchard Hills (Commonwealth land) would be reported to the Department of Defence to be managed in accordance with the relevant provisions of the Defence Establishment Orchard Hills Heritage Management Plan	AEW Contractor	Yes	Yes	Section 15 & Unexpected Fnds Procedure
Aboriginal heritage - construction	AH7	Aboriginal Site Impact Recording forms for sites subject to archaeological salvage would be submitted to the Aboriginal Heritage Information Management System register within one month of the completion of salvage works within their bounds.	AEW Contractor	Yes	Yes	Section 15 & Unexpected Fnds Procedure

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Aboriginal heritage - construction	AH8	If any suspected human remains or unexpected Aboriginal cultural heritage objects are discovered within the on- airport area, all activity would cease and the unexpected finds protocol and discovery of human remains protocol specified in the Western Sydney Airport Aboriginal Cultural Heritage Construction Environmental Management Plan would be followed	AEW Contractor	Yes	Yes	Section 15 & Unexpected Fnds Procedure
Aboriginal heritage - construction	AH9	Works within the bounds of existing Aboriginal Heritage Impact Permit areas should be undertaken in accordance with the conditions of those permits and with permission from the relevant Aboriginal Heritage Impact Permit holder. Works undertaken on Defence Establishment Orchard Hills (Commonwealth land) should be undertaken in accordance with the Defence Establishment Orchard Hills Heritage Management Plan	AEW Contractor	Yes	No - works not within a AHIP area.	N/A
Aboriginal heritage - construction	AH10	Impacted Aboriginal Sites would be managed in accordance with the Aboriginal Cultural Heritage Management Plan	AEW Contractor	Yes	No - No aboriginal site to be impacted	N/A
Aboriginal heritage - construction	AH11	Aboriginal sites located outside of the construction footprint, but within 100m of it, would be clearly demarcated or sign posted to avoid potential impact	AEW Contractor	Yes	Yes	Section 15
Aboriginal heritage - construction	AH12	Reporting for all archaeological salvage works completed for the project would include: 1) a minimum of one interim Aboriginal archaeological salvage report providing a summary of salvage works completed up to the reporting date, including the results of any post-excavation analyses completed. Interim results may be used to inform consistency assessments and Aboriginal heritage interpretation initiatives 2) an Archaeological Salvage Report detailing the results of the archaeological salvage program (including the results of any post excavation analyses) would be completed within one year of the completion of the fieldwork component of the program. The Archaeological Salvage Report would be consistent with the best practice guidelines suggested by the Code of Practice for	AEW Contractor	Yes	Yes - M12 team have completion of Archaeological Salvage works covering the work location.	Section 15

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		Archaeological Investigation of Aboriginal Objects in NSW (DECCW 2010b) and the Aboriginal Cultural Heritage Standards & Guidelines Kit (NSW NPWS 1997)				
Aboriginal heritage - construction	AH13	A heritage interpretation strategy would be prepared for the project identifying key stories and interpretive opportunities related to non Aboriginal heritage. The strategy would address historic and contemporary heritage and community values and would identify innovative and engaging opportunities for interpretation	AEW Contractor	Yes	No - M12 team have completion of Archaeological Salvage works covering the work location.	N/A
Aboriginal heritage - construction	OAH1	A heritage interpretation strategy would be prepared for the project in consultation with Aboriginal knowledge holders. Aboriginal heritage interpretation would be developed with reference to the findings of the Aboriginal Cultural Heritage Assessment Report and Archaeological Assessment Report, to promote understanding and awareness of cultural heritage values	AEW Contractor, except the Principal will prepare the heritage interpretation strategy in consultation with the Aboriginal knowledge holders.	Yes (Sydney Metro)	Yes by Sydney Metro	N/A
Flooding, hydrology and water quality construction	HYD1	Construction planning would consider flood related mitigation, including: 1) staging construction works to reduce the duration of works within the floodplain 2) daily and continuous monitoring of weather forecasts and storm events, rainfall levels and water levels in key watercourses to identify potential flooding events and related flood emergency response 3) consultation with NSW State Emergency Services and relevant local councils to ensure consistent approaches to the management of flood events (off-airport only) 4) provide flood-proofing to excavations at risk of flooding during construction, where reasonable and feasible, such as raised entry into shafts and/or pump-out facilities to minimise ingress of floodwaters into shafts and the dive structure 5) review of site layout and staging of construction works to avoid or minimise obstruction of overland flow paths and limit the extent of flow diversion required	AEW Contractor	Yes	Yes - Covered in ECM	ECM and Section 18

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Flooding, hydrology and water quality construc on	HYD2	Minimise works in the main creek channels (at Blaxland Creek, unnamed watercourse south of Patons Lane and Cosgroves Creek) where possible and avoid works in the channel during rainfall events	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality construc on	HYD3	Surface water flows during construction would be managed to ensure that there is no increase in flows into or through the Warragamba to Prospect Water Supply Pipelines corridor.	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality construc on	WQ1	A surface water quality monitoring program would be implemented to monitor water quality during construction. The program would be developed in consultation with (as relevant) Western Sydney Airport, NSW Environment Protection Authority, relevant sections of Department of Planning, Industry and Environment and relevant local councils. The program would consider monitoring being undertaken as part of other infrastructure projects such as the M12 Motorway and Western Sydney International On-airport, the water quality monitoring program would ensure that works meet the requirements under Schedule 2 of the Airports (Environment Protection) Regulations 1997. The program would monitor all construction discharge locations.	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality construc on	WQ2	Water treatment plants would be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality construc on	WQ3	The design and construction of the project would take into account the former NSW Office of Water's Guidelines for controlled activities on waterfront land.	Not Applicable	No	N/A	N/A
Flooding, hydrology and	OHYD1	The flood model for the project would be updated with regard to flood modelling undertaken for the	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
water quality-operation		South Creek Sector Review (anticipated to be released in 2021). The updated flood modelling would be used to inform design development including but not limited to, addressing potential residual flood impacts identified at the following locations: 1) the viaduct and earthworks in the vicinity of Blaxland Creek so as to minimise the extent of the project within the floodplain 2) the earthworks arrangement at the stabling and maintenance facility in the area affected by the Probable Maximum Flood The flood model for the project would be prepared in consultation with relevant stakeholders				
Flooding, hydrology and water quality-operation	OHYD2	Develop localised stormwater management plans at St Marys Station and Aerotropolis Core Station to ensure these stations are protected from localised flooding	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality-operation	OHYD3	Flood compatible design would need to be demonstrated for the permanent spoil placement areas to ensure compliance with applicable land use criteria	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality-operation	OHYD4	The design of the viaduct crossing over the Warragamba to Prospect Water Supply Pipelines would not result in an increase of overland flows into or through the pipelines corridor for each storm event up to and including the 1% AEP event	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality-operation	OWQ1	Design batter slope gradients and surface treatments to minimise erosion risk	AEW Contractor	Yes	No - Design by SM-WSA and TfNSW.	N/A
Flooding, hydrology and water quality-operation	OWQ2	Drainage and water treatment design to be undertaken in accordance with Water Sensitive Urban Design requirements specified in local council, Transport for NSW and on-airport standards	AEW Contractor	Yes	No - Design by SM-WSA and TfNSW.	N/A
Flooding, hydrology and water quality-operation	OWQ3	Suitably designed scour and erosion controls should be included at drainage and sedimentation basin outlet discharge points	Not Applicable	No	N/A	N/A
Flooding, hydrology and	OWQ4	Detailed design of viaducts across waterways would aim to minimise infrastructure within the bed and	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
water quality-operation		banks of existing waterways and minimise changes to flood behaviour across the floodplain Detailed design of viaducts across waterways would aim to minimise infrastructure within the bed and banks of existing waterways and minimise changes to flood behaviour across the floodplain				
Flooding, hydrology and water quality-operation	OWQ5	Where feasible, on-site detention of stormwater would be introduced where stormwater runoff rates are increased. Where there is insufficient space for the provision of on-site detention, the upgrade of downstream infrastructure would be implemented where feasible and reasonable	Not Applicable	No	N/A	N/A
Flooding, hydrology and water quality-operation	OWQ6	At all locations where stormwater is discharged, water quality measures such as gross pollutant traps, bio-retention swales and Water Sensitive Urban Design features would be investigated and implemented where feasible and reasonable	AEW Contractor	Yes	No - Design by SM-WSA and TfNSW.	N/A
Flooding, hydrology and water quality-operation	OWQ7	Water treatment plants would be designed to ensure that wastewater is treated to a level that is compliant with the ANZECC/ ARMCANZ (2000), ANZG (2018) and draft ANZG (2020) default guidelines for 95 per cent species protection and 99 per cent species protection level for toxicants that bioaccumulate unless other discharge criteria are agreed with relevant authorities.	Not Applicable	No	N/A	N/A
Groundwater and geology construction	GW1	Further assessment would be undertaken during design development, and prior to construction commencing, to ensure that damage to buildings and structures at risk of ground movement impacts around St Marys, Claremont Meadows, Orchard Hills and Bringelly are avoided or managed. Where building damage risk is rated as slight, moderate or high (as per Rankin 1988), a structural assessment of the affected buildings/structures would be carried out and specific measures implemented to address the risk of damage	AEW Contractor	N/A	No - Design by SM-WSA and TfNSW.	N/A
non-Aboriginal heritage - construction	GW2	Further assessment of road and rail infrastructure and utility assets (including the Warragamba to Prospect Water Supply Pipelines) considered to be at risk from ground movement would be undertaken during design development. Consultation would be	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		undertaken with the infrastructure and asset owners in each case to determine appropriate ground movement criteria for the assessment and, if required, to agree management measures to manage potential impacts				
Groundwater and geology construction	GW3	Further assessment of potential ground movement impacts on the Goods Shed building at St Marys Station, including a building condition survey, would be carried out during design development and prior to the commencement of construction. The assessment would be carried out in consultation with a suitably qualified heritage architect and would identify acceptable ground movement criteria and, if required, feasible measures to reduce or mitigate the effects of ground movement on this structure. Ground movement in the vicinity of the Goods Shed and the condition of the Goods Shed building would be monitored during construction. A dilapidation survey of the Goods Shed would be carried out prior to work commencing in the vicinity of the building. At the completion of construction, should there be any damage to the building which is determined to be as a result of the project construction works, the building would be repaired in consultation with a suitably qualified heritage architect.	Not Applicable	No	N/A	N/A
Groundwater and geology construction	GW4	Consultation with Western Sydney Airport will be on-going in respect to the construction programs for both projects to understand the potential for ground movement impacts to proposed buildings and structures.	Not Applicable	No	N/A	N/A
Groundwater and geology construction	GW5	Detailed hydrogeological and geotechnical models for the project would be developed and progressively updated during design and construction. These models would: 1) be informed by the results of groundwater monitoring undertaken before and during construction 2) identify predicted changes to groundwater levels, including at nearby water supply works and at groundwater dependent ecosystems or other sensitive groundwater receptors. Where changes to groundwater levels are predicted at nearby water	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		supply works, groundwater dependent ecosystems or other sensitive groundwater receivers, an appropriate groundwater monitoring program would be developed and implemented Where changes to groundwater level are close to the ground surface, dryland salinity monitoring would be implemented to allow for management of any identified impacts The groundwater monitoring program would aim to confirm no adverse impacts on the receiver during construction or to effectively manage any impacts with the implementation of appropriate mitigation measures. Monitoring at any specific location would be subject to the status of the water supply work and agreement with the landowner				
Groundwater and geology construction	GW6	A Groundwater Management Plan would be prepared and implemented. The plan must include the following trigger-action response measures in relation to groundwater levels in areas identified as subject to potential drawdown (at groundwater dependent ecosystems or other sensitive receivers) but outside the construction footprint and Western Sydney International Stage 1 Construction Impact Zone: a) target criteria, set with reference to relevant standards and site specific parameters; b) trigger values and corresponding corrective actions to prevent recurring or long-term exceedance of the target criteria described in (a); and c) corrective actions to compensate for any recurring or long-term exceedance of the target criteria described in (a) Response measures may include: 1) targeted ground improvement and grouting to limit groundwater inflows into station excavations, tunnels and cross-passage to reduce groundwater drawdown 2) design of undrained temporary retention systems to minimise groundwater inflow into station excavations and reduce groundwater drawdown 3) supplementing groundwater supply at affected	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		groundwater dependent ecosystems or watercourses 4) make good provisions for groundwater supply wells impacted by changes in groundwater level or quality				
Groundwater and geology - operation	OGW1	Ongoing groundwater inflows from drained project elements (or incidental flows) would be treated and tested before discharge to comply with any relevant Environmental Protection Licence or agreed discharge criteria	Not Applicable	No	N/A	N/A
Soils and Contamination - Construction	SC1	The Soil and Water Management Plan would incorporate the following measures: 1) for low risk areas of environmental concern, worker health and safety measures, waste management and tracking for contamination would be outlined. 2) for medium and high risk areas of environmental concern, detailed site investigations and review of further available information would be undertaken prior to the start of construction	AEW Contractor	Yes	Yes	Section 15 Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.
Soils and Contamination - Construction	SC2	Based on outcomes of SC1: 1) if a medium or high risk area of environmental concern is reassessed as low risk, the site would be managed in accordance with the Soil and Water Management Plan. This would typically occur where there is minor, isolated contamination that can be readily remediated through standard construction practices such as excavation and off-site disposal 2) for areas of environmental concern that remain or change to medium risk, visual inspections and monitoring would be performed during earthworks. If suspected contamination is encountered, the materials would be subject to sampling and analysis	AEW Contractor	Yes	Yes	Section 18 Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		<p>to assess management requirements in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines</p> <p>3) for areas of environmental concern that remain or change to high risk, a Sampling, Analysis and Quality Plan would be prepared for Detailed Site Investigations or data gap investigations. The results from the site investigations would be assessed against criteria contained within the National Environment Protection (Assessment of Site Contamination) Measure (2013) and other applicable NSW statutory guidelines to assess whether remediation is required. Remediation works would be performed in accordance with the hierarchy of preferred strategies in the Guidelines for the NSW Site Auditor Scheme (NSW Environment Protection Authority, 2017) and other guidelines made or endorsed by the NSW Environment Protection Authority. Where practical, remediation works would be integrated with excavation and development works performed during construction</p>				management during construction in consultation with Contaminated Land Consultant.
Soils and Contamination - Construction	SC3	<p>Where information gathered from investigations for medium and high risk areas of environmental concern (as per mitigation measure SC1) is insufficient to determine the risk of contamination, a detailed site investigation would be carried out in accordance with the National Environment Protection Measure (2013) and other guidelines made or endorsed by the NSW Environment Protection Authority</p> <p>Where data from the additional data review (mitigation measure SC1) or the detailed site investigation (mitigation measure SC2) confirms that contamination would require remediation, a Remediation Action Plan would be developed for the area of the construction footprint.</p> <p>If a Remediation Action Plan is required, it would be developed in accordance with NSW Environment Protection Authority statutory guidelines and a Site Auditor would be engaged. Remediation</p>	AEW Contractor	Yes	Yes	<p>Section 18</p> <p>Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.</p>

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		methodologies would be undertaken in accordance with Australian Standards and other relevant government guidelines and codes of practice. Remediation would be performed as an integrated component of construction and to a standard commensurate with the proposed end use of the land.				
Soils and Contamination - Construction	SC4	If a duty to report to the NSW Environment Protection Authority under Section 60 of the Contaminated Lands Management Act 1997 is triggered, or where a medium to high risk of contamination is identified, an accredited Site Auditor would review and approve the Remediation Action Plan (including issue of interim audit advice) and would develop a Site Audit Statement and Site Audit Report upon completion of remediation.	AEW Contractor	Yes - Based on information as described above.	Yes - Based on information as described above.	Section 18
Soils and Contamination - Construction	SC5	An unexpected finds procedure would be developed and implemented as part of the project Soil and Water Management Plan, outlining a set of potential contamination issues which could be encountered, and detailing the management actions to be implemented. The unexpected finds procedure would include a process for chemical and asbestos contamination and would generally include: 1) cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands consultant (verification by a certified contaminated land practitioner) 2) collection of soil samples for chemical or asbestos analysis, where required, based on observations 3) assessment of results against applicable land use or waste classification criteria in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines 4) management of the contamination in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority statutory guidelines 5) the unexpected finds procedure for on-airport construction would be consistent with the Western	AEW Contractor	Yes	Yes - CEMP - Appendix G	Section 18 and Appendix G

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		Sydney Airport unexpected finds procedure detailed in the Soil and Water Construction Environmental Management Plan (Western Sydney Airport, 2019)				
Soils and Contamination - Construction	SC6	Post construction, an inspection of construction, stockpiling and laydown sites and soil validation of redundant sedimentation/water quality basins would be undertaken to assess if further investigation and remediation is required. Investigation and remediation (if required) would be undertaken in accordance with the Soil and Water Management Plan (off-airport) and a project specific Remediation Action Plan that would be prepared in a manner consistent with the Western Sydney Airport Remediation Action Plan (2019) (on-airport). All inspections, investigations and remediation would be undertaken by a qualified contaminated lands consultant with reports prepared or reviewed by a Certified Contaminated Land Consultant	AEW Contractor	Yes	Yes	Section 18
Soils and Contamination - Construction	SC7	Prior to ground disturbance in areas of potential acid sulfate soil occurrence, testing would be carried out to determine the actual presence of acid sulfate soils. If acid sulfate soils are encountered, they would be managed in accordance with the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee, 1998)	AEW Contractor	Yes	No - No impacts expected.	Section 18
Soils and Contamination - Construction	SC8	Prior to ground disturbance in high probability salinity areas testing would be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils would not be reused or would be managed in accordance with Book 4 Dryland Salinity: Productive Use of Saline Land and Water (NSW DECC 2008). Erosion controls would be implemented in accordance with the Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004)	AEW Contractor	Yes	No - Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management	Section 18

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
					during construction in consultation with Contaminated Land Consultant.	
Soils and Contamination - Construction	SC9	Targeted groundwater investigations would be undertaken prior to construction to identify high salinity areas at risk from rising groundwater. Where high saline areas (>1000 µS/cm) are identified, measures such as planting, regenerating and maintaining native vegetation and good ground cover in recharge, transmission and discharge zones would be implemented where possible	AEW Contractor	Yes	No - Due to the scope and scale of the works, DSI's are not proposed. In-situ sampling and waste classification will occur prior to ground disturbance within any AEC to determine extent of contamination. Results will guide management during construction in consultation with Contaminated Land Consultant.	Section 18
Soils and Contamination - Construction	SC10	Where the construction footprint is not used as part of the operational footprint (residual land), an assessment of the suitability of the site for the proposed land use would be undertaken in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority	AEW Contractor	Yes	No - No residual land	Section 18
Soils and Contamination - Construction	SC11	For works within Western Sydney International: 1) A review of further available information from Western Sydney Airport would be undertaken prior to the commencement of construction, which may include review of investigations, the Western Sydney Airport Remediation Action Plan and validation reports 2) Any remediation works (for contamination	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		encountered by The Principal that has not been remediated by Western Sydney Airport) would be undertaken in accordance with the Principal Remediation Action Plan, developed in a manner consistent with the Western Sydney Airport Remediation Action Plan (Department of Infrastructure and Regional Development, 2019)				
Sustainability, climate change and greenhouse gas-construction	SUS1	A Sustainability Plan would be developed and implemented during construction of the project. The Sustainability Plan would identify the sustainability, climate change and greenhouse gas objectives, initiatives and targets which would be implemented during further design development and construction of the project. The Sustainability Plan would be developed to be consistent with the Western Sydney Airport Sustainability Plan for on-airport works. The Sustainability Plan would also inform the preparation of Sustainability Management Plans for each off-airport construction work package.	AEW Contractor, except the Principal will prepare the Sustainability Plan.	Yes	No - Due to scale and nature of works this assessment is considered negligible Not required by CEMP requirements in Staging Report V5.0.	N/A
Sustainability, climate change and greenhouse gas-construction	SUS2	Protect sensitive construction equipment from the effects of extreme weather, such as direct exposure to the sun on extreme heat days and flooding	AEW Contractor	Yes	Yes	Covered in Incident and Emergency Management Plan
Sustainability, climate change and greenhouse gas-construction	SUS3	Address climate change impacts in emergency management procedures for the construction of the project, such as consideration of impacts of flash flooding on evacuation procedures	AEW Contractor	Yes	Yes	Covered in Incident and Emergency Management Plan
Sustainability, climate change and greenhouse gas-construction	GHG1	Carry out an iterative process of greenhouse gas assessments and design refinement prior to construction to identify opportunities to minimise greenhouse gas emissions Performance would be measured in terms of a percentage reduction in greenhouse gas emissions, and assessed against a business as usual project benchmark verified by Infrastructure Sustainability Council of Australia or equivalent independent industry body	AEW Contractor	Yes	No - Due to scale and nature of works this assessment is considered negligible.	N/A
Sustainability, climate change and greenhouse gas-construction	OSUS1	A Sustainability Plan would be developed and implemented during operation of the project. The Sustainability Plan would identify the sustainability, climate change and greenhouse gas objectives,	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		initiatives and targets which would be implemented during further design development and operation of the project. The Sustainability Plan would be developed to be consistent with the Western Sydney Airport Sustainability Plan for on-airport works.				
Sustainability, climate change and greenhouse gas-construction	OSUS2	Climate change risk treatments would be confirmed and incorporated during further design development	Not Applicable	No	N/A	N/A
Sustainability, climate change and greenhouse gas-construction	OGHG1	Carry out an iterative process of greenhouse gas assessments and design refinement during detailed design to identify opportunities to minimise greenhouse gas emissions. Performance would be measured in terms of a percentage reduction in greenhouse gas emissions, and assessed against a business as usual project benchmark verified by Infrastructure Sustainability Council of Australia or equivalent independent industry body.	Not Applicable	No	N/A	N/A
Resource management-construction	WR1	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging.	AEW Contractor	Yes	Yes	Section 20
Resource management-construction	WR2	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	AEW Contractor	Yes	Yes	Section 20
Resource management-construction	WR3	A materials tracking system would be implemented for material transferred between construction sites.	AEW Contractor	Yes	Yes	Section 20
Resource management-operation	OWR1	Generation of waste would be minimised and reused where possible in line with the waste hierarchy and the sustainability objectives outlined in a Sustainability Plan. In addition: 1) bins would be provided for general waste and recyclables and collection would be undertaken by an authorised contractor for off-site recycling or disposal at a licenced waste facility 2) waste from maintenance activities would be stored in designated areas for collection by an	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		authorised contractor for off-site disposal 3) containers holding grease and lubricants for maintenance would be washed prior to disposal or stored separately for disposal as hazardous waste 4) waste oil and oil filters would be stored in recycling bins and collected by an authorised contractor, and recycled off- site, where feasible 5) wastewater, sewage and grey water would be disposed to stormwater, sewer, recycled wastewater system or transported to an appropriately licenced liquid waste treatment facility (if water quality does not meet requirements for discharge to the stormwater/sewer system)				
Land use and property- Construction	LU1	Areas of land leased for the purposes of construction would be reinstated at the end of the lease to at least equivalent standard in consultation with the landowner	AEW Contractor	Yes	No - Area are not leased, are is road reserve	N/A
Land use and property- Construction	LU2	Where required property adjustments have the potential to impact farm infrastructure (such as fencing or dams) or local access to properties. Consultation with affected property owners would be carried out prior to these works occurring, in order to determine reasonable, feasible and acceptable solutions.	AEW Contractor	Yes	No - not applicable to scope of works	N/A
Land use and property- Construction	LU3	Where a property would be potentially fragmented by the construction corridor, access to properties would be maintained, in consultation with the landowner(s)	Not Applicable	No	N/A	N/A
Land use and property- operation	OLU1	Where a property would be potentially fragmented by the rail corridor, access to properties would be provided. The location of access to be provided would be agreed in consultation with the landowner(s).	Not Applicable	No	N/A	N/A
Land use and property- operation	OLU2	Sydney Metro would continue to consult with key stakeholders and affected landowners during design development of the station interchanges and precincts.	Not Applicable	No	N/A	N/A
Landscape and visual - construction	LV1	Opportunities for the retention and protection of existing street trees and trees within the construction sites would be identified during detailed construction planning	AEW Contractor	Yes	Yes	Section 16

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
Landscape and visual - construction	LV2	Existing trees to be retained would be protected prior to the commencement of construction in the vicinity of these trees in accordance with AS4970-2009 Protection of Trees on Development Sites	AEW Contractor	Yes	Yes	Section 16
Landscape and visual - construction	LV3	All structures (including potential acoustic sheds, site offices, workshop sheds and site hoarding) would be finished in a colour which aims to minimise their visual impact where appropriate. This finish is to be applied to all visible fixtures and fittings (such as exposed downpipes)	Not Applicable	No	N/A	N/A
Landscape and visual - Operation	OLV1	The landscape design for the project would include consideration of appropriate species lists to minimise opportunities to attract wildlife at levels likely to present a hazard to aviation operations. The landscape design would have regard to relevant requirements and species lists under Western Sydney Airport's Wildlife Management Plan and other relevant guidelines, including the National Airports Safeguarding Framework (Guideline C) and Recommended Practices No. 1 – Standards for Aerodrome Bird/Wildlife Control (International Birdstrike Committee 2006)	Not Applicable	No	N/A	N/A
Landscape and visual - Operation	OLV2	Lighting at stations would be designed and operated in accordance with AS4282- 2019 Control of the obtrusive effects of outdoor lighting and the National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (where relevant)	Not Applicable	No	N/A	N/A
Landscape and visual - Operation	OLV3	Opportunities to provide vegetation screening of the stabling and maintenance facility (from sensitive receivers such as Luddenham Road and the surrounding rural areas within the view shed) would be investigated during design development. This would include investigating options for establishing screening vegetation as early in the construction phase as possible	Not Applicable	No	N/A	N/A
Landscape and visual - Operation	OLV4	Landscape screening would be provided along the corridor including restoring vegetation along the creeks to contain local views, in accordance with	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		the Principal – Western Sydney Airport Design Guidelines, to minimise adverse visual impacts where feasible				
Landscape and visual – Operation	OLV5	Corridor services, including the combined services route would be designed to reduce visual clutter and minimise visual impact ensuring these structures have a low profile and do not obstruct views across the corridor	Not Applicable	No	N/A	N/A
Landscape and visual – Operation	OLV6	Proposed engineering batters and water management measures would be designed to integrate with the existing landforms and natural features	Not Applicable	No	N/A	N/A
Landscape and visual – Operation	OLV7	The landscape design for the project would: 1) incorporate salvaged native trees (including tree hollows and root balls), to enhance fauna habitat in suitable locations, including riparian corridors, where practicable 2) use native species from the relevant native vegetation communities within the local area for tree planting programs	Not Applicable	No	N/A	N/A
Social and economic-construction	SE1	Consultation with the local community and project stakeholders would be undertaken to: 1) identify and deliver opportunities for facilitating local creative and cultural activities in appropriate project locations 2) identify and deliver initiatives and opportunities to provide a positive contribution to the potentially affected community and affected locations such as temporary public art and targeted community events and programs	AEW Contractor	Yes	Yes - Sydney Metro responsibility.	N/A
Social and economic-construction	SE2	Not Used	Not Used	Not Used	Not Used	Not Used
Social and economic-construction	SE3	Where partial property acquisition has been identified, undertake property liaison and consultation activities to minimise disruption to property owners and activities on impacted sites	Not Applicable	No	N/A	N/A
Air quality-construction	AQ1	The Air Quality Management Plan for the project would incorporate the following best-practice odour management measures would be implemented during relevant construction works: 1) the extent of opened and disturbed contaminated	AEW Contractor	Yes	Yes	Section 19

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		soil at any given time would be minimised 2) temporary coverings or odour suppressing agents would be applied to excavated areas where appropriate 3) regular odour monitoring would be conducted during excavation to verify that no offensive odours are being generated				
Air quality-construction	AQ2	Where acoustic sheds are proposed these would be designed and managed to prevent/minimise the escape of dust emissions	Not Applicable	No	N/A	N/A
Air quality-construction	AQ3	Air quality monitoring, consistent with the Western Sydney Airport, Air Quality Construction Environmental Management Plan would be carried out during construction to ensure that works meet the requirements under Schedule 1 of the Airports (Environment Protection) Regulations 1997	Not Applicable	No	N/A	N/A
Hazard and risk-construction	HR1	All hazardous substances that may be required for construction would be stored and managed in accordance with the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005), the Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (Department of Planning, Industry and Environment, 2011), the Work Health and Safety Act 2011 (Commonwealth and NSW) and the requirements of the Environmentally Hazardous Chemicals Act 1985 (NSW)	AEW Contractor	Yes	Yes	Section 7.8
Hazard and risk-construction	HR2	A Bushfire Management Plan would be prepared and implemented to manage current bushfire risk and identify response actions during construction of the project. The Plan would be prepared in consultation with the NSW Rural Fire Service and Western Sydney Airport. For project areas within Western Sydney International the Plan would be prepared having regard to the existing Western Sydney Airport Site at Badgerys Creek Bushfire Risk Management Plan (Western Sydney Airport Corporation, 2019)	AEW Contractor	Yes	No - not applicable to scope of works	N/A
Hazard and risk-construction	HR3	A hazardous materials analysis would be carried out prior to stripping and demolition of structures and buildings which are suspected of containing hazardous materials (particularly asbestos).	AEW Contractor	Yes	No - not applicable to scope of works	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		Hazardous materials and special waste (such as asbestos) would be removed and disposed of in accordance with the relevant legislation, codes of practice and Australian Standards (including the Work Health and Safety and Regulation 2011 (NSW))			demolition not proposed.	
Hazard and risk-construction	HR4	Where the project crosses or is adjacent to the Warragamba to Prospect Water Supply Pipelines, construction planning, and approaches to minimising risks of damage or rupture of the Pipelines, would be developed in consultation with WaterNSW, and in accordance with the Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines	AEW Contractor	Yes	No - not applicable to scope of works	N/A
Hazard and risk-operation	OHR1	All hazardous substances that may be required for operation would be stored and managed in accordance with the Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005), the Hazardous and Offensive Development Application Guidelines: Applying SEPP 33 (Department of Planning, Industry and Environment, 2011), the Work Health and Safety Act 2011 (Commonwealth and NSW) and the requirements of the Environmentally Hazardous Chemicals Act 1985 (NSW)	Not Applicable	No	N/A	N/A
Hazard and risk-operation	OHR2	A Bushfire Management Plan would be prepared and implemented to manage current bushfire risk and identify response actions during operation of the project. The Plan would be prepared in consultation with the NSW Rural Fire Service and Western Sydney Airport. For project areas within Western Sydney International the Plan would be prepared having regard to the existing Western Sydney Airport Site at Badgerys Creek Bushfire Risk Management Plan (Western Sydney Airport Corporation, 2019)	Not Applicable	No	N/A	N/A
Hazard and risk-operation	OHR3	Where the project crosses or is adjacent to the Warragamba to Prospect Water Supply Pipelines, the design of the project would aim to minimise risks of damage or rupture of the Pipelines in consultation with WaterNSW, and in accordance with the	Not Applicable	No	N/A	N/A

REMM Condition Classification	Condition Reference	Description	Responsibility	Applicable AEW Road Works (Y/N)	Applicable EDR Road Works (Y/N)	Where addressed in CEMP
		Guidelines for Development Adjacent to the Upper Canal and Warragamba Pipelines				
Hazard and risk-operation	OHR4	The project would be designed to avoid pilot distraction and minimise the risk of headlight glare from metro trains where on surface rail alignment. This would include providing glare screens in those locations where the project creates an unacceptable risk of pilot distraction	AEW Contractor	No	N/A	N/A
Cumulative impacts-construction	CL1	A Cumulative Construction Impacts Management Plan would be developed and would detail co-ordination and consultation requirements with the following stakeholders (as relevant) to manage the interface of projects under construction at the same time: 1) Western Sydney Airport 2) Transport for NSW 3) Western Parkland City Authority 4) Sydney Water 5) Emergency service providers 6) Utility providers Co-ordination and consultation requirements with these stakeholders would be detailed in the plan to include: 7) provision of regular updates to the detailed construction program, construction sites and haul routes 8) identification of key interfaces with other construction projects 9) development of mitigation strategies to manage cumulative impacts associated with these interfaces	AEW Contractor, except SM-WSA will develop and obtain approval of the Cumulative Impacts Plan.	Yes	No - SM-WSA responsibly. Abergeldie will work with Sydney Metro to ensure ongoing interface with other contractors is managed to minimise cumulative impacts.	N/A

Table 68 EBPC Matrix

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 1	1. The approval holder must not clear outside the study area.	Pre-construction, Construction, Post-construction	Contractor	Yes	Clearing limited to the construction area which is located within the study area
EPBC 2	2. To minimise the impacts of the action on protected matters, the approval holder must not clear more than the following specified amounts within the study area: a. 5.87 hectares of Cumberland Plain Woodlands and Shale-Gravel Transition Forest threatened ecological community (TEC). b. 4.94 hectares of Coastal Swamp Oak (Casuarina glauca) Forest of New South Wales and South East Queensland TEC. c. 24.79 hectares of Grey-headed Flying-fox habitat. d. 7.3 hectares of native vegetation on the Defence Establishment Orchard Hills site (which may include threatened ecological communities in conditions 2a and 2b). e. 335 individuals of Grevillea juniperina subsp. juniperina on the Defence Establishment Orchard Hills site (Lot 1 DP 629326 and Lot 2 DP 242968). f. The number of individuals identified by pre-clearance surveys, undertaken in accordance with conditions 3 – 5.	Pre-construction, Construction, Post-construction	Contractor	Yes	Clearing limited to the construction area which is located in the study area Total areas cleared to be managed by Metro
EPBC 3	3. To inform the preparation of the Biodiversity Management Plan required under conditions 8 and the Biodiversity Offset Strategy required under conditions 18, the approval holder must undertake pre-clearance surveys in areas not yet surveyed for the following species: a. Bynoe's Wattle. b. Downy Wattle. c. Allocasuarina glauca. d. White-flowered Wax Plant. e. Small-flower Grevillea. f. Micromyrtus minutiflora. g. Pimelea curviflora var. curviflora. h. Spiked Rice-flower. i. Pultenaea parviflora.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	N/A - SM-WSA responsible
EPBC 4	4. Pre-clearance surveys in areas not yet surveyed must be undertaken in accordance with the NSW Biodiversity Assessment Method, or another methodology agreed to by the Department in writing.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	Area already surveyed

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 5	5. The results of the pre-clearance surveys in areas not yet surveyed must be submitted to the Department in writing prior to, or with, the submission of: a. The Biodiversity Management Plan required under condition 8; and b. The Biodiversity Offset Strategy required under condition 18.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	Area already surveyed
EPBC 6	6. To minimise the impacts of the action on heritage values of the Defence Establishment Orchard Hills, the approval holder must prepare an Aboriginal Cultural Heritage Management Plan in consultation with the Registered Aboriginal Parties and Heritage NSW, prior to the commencement of the action. To demonstrate compliance with this condition, the approval holder must keep appropriate records to demonstrate that consultation has taken place, and how comments received during consultation have been taken into account in the Aboriginal Cultural Heritage Management Plan.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	No	N/A
EPBC 7	7. The approval holder must not remove or disturb any Aboriginal archaeological heritage artefacts or sites on the Defence Establishment Orchard Hills, including unexpected finds, except in accordance with an Aboriginal Cultural Heritage Management Plan prepared under condition 6.	Pre-construction, Construction, Post-construction	Contractor	No	N/A
EPBC 8	8. For the protection of protected matters, the approval holder must submit to the Minister for approval a Biodiversity Management Plan that sets out requirements for Flora and Fauna Management Plans prepared and implemented under the project's Construction Environmental Management Framework.	Pre-construction, Construction, Post-construction	Contractor	No	N/A
EPBC 9	9. The Biodiversity Management Plan must be consistent with the Department's Environmental Management Plan Guidelines (2014), and must include: a. Environmental objectives, relevant protected matters, and a reference to EPBC Act approval conditions to which the Biodiversity Management Plan refers; b. A table of commitments made in the Biodiversity Management Plan to achieve the objectives, and a reference to where the commitments are detailed in the Biodiversity Management Plan; c. Reporting and review mechanisms, and documentation standards, to demonstrate compliance with the Biodiversity Management Plan; d. An assessment of risks to achieving Biodiversity Management Plan environmental objectives and risk management strategies that will be applied; e. Impact avoidance, mitigation and repair measures, and their timing; f. A monitoring program, which must include: i. measurable performance indicators; ii. trigger values for corrective actions; iii. the timing and frequency of monitoring to detect trigger values and changes in the performance indicators; and iv. proposed corrective actions, if trigger values are reached. g. Provide any links to other plans or conditions of approval for the action.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	SM-WSA Off-airport Biodiversity Management Plan approved

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 10	10. The approval holder must not commence the action unless the Minister has approved the Biodiversity Management Plan in writing.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	SM-WSA Off-airport Biodiversity Management Plan approved
EPBC 11	11. If the Minister approves the Biodiversity Management Plan then the Biodiversity Management Plan must be implemented.	Pre-construction, Construction, Post-construction	Contractor	Yes	Approved SM-WSA Off-airport Biodiversity Management Plan to be implemented
EPBC 12	12. The approval holder must submit to the Minister, for approval, a Staging Plan in relation to the construction of the action, prior to commencement of the action.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	N/A
EPBC 13	13. The approval holder must implement the Staging Plan approved by the Minister.	Pre-construction, Construction, Post-construction	Contractor	Yes	This CEMP
EPBC 14	14. The Staging Plan must set out: a. how the construction of the action will be staged, including details of clearing and other activities to be carried out in each stage; b. mapping and delineation of the spatial location of each stage; and c. the planned timing of when construction of each stage will commence and finish.	Pre-construction, Construction, Post-construction	Pre-construction, Construction, Post-construction	Yes - by SM-WSA	No - by Metro
EPBC 15	15. Prior to the commencement of clearing of protected matters identified in condition 2 in each stage, as defined in the Staging Plan required under condition 12, the approval holder must: a. determine the offset requirement for protected matters identified in condition 2 to be cleared in that stage in accordance with the NSW Biodiversity Assessment Method and the process set out in the Biodiversity Offset Strategy required under condition 18. b. secure the required offsets for that stage.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	No	No clearing under Condition 2.
EPBC 16	16. The offsets must be secured in accordance with the NSW Biodiversity Offset Scheme.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A - No EPBC listed vegetation is being impacted, as per pre-clearance report.
EPBC 17	17. Within 3 months of retiring credits or making a payment to secure offsets, the approval holder must submit evidence of the retirement or payment the Department.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A - No EPBC listed vegetation is being impacted, as per

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
					pre-clearance report
EPBC 18	18. The approval holder must submit a Biodiversity Offset Strategy for the Minister's approval, prior to clearing of protected matters identified in condition 2.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes - by SM-WSA	N/A
EPBC 19	19. The Biodiversity Offset Strategy must: a. Be prepared by a suitably qualified ecologist; b. Be prepared in accordance with the NSW Biodiversity Assessment Method; c. Be based on and consistent with the Biodiversity Development Assessment Report at Appendix A of the EIA; d. Be consistent with the principles of the Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012); and e. Provide for the number of individuals identified in accordance with condition 3; and f. Set out: i. The process used for quantifying the impacts to protected matters based on the final design of the action, with quantification of the final number and class of biodiversity credits required to offset the residual impacts of action on protected matters; ii. Details of how the credit requirement to offset the impacts from each stage of construction (defined in the Staging Plan) will be determined and reported; and iii. How offset requirements will be satisfied, including the timeframes by which offsets must be secured in relation to each stage of construction as defined within the Staging Plan.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes - by SM-WSA	N/A
EPBC 20	20. The approval holder must not commence the action unless the Minister has approved the Biodiversity Offset Strategy in writing.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes	SM-WSA confirmed the Biodiversity Offset Strategy is approved
EPBC21	21. If the Minister approves the Biodiversity Offset Strategy then the Biodiversity Offset Strategy must be implemented.	Pre-construction, Construction, Post-construction	Contractor	Noted	CEMP States implementation of Biodiversity Offset Management
EPBC22	22. The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes - by SM-WSA	N/A
EPBC23	23. The approval holder must notify the Department in writing of the date of commencement of each stage of the action, as specified in the Staging Plan required under condition 12, within 10 business days after the date of commencement of the relevant stage of the action.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes - by SM-WSA	N/A

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 24	24. The approval holder must maintain accurate and complete compliance records.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	Yes	This CEMP
EPBC 25	25. If the Department makes a request in writing, the approval holder must provide electronic copies of compliance records to the Department within the timeframe specified in the request. Note: Compliance records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, and or used to verify compliance with the conditions. Summaries of the result of an audit may be published on the Department's website or through the general media.	Pre-construction, Construction, Post-construction	Contractor	Noted	CEMP Records.
EPBC 26	26. The approval holder must: a. submit plans electronically to the Department b. publish each plan on the website within 3 month of the date the plan is approved by the Minister or the date a revised action management plan is submitted to the Minister or the Department, unless otherwise agreed in writing by the Minister c. exclude or redact sensitive ecological data from plans published on the website or provided to a member of the public d. keep plans published on the website until 24 months after the completion of the action, or as otherwise agreed by the department in writing.	Pre-construction, Construction, Post-construction	Sydney Metro	Yes - by SM-WSA	N/A
EPBC 27	27. The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps, and other spatial and metadata required under the Biodiversity Management Plan, is prepared in accordance with the Department's Guidelines for biological survey and mapped data (2018) and submitted electronically to the Department in accordance with the requirements of the plan.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	Yes	Noted
EPBC 28	28. The approval holder must prepare a compliance report addressing each condition of this approval for each 12-month period following the date of commencement of the action, or otherwise in accordance with an annual date that has been agreed to in writing by the Minister. The approval holder must: a. publish each compliance report on the website within 3 months following the relevant 12-month period; b. notify the Department by email that a compliance report has been published on the website and provide the weblink for the compliance report within 5 business days of the date of publication; c. keep all compliance reports publicly available on the website until 24 months after the completion of the action, or as otherwise agreed by the department in writing; d. exclude or redact sensitive ecological data from compliance reports published on the website; and	Pre-construction, Construction, Post-construction	Sydney Metro	No	N/A

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
	e. where any sensitive ecological data has been excluded from the version published, submit the full compliance report to the Department within 5 business days of publication. Note: Compliance reports may be published on the Department's website.				
EPBC29	29. The approval holder must notify the Department in writing of any: incident; non-compliance with the conditions; or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than 2 business days after becoming aware of the incident or non-compliance. The notification must specify: a. any condition which is or may be in breach b. a short description of the incident and/or non-compliance c. the location (including co-ordinates), date, and time of the incident and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	Yes	Appendix N & Contract requirements for incidents
EPBC30	30. The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying: a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future b. the potential impacts of the incident or non-compliance c. the method and timing of any remedial action that will be undertaken by the approval holder.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	Yes	Appendix N & Contract requirements for incidents
EPBC31	31. The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.	Pre-construction, Construction, Post-construction	Contractor and Sydney Metro	Yes - by SM-WSA	Independent audits are arranged by the Principal (TNSW/SM-WSA) if requested
EPBC 32	32. For each independent audit, the approval holder must: a. provide the name and qualifications of the independent auditor and the draft audit criteria to the Department b. only commence the independent audit once the independent auditor and audit criteria have been approved in writing by the Department c. submit an audit report to the Department within the timeframe specified in the approved audit criteria.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC33	33. The approval holder must publish the audit report on the website within 10 business days of receiving the Department's approval of the audit report and keep the audit report published on the website until 24 months after the completion of the action, or as otherwise agreed by the department in writing.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 34	34. The approval holder may, at any time, apply to the Minister for a variation to an action management plan approved by the Minister under conditions 8 and 15, or as subsequently revised in accordance with these conditions, by submitting an application in accordance with the requirements of section 143A of the EPBC Act. If the Minister approves a revised action management plan (RAMP) then, from the date specified, the approval holder must implement the RAMP in place of the previous action management plan.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC 35	35. The approval holder may choose to revise an action management plan approved by the Minister under conditions 18 and 15, or as subsequently revised in accordance with these conditions, without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the RAMP would not be likely to have a new or increased impact.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC 36	36. If the approval holder makes the choice under condition 35 to revise an action management plan without submitting it for approval, the approval holder must: a. notify the Department in writing that the approved action management plan has been revised and provide the Department with: i. an electronic copy of the RAMP ii. an electronic copy of the RAMP marked up with track changes to show the differences between the approved action management plan and the RAMP iii. an explanation of the differences between the approved action management plan and the RAMP iv. the reasons the approval holder considers that taking the action in accordance with the RAMP would not be likely to have a new or increased impact v. written notice of the date on which the approval holder will implement the RAMP (RAMP implementation date), being at least 20 business days after the date of providing notice of the revision of the action management plan, or a date agreed to in writing with the Department. b. subject to condition 38, implement the RAMP from the RAMP implementation date.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC 37	37. The approval holder may revoke their choice to implement a RAMP under condition 35 at any time by giving written notice to the Department. If the approval holder revokes the choice under condition 35, the approval holder must implement the action management plan in force immediately prior to the revision undertaken under condition 35.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC 38	38. If the Minister gives a notice to the approval holder that the Minister is satisfied that the taking of the action in accordance with the RAMP would be likely to have a new or increased impact, then: a. condition 35 does not apply, or ceases to apply, in relation to the RAMP b. the approval holder must implement the action management plan specified by the Minister in the notice.	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A

EPBC Condition Classification	Description	Phase	Responsibility	Applicable EDR Works (Y/N)	Addressed
EPBC 39	<p>39. At the time of giving the notice under condition 38, the Minister may also notify that for a specified period, condition 35 does not apply for one or more specified action management plans.</p> <p>Note: conditions 35, 36, 37, and 38 are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised action management plan, at any time, to the Minister for approval.</p>	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A
EPBC 40	<p>40. Within 20 business days after the completion of the action, the approval holder must notify the Department in writing and provide completion data.</p>	Pre-construction, Construction, Post-construction	Sydney Metro	No - by SM-WSA	N/A

APPENDIX D PROJECT RISK ASSESSMENT

The Risk Assessment has been undertaken in accordance with the requirements of the Sydney Metro Risk Management Standard, included below the table.

Probability	One off event How likely?	Frequency	Repeated How often?	Likelihood	Consequence					
					Insignificant	Minor	Moderate	Major	Severe	Catastrophic/ Transformational
					C6	C5	C4	C3	C2	C1
	Expected to occur frequently during time of activity or project. Greater than a 90% chance of occurring.	10 times or more every year	Almost certain	L1	Medium	High	High	Very High	Very High	Very High
	Expected to occur occasionally during time of activity or project. A 75-90% chance of occurring.	1-10 times every year	Very Likely	L2	Medium	Medium	High	High	Very High	Very High
	More likely to occur than not occur during time of activity or project. A 50-75% chance of occurring.	Once each year	Likely	L3	Low	Medium	Medium	High	High	Very High
	More likely not to occur than occur during time of activity or project. A 25-50% chance of occurring.	Once every 1 to 10 years	Unlikely	L4	Low	Low	Medium	Medium	High	High
	Not expected to occur during the time of activity or project. A 10-25% chance of occurring.	Once every 10 to 100 years	Very Unlikely	L5	Low	Low	Low	Medium	Medium	High
	Not expected to ever occur during time of activity or project. Less than 10% chance of occurring.	Less than once every 100 years	Almost Unprecedented	L6	Low	Low	Low	Low	Medium	Medium

Likelihood Criteria and Risk Matrix

	CONSEQUENCES					
	Insignificant	Minor	Moderate	Major	Severe	Catastrophic
	C6	C5	C4	C3	C2	C1
Environment	No appreciable changes to environment and/or highly localised event.	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries.	Short-term and/or well-contained environmental effects. Minor remedial actions probably required.	Impacts external ecosystem and considerable remediation is required.	Long-term environmental impairment in neighbouring or valued ecosystems. Extensive remediation required.	Irreversible large-scale environmental impact with loss of valued ecosystems.
Regulatory or Legal Breach	Low-level non-compliance with legal and/or regulatory requirement or duty by individuals or TfNSW.	Minor non-compliance with legal and/or regulatory requirement or duty. Investigation and/or report to authority.	Moderate non-compliance. Subject to comment and monitoring from applicable regulator. Small fine and no disruption to services.	Systemic non-compliance/Major breach resulting in enforcement action and/or prohibition notices. Substantial fine and no disruption to services.	Substantial breach resulting in prosecution, fines and/or litigation. Licence or accreditation restricted or conditional affecting ability to operate.	Prosecution leading to imprisonment of TfNSW executive. Loss of operating licence.
Customer Experience and Satisfaction	Infrequent or unrelated written complaints.	A stream of written complaints for more than 3 months.	A stream of written complaints for more than a year.	A substantial and sustained uplift in the rate of complaints.	A deluge of complaints for up to 6 months with normal background rates increasing by a factor of 3 or more.	A prolonged deluge of complaints for more than 6 months, with some normal background rates increasing by a factor of 10 or more.

Consequence Criteria



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
Soil and Water	Sediment laden runoff from stockpiles and disturbed areas entering waterways	C4	L3	Medium	<ul style="list-style-type: none"> Set up erosion and sediment controls (i.e. sediment fences, sandbags) prior to starting excavation works. Stockpiles are to be limited to 2min height and spoil covered prior to rain fall events. Stockpile to be managed in accordance with the Stockpile Management Protocol attached, Appendix 6 Stockpiled material will be stored outside lower lying drainage areas and covered during inclement weather. Sediment and erosion controls are developed and included within area specific ECM Temporary concrete washouts are to be utilised. The location will be discussed in the pre-start. ECM must be included erosion and sediment controls must be prepared by a person with demonstrated skills and experience in preparing the ESCP in accordance with the BLUE BOOK guidelines. ECM with erosion and sedimentation controls will be implemented in advance of site disturbance and will be updated as required as the work progresses and the sites and methodology change. ECM's will be reviewed for effectiveness fortnightly, following rainfall events exceeding 10mm. All erosion and sediment controls will be designed and installed in accordance with Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom, 2004) and Volume 2D (DECC, 2008), commonly referred to as the 'Blue Book'. Works will be designed and programmed to minimise the extent and duration of disturbance to vegetation. The extent of ground disturbance and exposed soil will be minimised to the greatest extent practicable to minimise the potential for erosion. Disturbed ground and exposed soils will be temporarily stabilised during periods of site inactivity to minimise the potential for erosion. 	C5	L4	Low	E126 E128 E130 (note: not to be implemented as no discharges proposed) E131



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
					<ul style="list-style-type: none"> Disturbed ground and exposed soils will be permanently stabilised and proposed landscaped areas suitably profiled and vegetated as soon as practicable following disturbance to minimise the potential erosion. Pooled water on site is to be collected for re-use on site for dust suppression. Weekly inspections at active, exposed work sites to evaluate the effectiveness of soil and water management measures. Rainfall inspections will be conducted after receiving >10 mm over a 24-hour period at active exposed work sites to evaluate the effectiveness of erosion and sediment controls measures. Inspections will be undertaken of erosion and sediment controls prior to any shut down of greater than 48 hours. Pre-work inspection will be conducted by the Environment Coordinator prior to ground disturbing activities to ensure appropriate controls are installed or are planned to be installed in accordance with the ECM. 				
Spoil and Contamination Management	Local contamination and health risk to site personnel	C4	L4	Medium	<ul style="list-style-type: none"> Implementation of Unexpected Finds Soil Contamination and Asbestos Procedure Annexure 7. Induction to include Unexpected Finds Soil Contamination and Asbestos Procedure. Spill kits will be kept near to works area at all times and trained staff present in case of a spill. Land Condition Survey and Spoil Classification will be undertaken as part of site establishment. Where materials cannot be reused and/or recycled, waste material would be disposed in accordance with the <i>Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014, and Waste Avoidance and Resource Recovery Act 2001</i>. Wastes that are unable to be reused or recycled will be disposed of offsite to an EPA approved 	C5	L5	Low	COA: E98 E99 REMM: SC1 SC2 SC3 SC4 SC5



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
					<p>waste management facility following the waste classification assessment. Details of waste types and its classification, volumes and destinations are to be recorded in the Waste Management Register.</p> <ul style="list-style-type: none"> ▪ Prior to waste leaving the Project site, Abergeldie will obtain copies of licences or licence numbers (under the <i>Waste Avoidance and Resource Recovery Act 2001</i>) for transporters of industrial/ hazardous waste, industrial/ hazardous waste treatment facilities and waste disposal facilities and provide these to the Principal prior to disposal of these wastes. Transporter and waste transport licence details will be recorded in the Waste Management Register. ▪ Where materials are being transported off site to a non-licensed waste disposal facility, a s143 notice is required to be held by the owner / occupier of the property receiving the waste. The Project must provide evidence that the waste has been classified in accordance with the EPA Waste Classification Guideline and is consistent with the s143. All materials transferred to the 'waste site' must be done so in accordance with the s143 notice and be tracked within the Waste Management Register. ▪ All Heavy Vehicles used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away. ▪ All loads are to be covered. 				
Spills	Hazardous materials may contaminate the soil or leave site contaminating local waterways, potentially impacting	C4	L4	Low/Medium	<ul style="list-style-type: none"> ▪ No refuelling will occur within the work area ▪ Spill kits will be kept near to works area at all times and trained staff present in case of a spill. ▪ Location of spill kit to be identified in ECM ▪ implementation of the CEMP and Spill Management Procedure in Appendix 11 of this application 	C5	L5	Low	REMM: HR1



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
	environment and community,								
Noise emissions	Noise impacts on nearby sensitive receptors Night works	C5	L4	Low	<ul style="list-style-type: none"> Site equipment is to be turned off when not in use Induction and pre-start briefing to include noise mitigation Mitigation measures to be implemented in accordance with the Sydney Metro Western Sydney Airport Construction Noise and Vibration Standard including appropriate notification Consider orientation of construction compound layout so that primary noise sources and noisy plant items (generators, pumps, fixed plant) to minimise impact to nearby noise sensitive receivers. Consider how structures (sheds and containers) can be placed between sensitive receivers and noise sources (and as close to the noise sources as is practical). Consider selecting site access points and roads as far as possible away from sensitive receptors. Where possible use an alternative low noise process. Plant and equipment is to be maintained as per manufacturers recommendation and be in good working order. Where impacts to a sensitive receiver is expected to occur from fixed plant that is regularly operating an acoustic screen, such as shrouds, enclosures, must be considered. Selection of low-noise plant and equipment of appropriate size and power, including alternatives to diesel and petrol engines and pneumatic units such as hydraulic or electric-controlled units where feasible. Select compressors that are silenced, or sound-reduced models fitted with acoustic enclosures. Minimise concurrent operation of dominant noise-generating plant to reduce noise impacts Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work. Where reasonable and feasible arrange 	C5	L3	Low	COA: E38 E43 E45



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
					<p>construction activities to restrict need for reversing of plant and use of reversing alarms.</p> <ul style="list-style-type: none"> No swearing or unnecessary shouting or loud stereos/radios on site No dropping of materials from height, throwing of metal items and slamming of doors No excessive revving of plant and vehicle engines Plant and equipment is to be switched off when not being used rather than left idling for prolonged periods. Controlled release of compressed air Residents, businesses and other stakeholders within the vicinity of the proposed works would be notified of the scheduled works at least seven (7) calendar days prior to construction. This would include the provision of a contact person and phone number to enable complaints to be received and responded to, if required. Verification measurements should be undertaken at the start of high noise generating activities and to assist in managing complaints. Predicted noise levels from the proposed works should be verified by measuring construction noise and background noise levels when high noise generating activities are undertaken or where complaints are received. Ensure that vibratory plant do not encroach on minimum safe working distance from building. See controls listed in section for Noise in Section Local Sensitives in Part 2 of this application. Implement SM-WSA OOHA Protocol. 				
Non-Aboriginal heritage	Works proposed within local heritage item, potential for disturbance of previously unidentified heritage items	C4	L3	Medium	<ul style="list-style-type: none"> Construction to only occur within works area, flagging and sign to demarcate boundary. Implementation of Sydney Metro Unexpected Heritage Finds Procedure included as Appendix 7 of this application. Limit of works area to be included in toolbox talk with identification of nearby heritage items 	C5	L4	Low	COA: E19 E34 E35 REMM: NAH5
Aboriginal heritage	Works area includes BWB which is an	C3	L3	High	<ul style="list-style-type: none"> Construction to only occur within works area, flagging and sign to demarcate boundary. Work area is to be limited to the area cleared by the 	C4	L4	Medium	COA: E28



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
	AHIMS site 45-5-5298. Potential for disturbance of previously unidentified heritage items				<ul style="list-style-type: none"> M12 Aboriginal Clearance Survey. APPENDIX L. Implementation of Sydney Metro Unexpected Heritage Finds Procedure included as APPENDIX K398 Limit of works area to be included in toolbox talk with identification of nearby heritage items 				E31 E33 E34 E35 REMM's: AH1 AH2 AH7 AH9 AH10 AH11 AH12
Biodiversity (Flora and Fauna)	Grubbing for widening Pruning or Clearing of Trees	C5	L4	Low	<ul style="list-style-type: none"> Delineation and flagging and signposting (as practicable to allow for access) of work area and vegetation to be retained. No parking under drip line of trees. TPZ of trees to be retained is to be protected using fencing and flagging. A pre-clearing inspection will be undertaken prior clearing by a suitable qualified ecologist and the Contractor's ESAM (or delegate). The pre-clearing inspection will include, as a minimum: <ul style="list-style-type: none"> Identification of potential hollow bearing trees or other habitat features; Identification of any threatened flora and fauna; A check on the physical demarcation of the limit of clearing; An approved erosion and sediment control plan for the worksite; and The completion of any other pre-clearing requirements required by any project approvals, permits or licences. The completion and approval of the SM Pre-clearing inspection for native vegetation approval form. A post clearance report, including any relevant Geographical Information System files, will be 	C5	L5	Low	COA: E2 E3 E4 E11 E12 E13 REMM: FF1 FF2 FF6 FF10 FF11 LV1 LV2

Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
					<p>produced that validates the type and area of vegetation cleared including confirmation of the number of hollows impacted and the corresponding nest box requirements to offset these impacts.</p> <ul style="list-style-type: none"> Regular inspections will include a check on the ecological mitigation measures and project boundary fencing. All details for trees to be removed will be provided prior to removal to SM-WSA for inclusion in the Tree Survey (COA E10). Prior to vegetation clearing, the Proponent must identify where it is practicable for the CSSI to reuse native trees and vegetation that are to be removed. If it is not possible for the CSSI to reuse removed native trees and vegetation, the Proponent must consult with the relevant council(s), NSW National Parks & Wildlife Service, Western Sydney Parklands Trust, Greater Sydney Local Land Services, Landcare groups, DPI Fisheries and any additional relevant government agencies to determine if: <ul style="list-style-type: none"> h) hollows, tree trunks (greater than 25-30 centimetres in diameter and 2-3 metres in length), mulch, bush rock and root balls salvaged from native vegetation impacted by the CSSI; and i) collected plant material, seeds and/or propagated plants from native vegetation impacted by the CSSI, could be used by others in habitat enhancement and rehabilitation work, before pursuing other disposal options. Implementation of Unexpected Ecological Finds Procedure, Appendix 12 				



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
Weeds	Contact and induced proliferation of priority weeds as listed under the Biosecurity Act 2015	C4	L4	Medium	<ul style="list-style-type: none"> Any priority weeds identified within the works area would be managed in accordance with the <i>Biosecurity Act 2015</i>. Weeds of national environmental significance would be managed in accordance with the Weeds of National Significance Weed Management Guide. Weeds to be identified in pre-clearing inspection. Report to provide recommendation of weed management options specific to the site. 	C5	L5	Low	FF1 F10
Transport and access – works on public roads	Temporary restrictions on Elizabeth Drive	C5	L4	Low	<ul style="list-style-type: none"> Community notified of any planned road closures or impacts on property access Construction personnel will park outside out of the road carriageway. Traffic Management Plan and Traffic Control Plans to be implemented. Road Occupancy Licence to be obtained prior to commencement of works. 	C6	L6	Low	COA E82 E109 E110 E111 E114 REMM: T1 T3 T4 T5 T6
	Damage to public assets	C5	L4	Low	<ul style="list-style-type: none"> Road Dilapidation Survey prior to commencement of works. Traffic Management Plan and Traffic Control Plans to be implemented. 	C6	L6	Low	COA E107 E109
Air quality	Dust generation during excavation and stockpiling	C5	L4	Low	<ul style="list-style-type: none"> Water cart or water trailer to be present to wet down material Monitor conditions and cease work where dusty conditions are observed Implement monitoring program as per CEMP. 	C6	L5	Low	COA: E1 REMM: AQ1
Waste	Incorrect Handling,	C5	L4	Low	<ul style="list-style-type: none"> Waste to be minimised by, ensuring correct amounts are ordered to avoid excess, re-using excess material where possible 	C6	L5	Low	COA: E122 E123



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
	storage, and disposal of waste.				<ul style="list-style-type: none"> Waste segregation onsite – Waste materials, including general solid waste and demolition waste, will be separated onsite into dedicated bins/areas for either reuse onsite or waste classification and collection by a waste contractor and transport to offsite facilities Waste separation offsite at an appropriately licenced facility – Waste to be deposited into one bin where space is not available for placement of multiple bins, and the waste is to be sorted offsite by a waste contractor. If vegetation is to be mulched and transported off site for beneficial reuse, it is to be assessed for the presence of weeds, pest, and other disease Liquid wastes are to be removed via sucker truck or stored in a site compound and other areas per the approved project. Liquid wastes are to be stored in appropriate containers in a secure bunded area until transported offsite. Bunded areas will have the capacity to hold 110 per cent of the liquid waste volume for bulk storage or 120 per cent of the volume of the largest container for smaller packaged storage. Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the <i>Environmentally Hazardous Chemicals Act 1985</i> and the EPA waste disposal guidelines. All other recyclable or non-recyclable wastes are to be stored in appropriate covered receptacles (e.g. bins or skips) in appropriate locations onsite and contractors commissioned to regularly remove/empty the bins to approved disposal or recycling facilities. Principal Contractors will report all necessary waste and purchasing information to Sydney Metro as required for Sydney Metro to fulfil their WRAPP reporting requirements. 				E124 E125 REMM: WR1 WR2 WR3



Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
Visual Amenity	Impacts on existing landscaping	C5	L4	Low	<ul style="list-style-type: none"> Installation and maintenance of outward facing elements of site hoarding or noise barriers, including the removal of graffiti and weeds. Apply the principles of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant safety design requirements and detail mitigation measures to minimise lighting impacts on sensitive receivers for all permanent, temporary and mobile light sources. 	C5	L6	Low	COA: E62 REMM: LV1
General	Lack of communicated and mis-information leading to impacts.	C4	L5	Low	<ul style="list-style-type: none"> LIW Approval to be endorsed by ER and SM-WSA prior to commencement. Induction of personnel into LIW Approval Incidents and Non-conformances to be managed as per Appendix 9 Sydney Metro - Environmental Incident and Non-compliance Reporting Procedure. 	C4	L6	Low	COA: A1 A2
Community Management	Impacts and complaints to community.	C4	L5	Low	<ul style="list-style-type: none"> Implementing Sydney Metro OCCS The Project team will come into contact with stakeholders and members of the community through meetings or site visits. 'Contact' is any communication with a stakeholder that results in a transfer of, or request for, information. Contact may occur through any of the following mediums: <ul style="list-style-type: none"> Telephone Direct engagement – face to face interactions including meetings or site visits Written correspondence including letters, emails and Facebook posts. A Communications Register is to be kept, located at the site office and submitted as part of the monthly progress report to the Principal. For any compliant the register must include: <ul style="list-style-type: none"> date and time of complaint method by which the complaint was made (telephone, letter, meeting, etc) name, address, contact telephone number of complainant (if no such details were provided, a note to that effect) nature of complaint action taken in response including follow up contact with the complainant 	C4	L6	Low	COA: B1

Aspect	Potential environmental impact	Initial Risk Rating			Control measures	Residual risk rating			Relevant COA / REMM
		Consequence	Likelihood	Risk		Consequence	Likelihood	Risk	
					<ul style="list-style-type: none"> any monitoring to confirm that the complaint has been satisfactorily resolved if no action was taken, the reasons why no action was taken Should a complaint be received the following process shall be implemented: Acknowledgement of complaints will occur within 2 hours of receipt. When a complaint or enquiry cannot be resolved immediately, a follow-up verbal response on what action is proposed will be provided to the complainant/enquirer within 24 hours of a complaint being received. The Project Manager will advise the Transport for NSW Project Manager of any complaints received and the actions taken to resolve the issue. For complaints and/or enquiries which require escalation, Transport for NSW Project Manager will be contacted immediately. Should an enquiry be received, the following process shall be implemented: Acknowledgement of enquiries must occur within 24 hours of receipt. If for some reason a thorough response cannot be provided within five days, an update will be provided with an expectation of the deliverable timeframes for a response. Emails or other written correspondence received will be required to be logged and documented in the consultation management system as well as preparing responses. Further details are included in the Communication Plan. 				

APPENDIX E SM-WSA OUT OF HOURS WORK PROTOCOL

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Sydney Metro Western Sydney Airport Out-of-hours Work Protocol

SM-21-00306108

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Table of contents

1.	Definitions and acronyms	4
2.	Introduction	5
2.1.	Purpose	5
2.2.	Document Requirements	9
2.2.1.	ER Endorsements and Approval.....	9
2.2.2.	Secretary Approval	9
2.3.	Governance.....	9
2.3.1.	Construction Environment Management Framework.....	9
2.3.2.	Construction Noise and Vibration Standard.....	9
2.3.3.	Environment Protection Licence	10
2.4.	Roles and Responsibilities	11
2.4.1.	Sydney Metro - Western Sydney Airport Director of Sustainability, Environment & Planning	11
2.4.2.	Sydney Metro Environment Manager.....	11
2.4.3.	Place manager.....	11
2.4.4.	Independent Environmental Representative	11
3.	Standard Hours	12
3.1.	Covid Health Orders.....	12
4.	OOH Work.....	13
4.1.	OOH Work Endorsement and Approval	13
4.2.	OOH Work Approval Process.....	14
4.2.1.	OOH Work subject to an EPL	16
4.2.2.	OOH Work not subject to an EPL	16
4.3.	Community Notifications.....	20
4.3.1.	Negotiated Agreements with Sensitive Receivers	20
4.4.	Emergency Works.....	21
4.5.	Ground-borne noise level exceedance	23
4.5.1.	Ground-borne regenerated noise condition.....	23
4.5.3.	Mitigation measures	23
4.5.4.	Applying additional mitigation measures.....	24
5.	Related documents and references.....	26
6.	Superseded documents	26
7.	Document history.....	26
5.	Appendix A: OOH Work Strategy/Protocol Endorsements and Approval(s)	27
	Out-of-hours work application form- SM-WSA.....	28
	Appendix 1: Location Map (and/or Environmental Control Map).....	39
	Appendix 2: Traffic Management Plan and/or Traffic Control Plan.....	40
	Appendix 3: Supporting Evidence for Noise & Vibration Impacts (e.g. Construction Noise & Vibration Impact Statement, noise assessment, etc.)	41
	Appendix 4: Community Notification.....	42

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1. Definitions and acronyms

All terminology in this document is taken to mean the generally accepted or dictionary definition. Other terms and jargon specific to this document are defined within the [SM-17-00000203 Sydney Metro glossary](#). Acronyms and terminology specifically used throughout this document are listed below.

	Definitions
CEMF	Construction Environment Management Framework https://central.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272123288
CNVS	Construction and Noise Standard https://central.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272123288
CNVMP	Construction Noise and Vibration Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
DNVIS	Detailed Noise and Vibration Impact Statement
DPIE	Department of Planning, Industry and Environment (formerly DPE)
EIS	Environmental Impact Statement
EPA	Environment Protection Authority (of New South Wales)
EPL	Environment Protection Licence
ER	Environmental Representative
ICNG	<i>Interim Construction Noise Guideline</i> (DECC, 2009)
MOD	Modification (to a planning approval)
OOH	Out-of-hours (i.e. outside of the standard construction hours stipulated in planning approval conditions)
POEO Act	<i>Protection of the Environment Operations Act 1997</i> (NSW)
REMM	Revised Environmental Mitigation Measure
SBOEP	Small Business Owners Engagement Plan
Secretary	The Secretary of the New South Wales Department of Planning, Industry and Environment
SM-WSA	Sydney Metro - Western Sydney Airport

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2. Introduction

This document outlines the process for preparing, considering, assessing, managing and approving work on the Sydney Metro - Western Sydney Airport project that is undertaken outside of standard construction hours (i.e. Out-of-hours) that are subject to the following Critical State Significant Infrastructure (CSSI) planning approvals:

- Sydney Metro - Western Sydney Airport (SSI_10051)

2.1. Purpose

This document has been developed to comply with various CSSI Conditions of Approval (CoAs)). Table 1 indicates where these requirements have been addressed.

Table 1: Out-of-hours Work CSSI CoAs

Condition Number	Condition	Where this condition is addressed
E37	A detailed land use survey must be undertaken to confirm sensitive land use(s) (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration and construction ground-borne noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area before the commencement of work which generates construction noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Detailed Noise and Vibration Impact Statements required under Condition E47.	Section 2.3.2.3 Detailed Noise and Vibration Impact Statement Construction Noise and Vibration Standard
E38	Work must only be undertaken during the following hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; (b) 8:00am to 1:00pm Saturdays; and (c) at no time on Sundays or public holidays.	Section 3.0 Standard hours
E39	Except as permitted by an EPL or approved in accordance with the Out-of-Hours Works Protocol required by Condition E42, highly noise intensive work that result in an exceedance of the applicable NML at the same receiver must only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) if continuously, then not exceeding three (3) hours, with a minimum cessation of work of not less than one (1) hour. For the purposes of this condition, 'continuously' includes any period during which there is less than one (1) hour between ceasing and recommencing any of the work.	Construction Noise and Vibration Standard
E40	This approval does not permit blasting.	Section 4.0 OOH Work
E41	Notwithstanding Conditions E38 and E39 work may be undertaken outside the hours specified in the following circumstances: (a) Safety and Emergencies, including: (i) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (ii) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or	Section 4.0 OOH Work Construction Noise and Vibration standard

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	<p>(b) Low impact, including:</p> <p>(i) construction that causes LAeq(15 minute) noise levels:</p> <ul style="list-style-type: none"> • no more than 5 dB(A) above the rating background level at any residence in accordance with the ICNG, and • no more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s); and <p>(ii) construction that causes:</p> <ul style="list-style-type: none"> • continuous or impulsive vibration values, measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), or • intermittent vibration values measured at the most affected residence are no more than the preferred values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006); or <p>(c) By Approval, including:</p> <p>(i) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or</p> <p>(ii) works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by Condition E42; or</p> <p>(iii) negotiated agreements with directly affected residents and sensitive land user(s); or</p> <p>(d) By Prescribed Activity, including:</p> <p>(i) tunnelling and ancillary support activities (excluding cut and cover tunnelling and surface works not directly supporting tunnelling) are permitted 24 hours a day, seven days a week; or</p> <p>(ii) grout batching at the Orchard Hills construction site is permitted 24 hours per day, seven days per week; or</p> <p>(iii) delivery of material that is required to be delivered outside of standard construction hours in Condition E38 to directly support tunnelling activities, except between the hours 10:00 pm and 7:00 am to / from the Orchard Hills ancillary facility; or</p> <p>(iv) haulage of spoil generated through tunnelling is permitted 24 hours per day, seven days per week except between the hours of 10:00 pm and 7:00 am to / from the Orchard Hills construction site; or</p> <p>(v) works within an acoustic enclosure are permitted 24 hours a day, seven days a week where there is no exceedance of noise levels or intermittent vibration levels under Low impact circumstances identified in Condition E41(b), unless otherwise agreed with the Planning Secretary; or</p> <p>(vi) tunnel and underground station box fit out works are permitted 24 hours per day, seven days per week.</p> <p>On becoming aware of the need for emergency work in accordance with (a)(ii) above, the ER, the Planning Secretary and the EPA must be notified of the reasons for such work. The Proponent must use best endeavours to notify as soon as practicable all noise and/or vibration affected sensitive land user(s) of the likely impact and duration of those work.</p> <p>Notes:</p> <ol style="list-style-type: none"> 1. Tunnelling does not include station box excavation. 2. Tunnelling ancillary support activities includes logistics support and material handling and delivery 	
E42	<p>An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of work (not subject to an EPL) that is outside the hours defined in Conditions E38 and E39. The Protocol must be approved by the Planning Secretary before commencement of the out-of-hours</p>	<p>This document Section 4.0 OOH Work Construction Noise and Vibration Standard</p>



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	<p>work. The Protocol must be prepared in consultation with the ER. The Protocol must provide:</p> <ul style="list-style-type: none"> (a) justification for why out-of-hours work need to occur; (b) identification of low and high-risk activities and an approval process and the section within this protocol ss that considers the risk of activities, proposed mitigation, management, and coordination, including where: <ul style="list-style-type: none"> (i) the ER reviews all proposed out-of-hours activities and confirms their risk levels; (ii) low risk activities that can be approved by the ER; and (iii) high risk activities that are approved by the Planning Secretary; (c) a process for the consideration of out-of-hours work against the relevant NML and vibration criteria; (d) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods consistent with the requirements of Condition E56. The measures must take into account the predicted noise levels and the likely frequency and duration of the out-of-hours works that sensitive land user(s) would be exposed to, including the number of noise awakening events; (e) procedures to facilitate the coordination of out-of-hours work including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; and (f) notification arrangements for affected receivers for all approved out-of-hours works and notification to the Planning Secretary of approved low risk out-of-hours works. <p>This condition does not apply if the requirements of Condition E41 are met</p> <p>Note: <i>Out-of-hours work is any work that occurs outside the construction hours identified in Condition E38 and E39.</i></p>	4.2.2.6 Approval Notification Arrangements
E44	<p>All reasonable and feasible mitigation measures must be applied when the following residential ground-borne noise levels are exceeded:</p> <p>(a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and (b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).</p> <p>The mitigation measures must be outlined in the Noise and Vibration CEMP Sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E42.</p>	<p>Section 2.3 Governance</p> <p>Section 4.5 Ground-borne noise level exceedance</p> <p>Construction Noise and Vibration Standard</p>
E45	<p>Noise generating work in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.</p>	<p>Section 2.3 Governance</p> <p>Construction Noise and Vibration Standard</p>
E47	<p>Detailed Noise and Vibration Impact Statements (DNVIS) must be prepared for any work that may exceed the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E43 and E44 at any residence outside construction hours identified in Condition E38, or where receivers will be highly noise affected or subject to vibration levels above those otherwise determined as appropriate by a suitably qualified structural engineer under Condition E87. The DNVIS must include specific mitigation measures identified through consultation with affected sensitive land user(s) and the mitigation measures must be implemented for</p>	<p>Section 2.3.2.3 Detailed Noise and Vibration Impact Statements</p> <p>Construction Noise and Vibration Standard</p>

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Page 7 of 28

SM-21-00306108

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	the duration of the works. A copy of the DNVIS must be provided to the ER before the commencement of the associated works. The Planning Secretary and the EPA may request a copy (ies) of the DNVIS.	
E49	<p>Where sensitive land use(s) are identified in Appendix B as exceeding the highly noise affected criteria during typical case construction, mitigation measures must be implemented with the objective of reducing typical case construction noise below the highly noise affected criteria at each relevant sensitive landuse(s). Activities that would exceed highly noise affected criteria during typical case construction must not commence until the measures identified in this condition have been implemented, unless otherwise agreed with the Planning Secretary.</p> <p>Note: Mitigation measures may include path barrier controls such as acoustic sheds and/or noise walls, at-property treatment, or a combination of path and at-property treatment.</p>	Section 2.3 Governance Construction Noise and Vibration Standard
E57	<p>In order to undertake out-of-hours work outside the work hours specified under Condition E38, appropriate respite periods for the out-of-hours work must be identified in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with:</p> <ul style="list-style-type: none"> (a) a progressive schedule for periods no less than three (3) months, of likely out-of-hours work; (b) a description of the potential work, location and duration of the out-of-hours work; (c) the noise characteristics and likely noise levels of the work; and (d) likely mitigation and management measures which aim to achieve the relevant NMLs under Condition E43 (including the circumstances of when respite or relocation offers will be available and details about how the affected community can access these offers). <p>The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour work must be provided to the ER, EPA and the Planning Secretary prior to the out-of-hours work commencing.</p> <p>Note: Respite periods can be any combination of days or hours where out-of-hours work would not be more than 5 dB(A) above the RBL at any residence.</p>	Section 4.2.2 and 4.3 Communications Construction Noise and Vibration Standard



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2.2. Document Requirements

The Out-of-hours Work Protocol needs to meet the following consultation, endorsement and approval requirements in accordance with the Sydney Metro - Western Sydney Airport CoAs

- Be prepared in consultation with the Environmental Representative (ER); and
- Be approved by the Planning Secretary of the NSW Department of Planning, Industry and Environment (the Secretary).

These requirements were complied with as demonstrated in Sections 2.2.1.

2.2.1. ER Endorsements and Approval

This document has been prepared in consultation with and reviewed and endorsed by the ER. Copies of the ER endorsements are provided in Appendix A.

2.2.2. Secretary Approval

In accordance with CSSI 10051 CoA E42, construction will not commence for OOH works that are not subject to an EPL prior to this document's preparation and submission to the Secretary for approval.

2.3. Governance

This document should be used in conjunction with the Construction Environmental Management Framework,

<https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272116977> Construction Noise and Vibration Strategy and any applicable EPLs. These documents establish minimum requirements for managing noise and vibration impacts on the SM-WSA project.

2.3.1. Construction Environment Management Framework

The CSSI planning approval includes [SM-21-00279320 Construction Environment Management Framework](https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272116977) <https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272116977> in its documentation. The CEMF represents Sydney Metro's minimum requirements for environmental management and specifies a standard framework that each contractor must establish and document in their Construction Environmental Management Plan and sub-plans. These requirements, including those relating to construction noise and vibration management, are specified in Chapter 9.

2.3.2. Construction Noise and Vibration Standard

The Construction Noise and Vibration Standard (CNVS) <https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272123288> establishes a framework for managing construction noise and vibration impacts and adopting appropriate mitigation measures (including minimum requirements);

- Is included in the CSSI planning approval documentation;
- Forms part of the contract requirements that contractors must comply with;

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SM-21-00306108

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Page 9 of 28

Sydney Metro - Western Sydney Airport Out-of-hours Work Protocol

Unclassified

Sydney Metro – Integrated Management System (IMS)

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- Defines a minimum standard for managing noise and vibration impacts that considers current best practice guidelines and other regulatory requirements; and
- Sets minimum requirements for all OOH work, including the need for and development of Construction Noise and Vibration Management Plans, Construction Noise and Vibration Impact Statements and Detailed Noise and Vibration Impact Statements.

2.3.2.1. Construction Noise and Vibration Management Plans

A Construction Noise and Vibration Management Plan (CNVMP) sets out how noise and vibration impacts will be mitigated and managed. These may also include a Noise & Vibration Monitoring Program, which typically outlines how noise and vibration monitoring will be undertaken, how the results of monitoring will be reported and procedures to identify and implement additional mitigation measures as necessary.

2.3.2.2. Detailed Noise and Vibration Impact Statement

A Detailed Noise and Vibration Impact Statement (DNVIS) is a document developed by Contractors which assesses and documents the anticipated noise and vibration impacts at receivers of proposed construction activities. In accordance with the CSSI planning approvals, a DNVIS is to be prepared for each construction site before construction noise and vibration impacts commence for any work that may exceed the NMLs, vibration criteria and / or ground-borne noise levels specified in Conditions E43 and E44 at any residence outside construction hours identified in Condition E38, or where receivers will be highly noise affected or subject to vibration levels above those otherwise determined as appropriate by a suitably qualified structural engineer under Condition E87.

The DNVIS must include specific mitigation measures identified through consultation with affected sensitive receivers. It also clarifies assumptions made in the EIS and allows the Contractor to provide more detailed quantitative assessments of the EIS due to their better understanding of the exact equipment list and construction methodology they will be using to complete the scope of works.

2.3.3. Environment Protection Licence

An Environment Protection Licence (EPL) is a regulatory approval issued to strategically control the localised, cumulative and acute impacts of pollution. The NSW Environment Protection Authority (EPA) is responsible for issuing EPLs for 'scheduled activities' under the Protection of the Environment Operations (POEO) Act 1997 (NSW).

Some aspects of the SM-WSA construction and operation works will constitute 'scheduled activities' under the POEO Act and therefore need to be subject to an EPL. SM-WSA contractors are required to either comply with Sydney Trains' EPL or obtain and comply with any EPLs as applicable to their scope of works.

The process for approving OOH work outside of those already permitted in accordance with an EPL, is governed by the conditions of the EPL. In order for these types of OOH work to be approved, an application to vary the EPL is to be prepared and submitted to the EPA for approval. The application is to be in accordance with the CNVS and EPL requirements.

OOH work that is subject to an EPL does not require an 'OOH approval' prior to the



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commencement of the proposed OOH works in accordance with the CSSI planning approval conditions.

2.4. Roles and Responsibilities

2.4.1. Sydney Metro - Western Sydney Airport Director of Sustainability, Environment & Planning

The Sydney Metro - Western Sydney Airport Director of Sustainability, Environment & Planning is accountable for this document. Accountability includes authorising the document, monitoring its effectiveness and performing a formal document review.

Roles reporting to the Director are accountable for ensuring the requirements of this document are implemented within their area of responsibility. The roles that are accountable for specific projects/programs are accountable for ensuring associated contractors comply with the requirements of this document.

2.4.2. Sydney Metro Environment Manager

A Sydney Metro Environment Manager will be allocated to each contract package on the Sydney Metro - Western Sydney Airport project. The Environment Manager is responsible for ensuring that all environmental management requirements associated with their contract package are being complied with.

2.4.3. Place manager

Either a Sydney Metro or contractor Place Manager will be allocated to each site on the Sydney Metro - Western Sydney Airport project. The Place Manager is responsible for ensuring that all project communication requirements with the surrounding community are being complied with.

2.4.4. Independent Environmental Representative

The CSSI planning approval conditions under CoA A32 requires an Environmental Representative (ER) to be appointed to the project prior to work commencing. The ER is to act as an independent point of contact for all environmental and planning approval compliance matters. Refer to A32 for a comprehensive list of the ER's responsibilities under CSSI 10051.

Section 4.2.2 includes descriptions of the ER's responsibilities with respect to reviewing and approving OOH work.

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3. Standard Hours

The SM-WSA CSSI planning approval conditions define standard construction hours as:

- 7:00am to 6:00pm Mondays to Fridays, inclusive;
- 8:00am to 1:00pm Saturdays for works and
- At no time on Sundays or public holidays.

Construction activity on the SM-WSA project must only be undertaken within these standard hours, unless otherwise permitted in accordance with this document or the conditions of an applicable EPL.

3.1. Covid Health Orders

Due to the Covid-19 pandemic affecting Sydney, the NSW Government has issued a number of Health Orders to assist in the population living through Covid. In order to assist infrastructure projects, the Government has issued the COVID Infrastructure Construction Work Days Order (2020-2020-75). This Order allows an infrastructure Project to work the following hours as Normal Hours:

- 7:00am to 6:00pm, Saturdays, Sundays or public holidays for works inclusive.

These Orders are subject to updates, with the latest update being:

Environmental Planning and Assessment (COVID-19 Development—Infrastructure Construction Work Days No. 2) Order 2020.

Condition 6 of this Order specifies the following for Infrastructure construction work days:

(1) The carrying out of any building work or work, or the demolition of a building or work, on a Saturday, Sunday or public holidays is development specified for this Order.

(2) The conditions specified for the development are that the development must—

(a) be the subject of an approval, and

(b) comply with all conditions of the approval other than any condition that restricts the hours of work or operation on a Saturday, Sunday or public holiday, and

(c) for work or operation on a Saturday, Sunday or public holiday—

(i) comply with the conditions of the approval that restrict the hours of work or operation on any other day as if the conditions applied to work or operation on a Saturday, Sunday or public holiday, and

(ii) not involve the carrying out of rock breaking, rock hammering, sheet piling, pile driving or similar activities during the hours of work or operation that would not be permitted but for this Order, and

(iii) take all feasible and reasonable measures to minimise noise.

These orders are for a finite time and may be updated again. The Project is to work to the conditions of any updates as they are issued.



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4. OOH Work

Out-of-hours (OOH) work is defined as any work that is undertaken outside of standard construction hours.

CoA E40 applies to OOH work and is not allowed during normal or OOH.

In accordance with CoA E41 any type of OOH work is permitted to be undertaken on the SM-WSA project provided that it is subject to this document.

A list of work activities that may typically be undertaken OOH is provided below:

- (a) Work which could result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 "Risk Management Principles and Guidelines"; or
- (b) where the relevant road authority has advised the Proponent in writing that carrying out the activities could result in a high risk to road network operational performance; or
- (c) where the relevant utility service operator has advised the Proponent in writing that carrying out the activities could result in a high risk to the operation and integrity of the utility network; or
- (d) where the Transport for NSW Transport Management Centre (or other road authority) has advised the Proponent in writing that a road occupancy licence is required and will not be issued for the activities during the hours specified in Conditions E19 and E20; or
- (e) where Sydney Trains (or other rail authority) has advised the Proponent in writing that a Rail Possession is required.

All works that are proposed to be undertaken OOH and are subject to this document must be supported by a clear statement justifying the reason(s) why the work is being proposed to be undertaken OOH. Furthermore, this statement must demonstrate how the works are being scheduled in accordance with the following OOH work period prioritisation list:

1. Standard Hours.
2. Daytime OOH.
3. Evening OOH.
4. Night Time OOH.

Further guidance on the provision of justification is provided in the Out-of-hours application form (refer to Section 4.2.2). Normally, program acceleration is normally not a justifiable reason to undertake works OOH, however in these times of Covid, with health restrictions, program acceleration may be acceptable.

4.1. OOH Work Endorsement and Approval

In accordance with CoA E42 and with the exception of OOH work that is subject to an EPL, all OOH work subject to the planning approval requires approval by either the ER, or in the case of 'high risk' works approval by the Secretary.

In accordance with CoA E42(b) OOH work that is subject to the planning approval and not subject to an EPL only require approval from the ER, or in the case of 'high risk' works approval by the Secretary.

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4.2. OOH Work Approval Process

Figure 1 provides the OOH work approval process for the Sydney Metro - Western Sydney Airport project. This includes a requirement to prepare an application that covers the assessment of noise and vibration impacts, mitigation measures (including community notification requirements) and review and approval for all proposed OOH work.

All OOH work applications that are not subject to an EPL will be submitted to the Place Manager, Sydney Metro Environment Manager and ER for review and comment. These reviews will take into consideration a range of aspects, including reviewer experience and expert understanding, local knowledge of the area, current understanding of sensitive receiver requirements and other relevant documents (for example, the applicable SBOEP Plan detailing predicted impacts to affected businesses, key issues and appropriate mitigation measures for implementation). This review process is further explained in Section 4.2.2.

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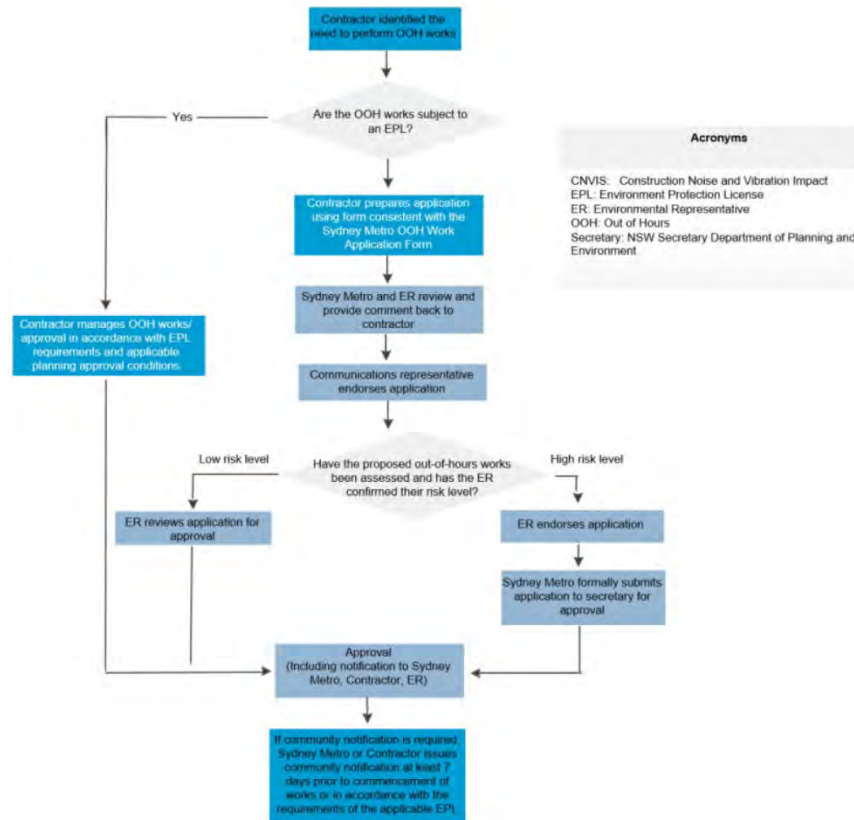


Figure 1: OOH Work Approval Process



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4.2.1. OOH Work subject to an EPL

For OOH work that is subject to an EPL, the EPL conditions will dictate the approval process. As a minimum however, for proposed OOH work that is not approved within the EPL and a license variation is required, the contractor is expected to:

- Prepare an application to the EPA in accordance with the CNVS and EPL requirements;
- Submit the revised application to the EPA for approval and submit the application to the Place Manager, Sydney Metro Environment Manager and the ER for information;
- Notify Sydney Metro and ER upon receiving EPA approval; and
- Ensure any required community notifications have been issued (by either Sydney Metro or the contractor directly) within the timeframe(s) specified and in accordance with any relevant conditions of the EPL.

For individual OOH work applications that are subject to an EPL (including Sydney Trains' EPL), endorsement/approval from the ER is not required. However, Sydney Metro may request the ER's endorsement prior to approval and commencement of the proposed OOH works (at Sydney Metro's discretion).

4.2.2. OOH Work not subject to an EPL

For OOH work that is not subject to an EPL, the approval process is dictated by CoA E42.

Contractors are required to prepare an OOH application using a form consistent with Out-of-hours Work application form. This form requires a noise and vibration impact assessment to be undertaken and contains a consolidated and conservative version of Table 14 from the CNVS. This facilitates simpler consideration of applicable additional mitigation measures to implement. The form also requires demonstration of how a range of additional noise and vibration mitigation measures have been considered for implementation, including community notifications and respite offers. The applicant is also required to indicate its risk level for the proposed OOH work within the application.

Where Third Party permits (e.g. Road Occupancy Licences and/or rail possessions) require works to be undertaken OOH, these works will be exempt from classification as 'high risk' (described under section 4.2.2.3) and will be subject to approval by ER as required under CoA E42 in accordance with the 'Low Risk' approval pathway. Evidence of Third Party approval applicable to the works, specifying the time that the works must be undertaken must be included as part of application.

4.2.2.1. Respite

Respite offers for impacted receivers will be considered in accordance with the CNVS. Respite may be offered in the form of a reduction or absence of noise emissions for a period of time, or by removing the affected receiver from the noise emission point source (e.g. dinner/movie tickets and/or alternative accommodation offers).

The CNVS requires respite offers to be considered for all OOH works that are predicted to generate impacts higher than the applicable exceedance criteria for the applicable OOH period. Proposed OOH works must be coordinated to avoid the same receiver being affected over consecutive nights as much as is reasonable. OOH works must be staggered as much as is reasonable in order to maximise the respite period between OOH works.

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If consideration of respite offers is required, a decision to implement respite offers will be determined on a case-by-case basis and considering, but not limited to, the following factors:

- The predicted maximum exceedance level;
- The predicted exceedance levels and associated duration and timings of those exceedance levels;
- The overall duration of the predicted exceedance levels;
- Surrounding land uses;
- Community feedback provided by Place Managers; and
- Any other OOH works (Sydney Metro or otherwise) that have affected or will affect the same receivers concurrently or within three days of either the start or end of the proposed OOH works.

In the event that respite is determined to be implemented for works that are subject to the planning approval, respite will be implemented to meet the intent of CoA E39 as applicable and so far is reasonable and practicable.

4.2.2.2. Review

Once the contractor has prepared an OOH work application, the application is submitted to the Place Manager, Sydney Metro Environment Manager, and ER for review. Any of the reviewers may provide comments on the application, which need to be adequately addressed by the contractor in a resubmitted application to the satisfaction of the comment provider(s).

4.2.2.3. Communications Endorsement and Default Risk Level Identification

The first endorsement of an OOH application is from the applicable communications representative (from Sydney Metro). This endorsement represents an agreement from the communications representative that the OOH works have been proposed in accordance with the relevant communications requirements and that the community's interests have been addressed as much as is reasonable (including appropriate consideration and implementation of additional mitigation measures, such as respite). This person may also add any comments and/or conditions that need to be complied with.



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Following this person's endorsement, the ER is required to consider the applicant's risk level for the proposed OOH work and determine whether this risk level is appropriate. Once the ER has considered the applicant's risk level, the ER indicates the risk level of the proposed OOH work in its own professional judgement in accordance with CoA E42. This risk level will be categorised as either 'Low risk' or 'High risk'.

As a default risk level, OOH work will be categorised as 'high risk' if all of the following three criteria apply:

- The type and sensitivity of the affected noise sensitive receivers is categorised as either Moderate Impact receivers (e.g. standard residential/typical density) or High Impact receivers (e.g. elderly/high density/persistent complainers/residents experiencing construction noise fatigue); and
- The predicted noise level of the OOH work has a likelihood for potential sleep disturbance (i.e. Rating Background Level + 15 dB or more); and
- The type of and intensity of noise emitted from the OOH work is categorised as High Impact (e.g. prolonged high noise and/or vibration intensive activities), and

These criteria are based on Section 3.1 of the CNVS.

For non-residential receivers, OOH work may be considered as 'high risk' if undertaken during trading hours and in close proximity to their place of business (for example, during Saturday evening trading hours). Since each non-residential receiver has different business needs, it is imperative that the Place Manager and ER discuss each OOH work application to better understand how the proposed OOH work would impact the business.

4.2.2.4. Modification of Default Risk Level

Using the default risk level as a 'starting point', the ER will consider all other relevant factors in order to identify a final risk level. These relevant factors include:

- Those identified in Section 3.1 of the CNVS (noting that the reference to 'impact levels' is different from the 'risk level' with respect to CoA E42(b));
- Those listed in Table 2 of this document;
- Third Party permits; and
- Any other factors the ER considers relevant in their professional opinion.

These factors may cause the default risk level to be modified from either 'high risk' to 'low risk' (or vice-versa), as the ER deems appropriate in their professional opinion.

Once the ER has identified a final risk level for the OOH work application, the ER indicates the risk level on the application (including any risk identification commentary). Depending on the risk level that has been determined, the ER either signs and dates the OOHs application if works are determined to be low risk, or endorses the OOH application for Sydney Metro to formally submit the OOH application to the Planning secretary for approval.



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4.2.2.5. Other Endorsements and Approval

Following the identification of risk level by the ER, the ER endorses the OOH work application and provides any conditions or comments. This endorsement represents an agreement from the ER that the OOH works have been proposed in accordance with the relevant requirements (as applicable to their respective roles) and that additional mitigation measures (including respite) have been appropriately considered and proposed for implementation.

If the ER identifies that the OOH work application is high risk, the application is forwarded to the Secretary for approval. This endorsement represents an agreement from the ER that the OOH works have been proposed in accordance with the relevant requirements and that additional mitigation measures (including respite) have been appropriately considered and proposed for implementation. Following the ER's endorsement, the application is then formally submitted by Sydney Metro to the Secretary for approval in accordance with CoA E42.

For all other applications, the ER indicates their approval (or otherwise) on the application, including any conditions or comments, and forwards directly to Sydney Metro and the contractor.).

4.2.2.6. Approval Notification Arrangements

Community notifications for approved OOH applications (which include low risk OOHW) will be made available to the Secretary, the EPA and the community through the Sydney Metro website within five (5) days and not more than fourteen (14) days of the works commencing. The community will also be issued with hard-copy community notifications.

Table 2: Risk Level Considerations

Risk Level Considerations	
Predicted Noise Exceedance	Degree of predicted noise level exceedance above the Rating Background Level or Noise Management Level as appropriate
Certainty	Rating background levels, noise management levels or predicted noise impacts are not well understood
Past Experience	Nature of works are new, in a new location or have not been undertaken by the contractor on the project already
Negotiated Agreement with Sensitive Receivers	No negotiated agreement with sensitive receivers has been obtained in accordance with CoA E41
Exceeding residential ground-borne noise levels	Addressing potential evening and night-time exceedance levels of 40 and 35 dB (A) respectively
Potential Sleep Disturbance	Likely to generate potential sleep disturbance (Rating Background Level + 15dB or greater)
Non-Residential Receivers	Impacted non-residential receivers operating during the same period of proposed OOH work
Special Events	The timing and location of special events in the area of the proposed OOH work may be scheduled at the same time or immediately before or after the special event (e.g. festivals, public gatherings, etc.)

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Sydney Metro – Integrated Management System (IMS)

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Place Manager Feedback	Feedback from the Place Manager for the area will provide the AA and ER an understanding of the types and requirements of surrounding sensitive receivers.
Sensitive Receivers	Moderate impact sensitive receivers (e.g. standard residential, medium density receivers) or high impact sensitive receivers (e.g. residential home for the elderly, high density unit blocks, persistent complainers, residents deemed to have 'construction noise fatigue')
Timetabling noisy activities	Timetabling works with high noise levels to avoid sensitive times for receptors such as hospitals, community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas
High Impact Works	Prolonged high noise or vibration intensive activities
Other Impacts	Impacts other than noise and vibration impacts are likely to be generated (e.g. lighting, traffic, etc.)

4.3. Community Notifications

Community notifications are used as a mitigation measure for receivers of noise and vibration impacts from OOH work.

Community notifications usually comprise of letterbox-dropped or hand-distributed notification letters to identified stakeholders prior to the commencement of works. Communities are more likely to understand and accept the impacts from noise and vibration if they are provided with honest detailed information and commitments on mitigation measures to be implemented that are adhered to by the project prior to the works commencing.

Community notification requirements are included in the CNVS and outlined in the Community Communications Strategy for the SM-WSA project.

Community notification is an example of an additional mitigation measure that may be considered for implementation in accordance with the CNVS and the additional mitigation measure tables contained in SM-21-00306108 Out-of-hours work application form.

4.3.1. Negotiated Agreements with Sensitive Receivers

A negotiated agreement for particular OOH work may be formed with the potentially affected sensitive receivers in accordance with CoA E41 (c) (iii). These negotiated agreements would be undertaken and documented by either the contractor or Sydney Metro as part of an OOH application.

The negotiated agreement needs to reach a minimum 65% acceptance rate of those sensitive receivers that are contactable. 'Contactable' is defined as having received correspondence (either verbal or written) from receivers within a two week timeframe. The preparation of a DNVIS and the Place Manager will advise of potentially affected sensitive receivers to be contacted.

Upon ER approval of any OOH applications containing negotiated agreements, Sydney Metro will forward the negotiated agreement documentation to the Secretary for information at least one week prior to the OOH work commencing. In the event that community notification is required as a mitigation measure prior to the OOH work commencing, this would be undertaken at the same time (i.e. at least five days and not more than fourteen days prior to the works commencing).



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4.4. Emergency Works

Occasionally there may be a need to undertake emergency works outside of standard work hours. In this situation, the works are permitted to proceed without prior approval, provided that the works were:

- Unforeseen, and
- Required to avoid injury or the loss of life, damage or loss of property or to prevent environmental harm.

Work 'over-runs' (i.e. work activities that have taken longer to complete than expected) are not emergency works, unless the continuation of the activity is required to 'avoid injury or the loss of life, damage or loss of property or to prevent environmental harm'.

Figure 2 outlines the emergency work process.

On becoming aware of the need to undertake emergency works, contractors must notify Sydney Metro, the Planning Secretary, the ER and the EPA (if it is required under an EPL if relevant) of the need to undertake the works. This notification should be in the form of a written email or text message to Sydney Metro and the ER. The requirements for notifying the EPA will be dictated in the conditions of the EPL if relevant.

As a form of mitigation, community notification is to be undertaken within two hours of the commencement of emergency works. These notifications will generally be prepared by the contractor using a small hand-written Sydney Metro template card for distribution to the immediate surrounding community. These cards will include the following details as a minimum:

- Scope;
- Location;
- Hours;
- Duration;
- Types of equipment to be used; and
- Likely impacts.

Within 24 hours of any emergency works commencing, the applicant is to provide a written emergency works report to Sydney Metro. The emergency works report is to include as a minimum:

- Date, time, duration and cause of the emergency;
- Description of emergency works undertaken;
- Mitigation measures implemented to address the impacts of the emergency works; and
- Actions/Measures taken or to be taken to prevent or mitigate recurrence of the emergency. If there are no appropriate actions/measures to be taken, explanation is to be provided as to why.

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The emergency works report will be used by Sydney Metro to determine whether the works qualified as emergency works under the applicable planning approval. If Sydney Metro determines that the works did not qualify as emergency works, the works may be considered an incident and/or non-compliant dependent on the applicable planning approval conditions.

ACRONYMS

EPA: Environment Protection Authority (NSW)
EPL: Environment Protection Licence
ER: Environmental Representative
OOH: Out of Hours

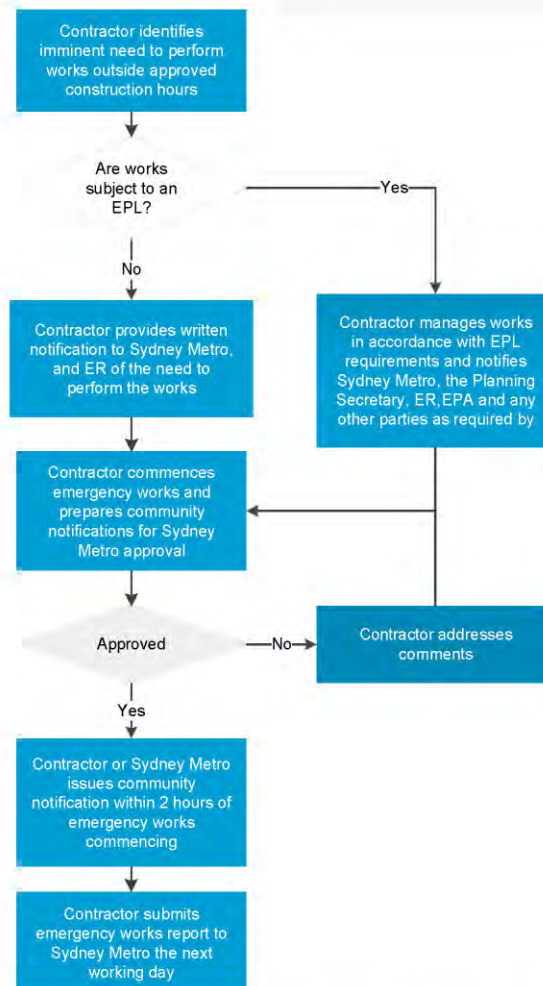


Figure 2: Emergency Works Process

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4.5. Ground-borne noise level exceedance

4.5.1. Ground-borne regenerated noise condition

All reasonable and feasible mitigation measures must be applied when the following residential ground-borne noise levels are exceeded:

- (a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and
- (b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A).

4.5.2. Ground-borne regenerated noise condition assessment

The evening and night-time criteria are only applicable to residential receivers.

The internal noise levels are to be assessed at the centre of the most-affected habitable room. For a limited number of discrete, ongoing ground-borne noise events, such as drilling or rock-hammering, The LAmax noise descriptor using a slow response on the sound level meter may be better than the LAeq noise descriptor (15 min) in describing the noise impacts. The level of mitigation of ground-borne noise would depend on the extent of impacts and also on the scale and duration of works. Any restriction on the days when construction work is allowed would take into account whether the community:

- Has identified times of day when they are more sensitive to noise (for example Sundays or public holidays).
- Is prepared to accept a longer construction duration in exchange for days of respite.

4.5.3. Mitigation measures

Due to the highly variable nature of construction activities and the likelihood of work outside the standard construction hours on Sydney Metro projects, some exceedances of the construction noise and vibration management levels are likely to be unavoidable. Where there is a potential exceedance of the construction noise and vibration management levels, a number of additional measures to mitigate such exceedances – primarily aimed at pro-active engagement with affected sensitive receivers – would be explored and have been included in below. The additional mitigation measures to be applied are outlined in Table 3 below.

Table 3: Additional Mitigation Measures

Measure	Description	Abbreviation
Alternative accommodation	Alternative accommodation options may be provided for residents living in close proximity to construction works that are likely to incur unreasonably high impacts over an extended period of time. Alternative accommodation will be determined on a case-by-case basis.	AA
Monitoring	Where it has been identified that specific construction activities are likely to exceed the relevant noise or vibration goals, noise or vibration monitoring may be conducted at the affected receiver(s) or a nominated representative location (typically the nearest receiver where more than one receiver have been identified). Monitoring can be in the form of either unattended logging or operator attended surveys. The purpose of monitoring is to inform the relevant personnel when the noise or vibration goal has been exceeded so that additional management measures may be implemented.	M
Individual briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Communications representatives from the contractor would visit identified stakeholders at	IB

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Page 33 of 28

SM-21-00306108

Sydney Metro - Western Sydney Airport Out-of-hours Work Protocol

Unclassified

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	least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project.	
Letter box drops	For each Sydney Metro project, a newsletter is produced and distributed to the local community via letterbox drop and the project mailing list. These newsletters provide an overview of current and upcoming works across the project and other topics of interest. The objective is to engage and inform and provide project-specific messages. Advanced warning of potential disruptions (e.g. traffic changes or noisy works) can assist in reducing the impact on the community. Content and newsletter length is determined on a project-by-project basis. Most projects distribute notifications on a monthly basis. Each newsletter is graphically designed within a branded template.	LB
Project specific respite offer	The purpose of a project specific respite offer is to provide residents subjected to lengthy periods of noise or vibration respite from an ongoing impact.	RO
Phone calls and emails	Phone calls and/or emails detailing relevant information would be made to identified/affected stakeholders within 7 days of proposed work. Phone calls and/or emails provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs etc.	PC
Specific notifications	Specific notifications would be letterbox dropped or hand distributed to identified stakeholders no later than 7 days ahead of construction activities that are likely to exceed the noise objectives. This form of communication is used to support periodic notifications, or to advertise unscheduled works.	SN

4.5.4. Applying additional mitigation measures

Prior to the commencement of OOHV a detailed noise impact assessment shall be carried out. Mitigation measures shall be determined based on potential exceedances of the relevant NML.

In circumstances where following application of the standard mitigation measures, the LAeq(15minute) construction noise and vibration levels are still predicted to exceed the Noise Management Level, including ground-borne noise levels, the relevant Additional Mitigation Measures (AMM) are considered to determine any offset strategies for these impacts (Tables 4-6).

The following steps need to be carried out to determine the Additional Mitigation Measures to be implemented:

- Determine the duration (time period) when the work is to be undertaken.
- Determine the level of exceedance above the NML.

From the AMM table, identify the additional mitigation measures to be implemented (abbreviation codes are explained in Table 3).

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Table 4: Additional Mitigation Measures – Airborne Construction Noise

Mitigation Measures		Predicted LAeq (15minute) noise level Above NML			
Time Period		0 to 10 dB	10 to 20 dB	20 to 30 dB	> 30 dB
Standard	Mon-Fri (7.00 am - 6.00 pm)	-	LB	LB, M, SN	LB, M, SN
	Sat (8.00 am - 1.00 pm)				
	Sun/Pub Hol (Nil)				
OOHW (Evening)	Mon-Fri (6.00 pm - 10.00 pm)	LB	LB, M	LB, M, SN, RO	LB, M, SN, IB, PC, RO
	Sat (1.00 pm - 10.00 pm)				
	Sun/Pub Hol (8.00 am - 6.00 pm)				
OOHW (Night)	Mon-Fri (10.00 pm - 7.00 am)	LB	LB, M, SN, RO	LB, M, SN, IB, PC, RO, AA	LB, M, SN, IB, PC, RO, AA
	Sat (10.00 pm - 8.00 am)				
	Sun/Pub Hol (6.00 pm - 7.00 am)				

Table 5: Additional Mitigation Measures – Ground Borne Construction Noise

Mitigation Measures		Predicted LAeq (15minute) noise level Above NML		
Time Period		0 to 10 dB	10 to 20 dB	> 20 dB
Standard	Mon-Fri (7.00 am - 6.00 pm)	No NML for GBN during standard hours, refer to Table 18		
	Sat (8.00 am - 1.00 pm)			
	Sun/Pub Hol (Nil)			
OOHW (Evening)	Mon-Fri (6.00 pm - 10.00 pm)	LB	LB, M, SN	LB, M, SN, IB, PC, RO
	Sat (1.00 pm - 10.00 pm)			
	Sun/Pub Hol (8.00 am - 6.00 pm)			
OOHW (Night)	Mon-Fri (10.00 pm - 7.00 am)	LB, M, SN	LB, M, SN, IB, PC, RO, AA	LB, M, SN, IB, PC, RO, AA
	Sat (10.00 pm - 8.00 am)			
	Sun/Pub Hol (6.00 pm - 7.00 am)			

Table 6: Additional Mitigation Measures – Ground-borne Vibration

Mitigation Measures		Predicted Vibration Levels Exceed Maximum Levels	
Time Period			
Standard	Mon-Fri (7.00 am - 6.00 pm)	LB, M, RO	
	Sat (8.00 am - 1.00 pm)		
	Sun/Pub Hol (Nil)		
OOHW (Evening)	Mon-Fri (6.00 pm - 10.00 pm)	LB, M, IB, PC, RO, SN	
	Sat (1.00 pm - 10.00 pm)		
	Sun/Pub Hol (8.00 am - 6.00 pm)		
OOHW (Night)	Mon-Fri (10.00 pm - 7.00 am)	LB, M, IB, PC, RO, SN, AA	
	Sat (10.00 pm - 8.00 am)		
	Sun/Pub Hol (6.00 pm - 7.00 am)		

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5. Related documents and references

Related documents and references

- [SM-17-00000022 Environment & Sustainability Management Manual](#)
- SM-21-00279320 Construction Environmental Management Framework
https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272116977_
- [SM-21-00279321 Construction Noise and Vibration Standard](#)
<https://icentral.tdocs.transport.nsw.gov.au/otcs/cs.exe/app/nodes/272123288>
- [SM-21-00306108 Out-of-hours Work Application Form](#)
- [Overarching Community Communications Strategy](#)
https://www.sydneymetro.info/sites/default/files/document-library/Sydney_Metro_Overarching_Community_Communication_Strategy.pdf
- [EPA Interim Construction Noise Guideline](#)

6. Superseded documents

Superseded documents

There are no documents superseded as a result of this document.

7. Document history

Version	Date of approval	Notes
1.0	14 October 2021	New document
2.0	8 November 2021	DPIE RFI Review

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5. Appendix A: OOH Work Strategy/Protocol Endorsements and Approval(s)

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Out-of-hours work application form- SM-WSA

This form is to be used for formal review and approval of Out-of-hours (OOH) work as it may affect residential and non-residential receivers. This form can be used in accordance with the Sydney Metro - Western Sydney Airport out-of-hours works protocol. Each OOH application and all applicable appendices must be submitted to Sydney Metro as one PDF file at least 15 business days prior to the commencement of the proposed OOH work.

1. OOH Application

Sydney Metro Project: Western Sydney Airport	
Contract:	
Contractor:	
Application Title: E.g. 'Smith St service relocation works'.	
Application Number: E.g. 1, 2, 3, etc.	
Application Date: Original submission date (resubmission date in parentheses if applicable).	
Relevant Planning Approval:	
Environment Protection Licence (EPL): If subject to an EPL, state title and number.	

2. Proposed OOH Work Details

Description of works, including: <ul style="list-style-type: none"> Work methodologies. List of plant/equipment to be used (worst case scenario). Location Map (and/or Environmental Control Map) attached as Appendix 1, indicating location of works, plant/equipment locations and receivers (including distance to nearest receiver for noisiest plant/equipment). Traffic Management Plan and/or Traffic Control Plan if applicable as Appendix 2. 	
Timing of works: Including proposed dates/times works are planned to be undertaken outside standard hours.*	
Worst-case number of consecutive occasions affecting the same receiver: Refer to Section 4 for definition of 'occasion'.	
Justification: Demonstrate how the proposed OOH work has been scheduled in accordance with the OOH work period prioritisation list.* Program acceleration is generally not accepted as a justification.	

* Unless specified otherwise in project-specific documentation, the prioritisation of work time periods is as follows:

- Standard Hours:** 7am to 6pm weekdays and 8am to 1pm Saturdays.
- Daytime OOH:** 1pm to 6pm Saturdays and 8am to 6pm Sundays and Public Holidays.
- Evening OOH:** 6pm to 10pm every day.
- Night Time OOH:** 10pm to 7am weekday mornings and 9pm to 8am weekend and Public Holiday mornings.



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3. Assessed Noise and Vibration Impacts and Standard Mitigation Measures

Are the proposed works consistent with a prepared Detailed Noise & Vibration Impact Statement (DNVIS)? (Y/N)

If 'N', skip this section and move to Section 4.

State the title of the DNVIS and attach the section(s) describing the noise and vibration impacts of the proposed works as Appendix 3.

Quantitatively summarise the worst-case predicted noise and vibration impacts specific to the proposed OOH work for each OOH period on the nearest receivers and compare these against the respective management levels.

For Night Time OOH Period works, include a review of potential sleep disturbance impacts in accordance with Section 4.3 of the ICNG.

Worst-case predicted noise impact summary:

-
-
-

Worst-case predicted vibration impact summary:

-
-

Potential sleep disturbance summary (for night time OOH periods only):

-

Using Table 4 and Table 5, indicate in Table 6:

- Which Additional Mitigation Measures (AMMs) are applicable for consideration,
- Which of those applicable for consideration are planned to be implemented,
- For AMMs that are applicable for consideration but not being implemented, justify why the AMM is not being implemented.
- For AMMs that are being implemented, provide details on how the AMM is being implemented (e.g. which receivers being offered respite, alternative accommodation, etc.).



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4. Non-Assessed Noise and Vibration Impacts

Skip this section if Section 3 has been completed in full.

A quantitative noise assessment for OOH work is to be carried out in accordance with the *Interim Construction Noise Guideline* (DECC, 2009). This section allows applicants to address these requirements through the following steps:

- 1) Establishing Rating Background Levels (RBLs) and Noise Management Levels (NMLs).
- 2) Predicting the anticipated noise levels using a quantitative noise assessment:
 - a. Works that are not likely to generate high noise impacts for a significant duration may use a preliminary quantitative noise assessment (facilitated within this form). This ensures that all applications, as a minimum, include a preliminary quantitative noise assessment in accordance with the *Interim Construction Noise Guideline* (ICNG).
 - b. Works that are likely to generate high noise impacts for a significant duration may require a detailed quantitative noise assessment (e.g. Construction Noise and Vibration Impact Statement) to be undertaken.
 - c. Works that are likely to generate ground-borne or structure-borne vibration and/or noise require specialist advice and assessment.
- 3) Comparing predicted noise levels against RBLs/NMLs and applying standard mitigation measures as appropriate (i.e. implementing 'all feasible and reasonable' mitigation measures in accordance with the ICNG).
- 4) Considering additional mitigation measures when predicted noise levels exceed RBLs/NMLs.

The need for a detailed quantitative noise and vibration assessment will be considered by Sydney Metro, the contractor and the Environmental Representative (if applicable) collectively when the predicted noise levels are anticipated to:

- Exceed an RBL at a residential receiver or an NML at a non-residential receiver by more than 10dBA, **AND**
- Affect the same receiver on 10 or more consecutive occasions. An occasion is anytime works are carried out:
 - ❖ Between 6pm on a weekday and the start of standard hours the next day, **OR**
 - ❖ Between 1pm on a Saturday and 8am on a Sunday), **OR**
 - ❖ Between 8am on a Sunday or public holiday and the start of standard hours the next day.

A detailed quantitative noise and vibration assessment should generally include:

- Derivation of RBLs for residential receivers and/or derivation of NMLs for non-residential receivers based on noise monitoring at representative locations and local sensitivities.
- Detailed noise predictions for daytime, evening and night time OOH periods (as applicable) in accordance with Section 4.5 of the ICNG (including an outline of timing, duration and predicted noise levels for each OOH period).
- For Night Time OOH Period works, a review of potential sleep disturbance impacts in accordance with Section 4.3 of the ICNG.
- Detailed predictions of vibration levels for sensitive receivers.

Please complete the following Steps 1 to 4.

Step 1: RBLs/NMLs	If RBLs for residential receivers or NMLs for non-residential receivers have already been established (e.g. in an Environmental Impact Statement, Review of Environmental Factors, detailed quantitative noise assessment or Construction Noise and Vibration Impact Statement for other work activities), enter into Table 3 and attach the supporting evidence as Appendix 3. If no RBLs/NMLs have been established, use Table 1 to estimate and enter into Table 3.
Step 2: Predicted Anticipated Noise Levels	If predicted anticipated noise levels have already been established (e.g. in an Environmental Impact Statement, Review of Environmental Factors, detailed quantitative noise assessment), enter the predicted anticipated noise levels into Table 3 and attach the supporting evidence as Appendix 3. If predicted anticipated noise levels have not already been established, use Table 2 to estimate anticipated noise aspects for the noisiest plant/equipment and enter into Table 3. In Table 3, use these values to calculate the anticipated predicted noise levels.
Step 3: Exceedances and Mitigation Measures	Compare the anticipated predicted noise levels to the applicable RBLs/NMLs, calculate the exceedances and enter into Table 3. In Section 5, provide a description of the standard mitigation measures that are planned to be implemented in order to mitigate the noise impacts (and vibration impacts if relevant) as much as 'feasible and reasonable' in accordance with the ICNG.
Step 4: Consideration of Additional Mitigation Measures	Use Table 4 and the exceedances in Table 3 to determine the applicable Additional Mitigation Measures for consideration. Use Table 6 to indicate which of these measures are applicable for consideration, which will be implemented and provide justification/details accordingly.

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5. Standard Mitigation Measures	
Outline the standard noise mitigation measures that will be implemented during the proposed OOH work: I.e. Implementation of all 'feasible and reasonable' mitigation measures in accordance with the ICNG:	<ul style="list-style-type: none">
Outline the standard vibration mitigation measures that will be implemented during the proposed OOH work: I.e. Implementation of all 'feasible and reasonable' mitigation measures in accordance with the ICNG:	<ul style="list-style-type: none">

Table 1: Noise RBLs and NMLs

Skip this section RBLs and NMLs have already been established in other documentation.			
Sensitive Receiver Category	Estimated RBLs (dBA)		
Residential	Daytime OOH	Evening OOH	Night Time OOH
Urban (e.g. city hubs, near busy roads, near industrial activity)	55	50	45
Suburban	45	40	35
Quiet, rural or isolated	40	35	30
Non-Residential	ICNG NMLs (dBA)		
Industrial facilities	75 (only applicable when in use)		
Offices or retail	70 (only applicable when in use)		
Health and educational facilities	55 (only applicable when in use)		

Table 2: Predicted Noise Level Aspects

Skip this section if predicted noise levels have already been established in other documentation.		
Noise Aspect	Select the most applicable value for each noise aspect below and enter into Table 3.	dBA
1. Plant/Equipment Noise Level at 10m Including non-continuous use reduction (-5dBA) and annoying activity penalty (+5dBA) for as per ICNG (refer to ICNG Appendix B for predicted noise level data) <u>Underline indicates vibratory generating plant/equipment</u>	<u>Impact sheet piling rig</u>	100
	<u>Hand-held tamper, excavator with hammer, rock-breaker, driven/vibratory piling, concrete saw, diamond saw, air track drill, large dozer, hand-held rail grinder</u>	95
	<u>Jackhammer, rock crusher, angle grinder, pneumatic hammer, medium dozer, tracked loader, impact wrench</u>	90
	<u>Mainline tamper, ballast regulator, dynamic track stabiliser, vibratory roller, mainline rail grinder, ballast train (pour/fill ballast), chainsaw, tub grinder/large mulcher, scraper, grader, super-sucker/vacuum truck, large backhoe/wheeled front-end loader, bored piling, pavement profiler, fixed crane, tracked excavator</u>	85
	Small bulldozer, small excavator, tower crane, truck-mounted crane, forklift, bobcat, skid-steer front-end loader, road truck/truck and dog, dump truck, concrete truck/pump/mixer, compressor, non-vibratory/large pad foot roller, whacker packer/compactor, water cart, pavement laying machine, asphalt truck and sprayer, line marking truck, standard penetration testing, welder, pin puller	80
	Concrete vibrator, cherry-picker scissor lift/elevated work platform/Franca crane, small backhoe, front end loader, fence post driver, electric drill rig, hand held rattle gun, generator (diesel/petrol), spreader	75
	Lighting tower, medium-rigid truck/semi-trailer, welding equipment, small front end loader	70
	Light vehicle, hand-tools (no impact), small cement mixer, attenuated generator (inside housing)	65

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2. Multiple Plant	More than one of the noisiest plant being used simultaneously at roughly the same location	+5
3. Local Screening	Existing screening between site and receiver (buildings, cuttings, canopies, etc.)	-5
	Temporary screening to be implemented near work site	-10
	Acoustic shed or enclosure	-25
4. Distance Attenuation	< 10 metres	0
	10 to 20 metres	-5
	20 to 35 metres	-10
	35 to 60 metres	-15
	60 to 100 metres	-20
	100 to 180 metres	-25
	180 to 350 metres	-30
	350 to 1,000 metres	-40

Table 3: Predicted Noise Levels and Exceedances of RBLs and/or NMLs (dBA)

Skip this section if Section 3 has been completed in full.										
Period (only complete as applicable for each period)	Noisiest Plant/Equipment (state the noisiest plant/equipment to be used during each applicable OOH period)	Receiver Type (state 'Res' or 'Non-Res' as applicable for closest receiver to noisiest plant/equipment)	Enter the most applicable values from Table 2, then add to determine the Predicted Noise Level				Predicted Noise Level (1 + 2 + 3 + 4)	RBL (for Res)	NML (for Non-Res)	Exceedance (Predicted Noise Level minus RBL for Res or NML for Non-Res)
			1. Plant/Equipment Noise Level	2. Multiple Plant/Equipment	3. Local Screening	4. Distance Attenuation				
Daytime OOH *										
Evening OOH *										
Night Time OOH *										

* Refer to OOH period timings under Section 2 of this form.

Table 4: Additional Mitigation Measures (AMM) requiring Consideration for Implementation

OOH Period	AMMs that must be considered for Implementation (apply the exceedances from Table 3 to the two OOH period categories below as applicable)			
	0 to 10 dBA Exceedance	>10 to 20 dBA Exceedance	>20 to 30 dBA Exceedance	>30 dBA Exceedance
Daytime OOH Period	-	LB	M, LB	M, IB, LB, PC, RO, SN
Evening and Night Time OOH Periods	-	M, LB	M, IB, LB, PC, SN, RO	M, IB, LB, PC, SN, RO, AA*

* AA is only applicable to Night Time OOH periods.



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Table 5: List of Additional Mitigation Measures (AMM)

AMM Abbrev	AMM	AMM Descriptions and Guidance
LB	Letterbox-drop (generic to the project)	A newsletter is generally produced and distributed to the local community via letterbox-drop and the project mailing list. These newsletters provide an overview of current and upcoming works across the project and other topics of interest. The objective is to engage, inform and provide project-specific messages. The geographic extent of letterbox-drops is generally centred on the immediate surrounding community within 200 metres from the works site.
M	Monitoring	Where it has been identified that specific construction activities are likely to exceed the relevant Rating Background Levels (RBL) and/or Noise Management Levels (NMLs), monitoring may be conducted at the affected receiver(s) or a nominated representative location (typically the nearest receiver where more than one receiver have been identified). Monitoring can be in the form of either unattended logging or operator attended surveys. The purpose of monitoring is to inform the relevant personnel when the RBL/NML has been exceeded so that additional management measures may be implemented.
IB	Individual Briefings	Individual briefings are used to inform stakeholders about the impacts of high noise activities and mitigation measures that will be implemented. Communications representatives would visit identified stakeholders at least 48 hours ahead of potentially disturbing construction activities. Individual briefings provide affected stakeholders with personalised contact and tailored advice, with the opportunity to comment on the project.
PC	Phone calls (and/or emails)	Phone calls and/or emails (with specific notifications attached) detailing relevant information would be made to identified/affected stakeholders within seven days of proposed work. The objective of the phone calls and/or emails is to support letterbox-drop and specific notifications. Phone calls and/or emails provide affected stakeholders with personalised contact and tailored advice, with the opportunity to provide comments on the proposed work and specific needs.
SN	Specific Notifications (specific to the OOH work)	Specific notifications are letterbox-dropped to identified stakeholders no later than 7 days prior to out of hour construction activities commencing that are likely to exceed the RBLs/NMLs. Specific notifications may be produced by Sydney Trains or by Sydney Metro (or on behalf of Sydney Metro by a contractor as approved by Sydney Metro): <ul style="list-style-type: none"> Sydney Trains specific notifications cover all works being undertaken by various parties (including Sydney Metro) during designated rail possession periods. These specific notifications are delivered 14 days prior to works commencing and are delivered to all properties located within 250m of the proposed works. Sydney Metro specific notifications focus on proposed Sydney Metro works being undertaken outside of designated rail possession periods and are only produced in the absence of any Sydney Trains notifications covering the proposed works. These notifications are delivered 7 days prior to works commencing and are delivered to all properties located within 100m of day works and within 200m of night works. All notifications are emailed to all registered stakeholders on site-specific email distribution lists.
RO	Respite Offer	The purpose of a project specific respite offer is to provide residents subjected to lengthy periods of noise and/or vibration impacts respite during OOH periods. Respite offers are offers made to affected receivers to provide a period of either no or limited noise impacts. This can be in the form of stopping or limiting works onsite or offering affected receivers dinner/movie vouchers. The first priority is to implement a period of no or limited noise impacts. If this cannot be achieved, dinner/movie vouchers may be offered on a case-by-case basis.
AA	Alternative Accommodation (residential only)	Alternative accommodation options may be provided for residents living in close proximity to construction works that are likely to incur unreasonably high impacts during night time OOH periods. Alternative accommodation will be considered on a case-by-case basis.

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Table 6: Consideration of Additional Mitigation Measures (AMM)

Additional Mitigation Measures	Applicable for Consideration? Y/N (refer to Table 4)	To be Implemented? Y/N	Justification/Details For AMMs that are applicable for consideration but not being implemented, justify why the AMM is not being implemented. For AMMs that are being implemented, provide details on how the AMM is being implemented (e.g. which receivers being offered RO, AA, etc.).
LB			
M			
IB			
PC			
SN			
RO *			
AA			

*If RO is being implemented, include how community consultation influenced the manner in which RO is being implemented.

6. Consideration Against Relevant Vibration Criteria

Using Table 2, indicate whether any vibratory plant/equipment is planned to be used for the proposed works (Y/N)		
If 'N', skip this section and move to Section 7.		
'People' Criterion	Are the proposed works anticipated to have any perceptible sleep disturbance impacts? (Y/N)	
'Structures' Criterion	Are the proposed works anticipated to generate greater than 7.5mm/s vibration impacts on surrounding structures (generally within 25 metres of works)? (Y/N)	
'Sensitive Equipment' Criterion	Are the proposed works anticipated to impact sensitive equipment located in surrounding non-residential receivers? (Y/N)	
If 'Y' is answered to ANY of the above criteria AND the impacts affect the same receiver for more than one consecutive occasion (refer to Section 4 for 'occasion' definition), the need to prepare a detailed quantitative assessment will be considered collectively by Sydney Metro, the contractor and the Environmental Representative (if applicable).		

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7. Cumulative Impacts

Document the relevant details of any other OOH work (Sydney Metro or otherwise) that will impact the same receivers as those being impacted by these proposed works either concurrently or within 3 days of the start or end of these proposed works.

If other works have been identified in the row above, how have the proposed works been coordinated to ensure appropriate respite is provided?

8. Community Consultation

What community consultation has been undertaken already?

What community consultation is planned to be undertaken?

If drafted already, attach applicable Community Notification as Appendix 4.

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9. Contractor's Signature	
Contractor's Identification of Risk Level: If subject to Western Sydney Airport Sydney Metro planning approval and not subject to an EPL, provide Contractor's Identification of Risk Level (refer to the <i>Western Sydney Airport Sydney Metro Protocol</i> for guidance).	Circle: LOW or HIGH
Contractor's Signature:	
Name:	
Title:	
Contact Number:	
Date:	

10. Contractor's Contact Details		
Contractor Personnel	Name	Mobile
Manager Environment:		
Manager Communications:		
Contractor's Representative:		
Contractor's 24hr contact person:		

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Planning Approval Determination Page

	Step 1 – Endorsement from Sydney Metro Director Project Communications or Contractor's Communications Manager	Step 2 – Risk Identification/Endorsement from ER under the Planning Approval	Step 3 – If works are under Sydney Trains EPL, approval from Sydney Metro Director of Planning, Environment and Sustainability. If works are not under an EPL, approval from either the ER or the Secretary of the NSW Department of Planning & Environment
Risk Level:	N/A	If not subject to an EPL, circle Risk Level as: LOW or HIGH If works are HIGH Risk Level Sydney Metro submits application to the Secretary of the NSW Department of Planning & Environment for approval.	N/A
Signature:	Approved Road Occupancy Licence/Road Opening Permit (if applicable) must be sighted prior to endorsement.		
Name:			
Role:			
Date:			
Comments: (including ER Risk Level comments if applicable)			
Conditions:			

Sydney Metro 2019

SM-21-00306470

Unclassified

Page 37 of 41

Out-of-hours work application form

Unclassified

Sydney Metro – Integrated Management System (IMS)

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Generic Determination Page (i.e. not subject to SM-WSA planning approvals)

	Step 1 – Sydney Metro Director of Project Communications	Step 2 – Environmental Representative (may be optional depending on planning approval or contract requirements)	Step 3 – Sydney Metro Director of Planning, Environment & Sustainability (only required if not approved already)
Action:	Endorsement	Circle: Endorsement or Approval	Approval
Signature:	Approved Road Occupancy Licence/Road Opening Permit (if applicable) must be sighted prior to endorsement.		
Name:			
Date:			
Comments:			
Conditions:			

Sydney Metro 2019

SM-21-00306470

Unclassified

Page 38 of 41

Out-of-hours work application form

Unclassified

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Appendix 1: Location Map (and/or Environmental Control Map)

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Appendix 2: Traffic Management Plan and/or Traffic Control Plan (if applicable)



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**Appendix 3: Supporting Evidence for Noise & Vibration
Impacts** (e.g. Construction Noise & Vibration Impact
Statement, noise assessment, etc.)
(if applicable)

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Appendix 4: Community Notification

(if applicable and already drafted)

APPENDIX F STOCKPILE MANAGEMENT PROTOCOL

Stockpile Management Protocol

Sydney Metro Enabling Works, Badgerys Creek Roadworks

April 2021

Abergeldie Contractors Pty Ltd

5 George Young St
Regents Park NSW 2143
(P) 02 8717 7777
(F) 02 8717 7778
ABN# 47 004 533 519

Stockpile Management Protocol

1. Distribution

There are no restrictions on the distribution / circulation of the Stockpile Management Protocol within Abergeldie or the Sydney Metro Enabling Works, Badgerys Creek Roadworks Project.

2. Introduction

This Stockpile Management Protocol has been prepared to ensure that stockpiles are managed using appropriate mitigation measures.

3. Purpose

This protocol outlines the locational criteria used to guide the placement of temporary stockpiles and provides both standard and site-specific mitigation measures to be implemented to minimise impacts on the environment. Stockpile sites may typically be required to store material including, but not limited to the temporary storage of:

- Excavated materials to be used in fill areas and for other design features
- ASS subject to treatment prior to reuse or disposal (not currently identified on this Project)
- Excavated material unsuitable for reuse on the project
- Excess concrete, pavement, rock, soils and aggregate stored for potential reuse in the Project or prior to removal from site
- Imported sands, soils, aggregates, recycled concrete products, topsoils, rock and engineered fills for use on the Project
- Topsoil, mulch, timber for landscaping and revegetation works

Temporary stockpiles would be removed for re-use within the Project or disposed of off-site. Stockpiles may also be permanent in nature in accordance with the design of the Project. These stockpiles will be managed in accordance with the mitigative measures in this plan.

Potentially contaminated materials will be managed in accordance with the *Unexpected Finds Soil Contamination and Asbestos Procedure* (Appendix G of the Construction Environment Management Plan).

The process for monitoring and managing spoil including details of how excavated material would be managed on-site and during offsite transport is detailed within the Waste Management measures detailed in the CEMP.

Where material is taken off-site, appropriate approvals will be confirmed and/or obtained under the *EP&A Act 1979* and *POEO Act 1997*.

4. Induction / Training

All construction personnel involved in planning or managing stockpiles will be trained in the requirements of the Procedure. Training will also include inductions, toolbox talks, pre-starts and targeted training as required.

5. Scope

This protocol is relevant to the planning, placement and management of all stockpiles on or related to the Sydney Metro Enabling Works, Badgerys Creek Roadworks Project.

6. Stockpile Location Criteria

Stockpile sites on the Project shall be assessed against the following criteria:

- Located five metres away from areas of concentrated water flow
- Located at least 10 metres away from a 1st Order Watercourse
- Have easy access via vehicle by internal haul road or external road network
- Located on relatively level land
- Not unreasonably affect the land use of adjacent properties
- Located so that the appropriate erosion and sediment control measures can be installed and will operate effectively
- Located on land above the 20 ARI flood level unless a contingency plan to manage flooding is prepared and implemented
- Not within a tree protection zone
- On land that does not require the removal of EEC
- On land that does not require the removal of roosting habitat for listed threatened fauna species
- Provides sufficient area for the storage of raw materials, to minimise to the greatest extent practical, the number of deliveries required outside of construction hours
- Positioned in areas where minimal noise and vibration impacts are anticipated at the nearest sensitive receiver
- Located within the approved Project boundary

7. Protocol

Prior to the establishment of any stockpile on site as part of the project, ensure that:

1. The location of the stockpile is considered against the site selection criteria outlined in Section 6 of this Protocol.
2. Site specific mitigation measure, where they are necessary to further reduce impacts, are identified and detailed
3. Mitigation measures for each stockpile site include as a minimum:
 - a. Materials will not be stockpiled within the tree protection zone (in accordance with AS 4970) of trees or native vegetation to be retained or within 5m of any trees. Trees are not to be flooded or cause soils to be waterlogged as a result of stockpile development.
 - b. An Erosion and Sediment Control Plan (ESCP) will be prepared and implemented in advance of stockpiling. ESCPs will be updated as required.
 - c. The ESCPs will detail soil and water management measures consistent with *Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004)* to minimise soil erosion and the discharge of sediment and other pollutants to land and / or waters. This may include:
 - i. Erosion and sedimentation controls will be erected between the site and any drainage lines or down-slop areas
 - ii. A diversion bund will be installed on the uphill side of the stockpile to divert off-site water around the site.
 - iii. Erosion and sediment control structures shall remain installed and maintained until sufficient permanent stabilisation is achieved as per the Blue Book
 - iv. Separating offsite water (clean) from onsite run-off from construction area that is turbid (dirty).
 - v. Controlling run-off during the construction of stockpiles (e.g. fill shaping and the construction of temporary dykes and batter drains).
 - d. Controls for stabilising stockpiles will be installed around and applied to all stockpiles that are in place for more than 10 days in order to prevent wind and water erosion. These controls will be in accordance with the Soil and Surface

Water Management Plan (Appendix C to the CEMP) and may include stabilisation with cover crop or similar appropriate controls.

- e. When stockpiling contaminated soil, erosion and sediment controls, including run-on/run-off control devices, will be maintained and functional at all times to prevent erosion. Sediment control measures will be used to preserve stockpiled soils to minimise siltation of any land surface and water or blockage of any existing drainage channels.
- f. All staff involved in the excavation works shall immediately report any visual or olfactory (smells/odours) evidence of contamination to the Site Supervisor. The Site Supervisor will consult with the ESAM when evidence of contaminated material is reported.
- g. The Contractor will maintain daily records of where excavation of contaminated or suspected material has occurred, the type and volume of any contaminated material excavated and where that material has been stored or stockpiled.
- h. Stockpiles will be monitored for odours on a regular basis during inspections. If nuisance odours are generated and are impacting sensitive receivers, odour control measures will be implemented
- i. Weed management measures will be undertaken progressively including weed spraying or covering the stockpile to prevent growth as appropriate. Topsoil that is not contaminated by weeds will be located separately to other stockpiles
- j. Dust management measures (including for vehicle movements associated with stockpiling activities) will be implemented in accordance with the Construction Environment Management Plan Section 8.9
- k. Temporary stockpile heights will be generally no greater than 4 meters with slopes no steeper than 2:1. Permanent stockpile heights will be generally no greater than 2 meters with slopes no steeper than 2:1
- l. Mulch stockpiles must be monitored and turned over to avoid spontaneous combustion
- m. Mulch stockpiles in high tannin generating vegetation should be:
 - i. Located 50 metres from water ways for mulch stockpiles that will be in place for duration of more than one month
 - ii. Located 20 metres from water ways for mulch stockpiles that will be in place for duration of less than one month
 - iii. Located on elevated ground where possible
 - iv. Be fully bunded with earth bund to ensure up-gradient water is prevented from entering the stockpile site, and to capture tannin impacted water. Bunds are to be impervious and 300mm high at a minimum. All bunded stockpiles that are in place for a period longer than one month must include a lined discharge point for overflow in extreme rainfall events
- n. Topsoil stockpile must:
 - i. Be free from subsoil, other excavated materials, contaminated materials, refuse, clay lumps and stones, timber or other rubbish
 - ii. Be trimmed to a regular shape to facilitate measuring and batter slopes not steeper than 2:1
 - iii. Have their batters track rolled or stabilised by other means
 - iv. Be seeded with a sterile cover crop
- o. Following completion of the Project works, carry out restoration of the stockpile sites.

8. Compliance

Compliance with this Stockpile Management Protocol will be tracked through the weekly environmental inspection, as per the Construction Environmental Management Plan (CEMP)

Identified non-compliances will be reported to the Environmental Manager and the appropriate management measures will be put in place to ensure ongoing compliance.

APPENDIX G UNEXPECTED FINDS SOIL CONTAMINATION AND ASBESTOS PROCEDURE

Unexpected Finds, Soil Contamination and Asbestos Procedure

Sydney Metro Enabling Works, Badgerys Creek Roadworks

April 2021

Abergeldie Contractors Pty Ltd

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Unexpected Finds, Soil Contamination and Asbestos Procedure

1. Distribution

There are no restrictions on the distribution / circulation of the Unexpected Finds, Soil Contamination and Asbestos Procedure within Abergeldie or the Sydney Metro Enabling Works – Badgerys Creek Roadworks Project

2. Purpose

This procedure has been prepared to provide a method for managing unexpected soil contamination and asbestos that is discovered during pre-construction and construction phases.

3. Definitions and Abbreviations

An unexpected soil contamination or asbestos find is:

- Any unanticipated discovery of an actual or potential area of contamination which is likely to comprise of any buried material which is not a typical soil material i.e. fill, soil, rock
- A find that has not been previously identified or assessed
- Likely to be associated with poor waste disposal and / construction activities undertaken historically at the site

There could be many kinds of unexpected materials that could be encountered during the works including (but not limited to):

- Buried wastes
- Buried containers/drums
- Discoloured and odorous soils and groundwater/seepage
- Underground tanks
- Asbestos

4. Scope

Even with early investigations unexpected finds may still occur during works. When this happens, this procedure must be followed. This procedure provides direction on when to stop work, where to seek technical advice, how to notify the regulator if required, and when works can recommence.

This procedure applies to the discovery of any unexpected soil contamination or asbestos where the find is not anticipated in any project specific document related to soil contamination.

This procedure must be followed by all staff, contractors, subcontractors or any person undertaking works for the Sydney Metro Enabling Works – Badgerys Creek Roadworks project. It includes reference to some of the relevant legislative and regulatory requirements but is not intended to replace them.

Unexpected finds will be managed in parallel with Section 14.2 of the Work Health and Safety Management Plan (N235), Abergeldie, November 2020.

5. Legislative Requirements

The following table identifies some of the relevant legislation / regulations for the management of contaminated materials on site.

Legislation	Key requirements
<i>Contaminated Land Management Act 1997</i>	<p>The Act provides a regime for investigating and, where appropriate, remediating land affected by contamination, which represents a significant risk of harm to human health or the environment.</p> <p>Under this act EPA has the power to:</p> <ul style="list-style-type: none"> • Declare an investigation site and order an investigation • Declare a remediation site and order remediation to take place • Agree to a voluntary proposal to investigate or remediate a site
<i>Contaminated Land Management Regulation 2013</i>	The regulations clarify, the recovery of administrative costs, accreditation of site auditors and penalty notices
<i>Protection of the Environment Operations Act 1997</i>	This Act provides for pollution events, scheduled activities and UPSS regulation. Creates rules/licences for protection of the public and environment during remediation
<i>Environmental Planning and Assessment Act 1979</i>	This Acts provides legislation for contaminated sites where remedial actions can wait for development control processes.
<i>Waste Avoidance and Resource Recovery Act 2001</i>	Establishes the waste hierarchy. Promotes waste avoidance and resource recovery by developing waste avoidance and resource recovery strategies
<i>Water Management Act 2000</i>	The objective of this Act is to provide for the sustainable and integrated management of the water sources of the State for the benefit of both present and future generations
<i>National Environment Protection (Assessment of Contaminated Sites Measure 1999 (Amended 2013)</i>	Sets the national frameworks for the assessment of contaminated sites

6. Induction / Training

All construction personnel are to be inducted into the identification of potential contaminated soil / material or asbestos along with this procedure during the project inductions, toolbox talks and pre-start briefs.

7. Identification of Contamination

When unexpected contamination of the site is encountered, the find will be documented in accordance with the Incident reporting procedures.

Indicators of contamination in soils include:

- Discolouration of soils, including staining and horizontal layers of discolouration
- Odours from soils
- Oily sheen on water leaving soils

- Foreign objects / evidence of landfilling

Contamination is unexpected when it is discovered on site outside of those areas that have previously been assessed to be contaminated, either during preliminary investigations, or the detailed investigations required to be completed by Abergeldie prior to works commencing.

8. Managing Unexpected Finds

In the event that an unexpected find is encountered on site, the steps detailed below must be followed.

Step	Task	Responsibility
1	STOP WORK	
1.1	<ul style="list-style-type: none"> • Stop all work in the immediate area of the potential soil contamination or asbestos find • Notify the Project Manager. • Notify TfNSW of suspected or potentially contaminated material. 	<ul style="list-style-type: none"> • Supervisor
1.2	<ul style="list-style-type: none"> • Establish a 'No-Go Zone' around the area • Use high visibility fencing where practical • No work is to be undertaken within this zone until further investigations are completed and, if require, appropriate approvals are obtained • Inform all site personnel about the 'No-Go Zone' • A suitable person must assess the potential risk to human health and the environment posed by the unexpected find and assess if evacuation or emergency services need to be contacted 	<ul style="list-style-type: none"> • Supervisor • Project Manager
2	ENGAGE A CONTAMINATION / ASBESTOS SPECIALIST	
2.1	<ul style="list-style-type: none"> • Engage the project Contamination or Asbestos specialist (depending on suspected material) • Provide as much information as possible on the potential soil contamination or asbestos find • Should a suspected gas / odour be detected (in particular on the Western Boundary of the Project, adjacent the historic landfill), engage Hibbs (project contamination consultant) to determine if LEL (Lower Explosive Limits monitor) monitoring is required • Inform the Sydney Metro ESAM that suspected soil contamination or asbestos has been discovered on site 	<ul style="list-style-type: none"> • ESAM • Supervisor
2.2	<ul style="list-style-type: none"> • Where there is no project Contamination or Asbestos Specialist engaged for the works, engage a suitably qualified consultant to assess the unexpected find 	<ul style="list-style-type: none"> • ESAM
3	ARRANGE SITE ACCESS	
3.1	<ul style="list-style-type: none"> • Arrange site access for the Contamination / Asbestos Specialist to inspect the area of concern as soon as practicable. • In most cases a site inspection is required to conduct a preliminary assessment 	<ul style="list-style-type: none"> • Supervisor • ESAM
4	UNDERTAKE ASSESSMENT	
4.1	<ul style="list-style-type: none"> • A Contamination / Asbestos Specialist should undertake an assessment to determine any further actions required e.g. sampling and / or validation of material, potential for remediation and / or management 	<ul style="list-style-type: none"> • Contamination / Asbestos Specialist

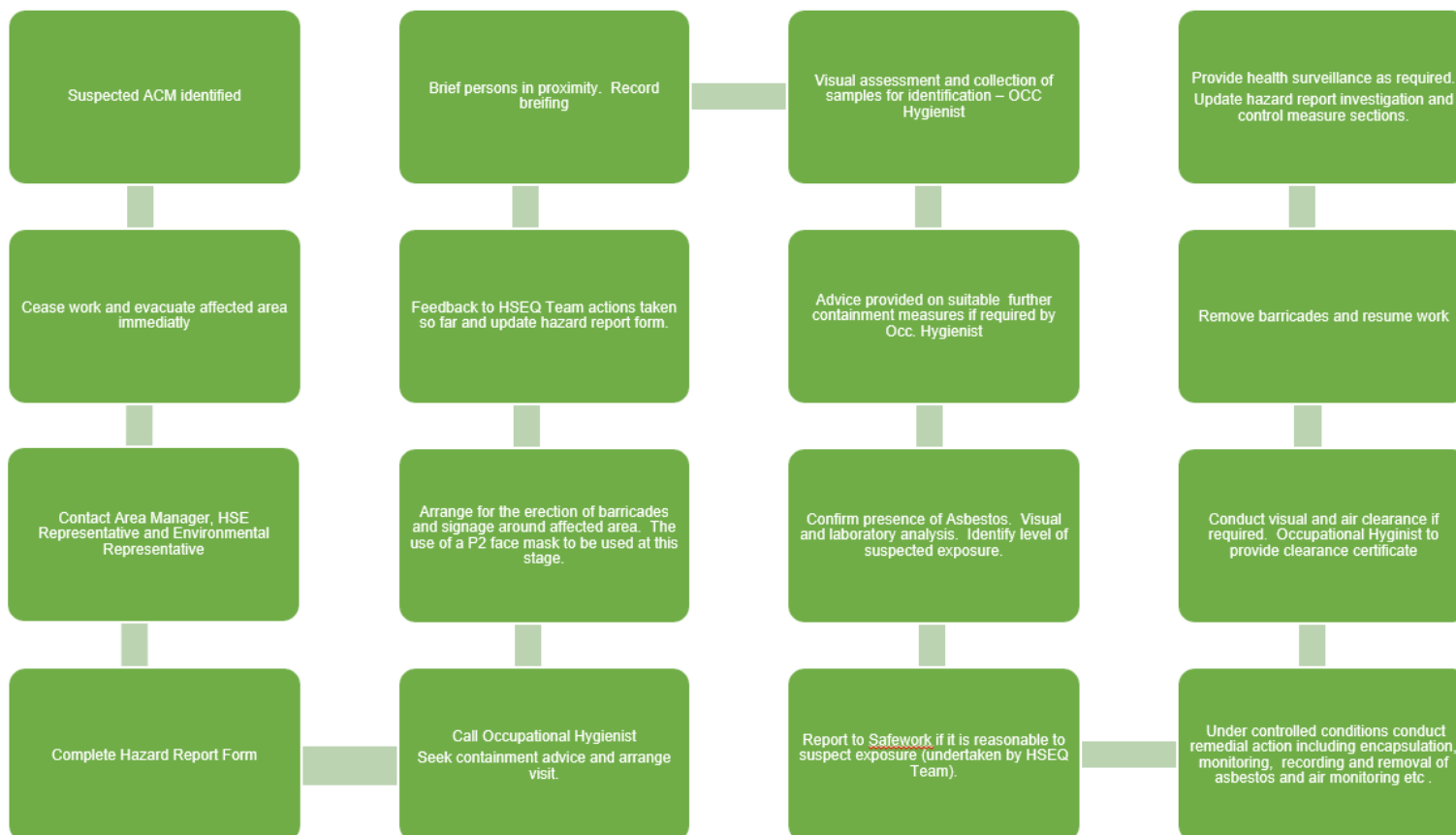
Step	Task	Responsibility
4.2	<ul style="list-style-type: none"> A Contamination / Asbestos Specialist to provide advice as follows: <ul style="list-style-type: none"> Preliminary assessment of the find and need for immediate management controls (if any) What further assessment and / or remediation works are required and how such works are to be undertaken in accordance with contaminated site regulations and guidelines Preparation of a remedial action plan for large scale contamination or specification for smaller or minor volumes of material (if necessary) Remediation works required (where applicable) Validation works required following remediation works (if applicable) Report is to be submitted to TfNSW as per G36 4.2.3.1. 	<ul style="list-style-type: none"> Contamination / Asbestos Specialist ESAM
4.3	<ul style="list-style-type: none"> Air monitoring requirements are to be advised by an Environmental Consultant 	<ul style="list-style-type: none"> Contamination / Asbestos Specialist
4.4	<ul style="list-style-type: none"> If it is deemed safe to do so, the Contamination / Asbestos Specialist will provide clearance for works to proceed in the affected area. If it is not considered to be safe, works must remain on hold until appropriate assessment, remediation and / validation measures have been actioned 	<ul style="list-style-type: none"> Contamination / Asbestos Specialist
5	IMPLEMENT THE APPROVED MANAGEMENT AND/OR REMEDIATION PLAN	
5.1	<p>Works are not to recommence in the affected area until appropriate advice has been obtained from the Contamination / Asbestos Specialist and they have provided clearance. Excavation will not recommence until the extent of the contamination has been assessed and, if necessary, a remedial action plan (RAP) has been prepared.</p> <p>If RAP is required it must be submitted to TfNSW for review prior to removal.</p>	<ul style="list-style-type: none"> Contamination / Asbestos Specialist ESAM
5.2	<ul style="list-style-type: none"> Excavated material from remedial activities will be separated from other materials and stockpiled for assessment. Sampling of the materials will be undertaken in accordance with the relevant guidelines. Sample will be analysed for a range of analytes as required for beneficial reuse or offsite disposal 	<ul style="list-style-type: none"> Supervisor ESAM
6	RECORDING OF CONTAMINATION	
6.1	<ul style="list-style-type: none"> A waste tracking system recording the volume of material, waste classification / beneficial reuse status, removal documentation and truck and receiving landfill facility details must be recorded to ensure all waste is accounted for and disposed of appropriately in accordance with NSW EPA requirements 	<ul style="list-style-type: none"> Supervisor ESAM
6.2	<ul style="list-style-type: none"> Any unexpected finds must be documented in the Unexpected Finds Register, and records of volumes and types of materials identified removed from the site must be kept on file 	<ul style="list-style-type: none"> Supervisor ESAM
6.3	<ul style="list-style-type: none"> Keep a record including exact location / GPS coordinates of the find 	<ul style="list-style-type: none"> Supervisor ESAM
6.4	<p>All asbestos waste and waste tyres must be tracked use the EPA NSW WasteLocate online application. When the following thresholds are exceeded:</p> <ul style="list-style-type: none"> consigning, transporting or accepting tyres with a total weight of more 	<ul style="list-style-type: none">



Step	Task	Responsibility
	<p>than 200 kilograms, or 20 or more tyres, in any single load</p> <ul style="list-style-type: none">• consigning, transporting or accepting more than 100 kilograms of asbestos waste, or more than 10 square metres of waste asbestos sheeting, in any single load	

In the event at Unexpected Asbestos Containing Material is found on site, the following flow chart will be followed in accordance with Section 14.2 of the Work Health and Safety Management Plan (N235), Abergeldie, November 2020.

Unexpected Asbestos Containing Material (ACM) Findings - Flowchart



9. Responsibilities

Role	Responsibility or role under this guidance
Contractor / Supervisor	<ul style="list-style-type: none"> Stop work immediately when an unexpected soil contamination or asbestos find is encountered. Cordon off area until ESAM advises that work can recommence Manage the process of identifying and mitigating impacts Liaise with Sydney Metro Project Manager, ESAM and Contamination Specialist / Asbestos Specialist Assist the Contamination Specialist / Asbestos Specialist with mitigation and regulatory requirements Complete Incident Report and review CEMP for any changes required. Propose amendment to the CEMP if any changes are required
Project Manager	<ul style="list-style-type: none"> Ensures all aspects of the procedure are implemented Advise Contractor / Supervisor to recommence work if all applicable requirements have been satisfied and the Contamination Specialist / Asbestos Specialist has approved commencement of work
Contamination Specialist / Asbestos Specialist	<ul style="list-style-type: none"> Provide expert advice to the ESAM on find identification, testing, removal or treatment, legislative procedures and regulatory requirements
Environmental Representative	<ul style="list-style-type: none"> Ensure compliance with relevant approvals (new and existing) Approve any updates to the CEMP where required
Environment Sustainability and Approvals Manager	<ul style="list-style-type: none"> Notify the TFNSW Environment Representative and the Sydney Metro WSA Environmental Manager of the find Complete incident reporting with Supervisor Review and update CEMP where required

10. Reporting of Unexpected Soil Contamination (including Asbestos)

Should unexpected contamination be discovered on site during construction works, the ESAM will report this to TfNSW as per TfNSW Environmental Incident Classification and Reporting Procedure. Information to be reported will include the following:

- Observations of the material discovered
- Chemical analysis of the material
- Comparison of material (observations and chemical analysis) to known on site contamination
- Remediation plans

11. Seeking Advice

Advice on this procedure should be sought from the ESAM in the first instance. All contractors and sub-contractors should ensure their site personnel are aware of and understand this procedure prior to commencing construction.

Technical contamination and asbestos advice regarding an unexpected find should be sought from a suitably qualified and experienced contamination specialist / asbestos specialist.

12. Example of Contamination Finds

Buried Wastes



Descriptions:

- Buried demolition wastes (e.g. concrete, tiles, bricks, asphalt, timber, metal, plastics)
- Buried domestic wastes (e.g. plastics, cardboard, paper, food, vegetation)
- Buried industrial wastes (e.g. chemical containers, ash/slag, paint, tar)
- Buried sanitary waste (e.g. collection can, glass, plastic, organic materials, tar)

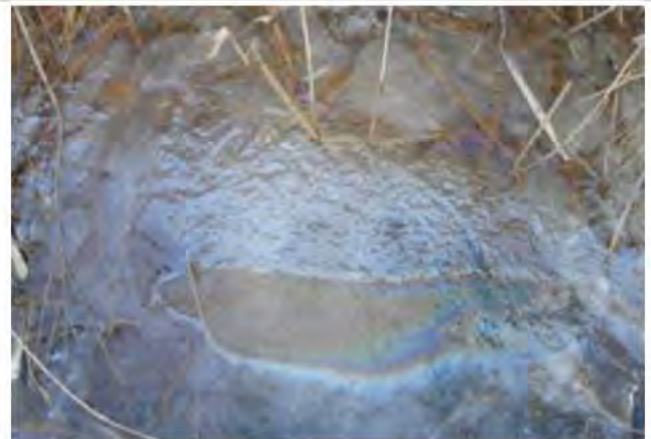
Buried Containers and Drums



Description:

- Metal or plastic drums, barrels and containers
- Chemicals may or may not be present within containers
- Strong chemical odour in surrounding soils

Discoloured or Odorous Soils and Groundwater/Seepage



Description:

- Discoloured soil (soil with non-natural colouring). More likely to be present close to surface or buried within fill material
- Acid sulfate soils (grey/black/green, sulphur odour, shell fragments)
- Pungent, petroleum, compost, putrefied, sulphurous, acidic, caustic, septic, sweet, aromatic odours
- Rainbow sheen on water surfaces

Underground Storage Tanks



Description:

- Likely to be located within or adjacent to historical and current refuelling facilities, mechanical and industrial operation
- More likely to contain fuel and waste oil products
- Metal or fibreglass construction
- Be aware of above ground evidence of tanks (i.e. pavement scarring, fill and dip points, bowser foundations, vent pipes on adjoining buildings)
- Hydrocarbon odours
- Be aware of sand backfill and concrete anchors during excavation works

Bonded or 'Non-Friable' Asbestos



Description:

- Colour dependant on building material matrix, typically white-grey
- Fibrous edges or 'torn-cardboard' appearance on broken edges
- Fibre cement sheeting has dimpled surface
- Cannot be crushed or broken up with hand force
- Construction materials up to 15 years and older

- Fibre cement sheeting / cladding
- Vinyl products (floor tiles)
- Fibre cement corrugated roofing material
- Fibre cement guttering and pipework
- Electrical backing boards

Non-Bonded or 'Friable' Asbestos



Description:

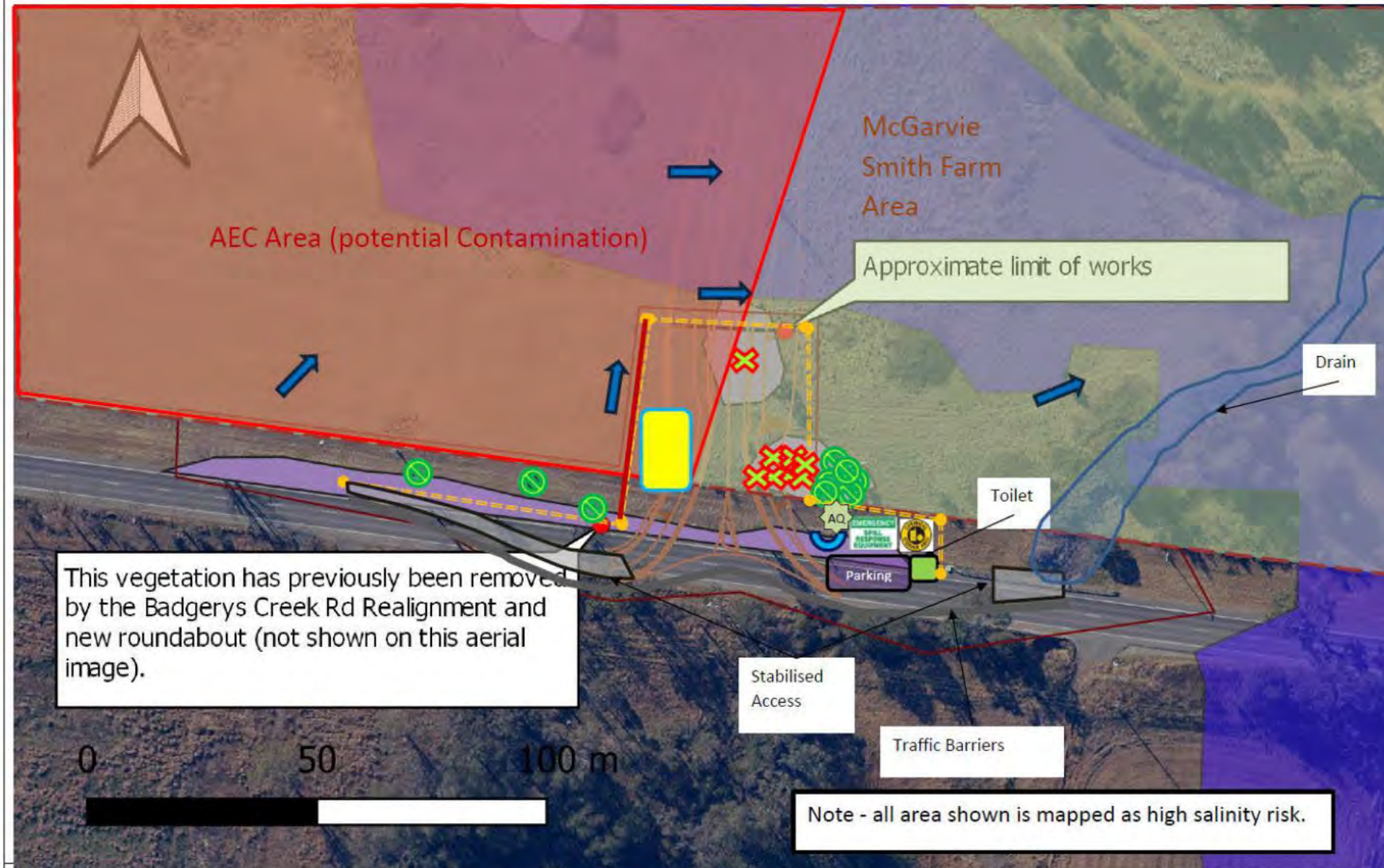
- White, grey, blue or dirty fibrous material
- Fluffy
- Easily crush with finger pressure
- Insulation
- Weathered/damaged fibre cement sheeting
- Fibrous clumps of material

[illegible]

1. All Unexpected Finds must be recorded in the register and the register must be kept on site by the ESAM or nominated representative. The register must be kept on site until the end of construction activity and provided to Sydney Metro or their representative for future reference as required.
2. All Unexpected Finds must be reported to the Supervisor or ESAM to ensure correct actions can be undertaken.
3. Comments and observations should clearly document the suspect material type (i.e. asbestos, hydrocarbon stained soil, buried construction and demolitions wastes, buried drums with liquids), the estimated volume or extent, any odours and specific visual or olfactory observations.



APPENDIX H ENVIRONMENTAL CONTROL MAP



LEGEND – BOUNDARIES AND AREAS

- Project Area
- Exclusion Zone
- Heritage Curtilage
- AEC Area (Potential Contamination)
- 1% AEP

CONTROLS AND DEVICES

- Retain Tree
- Remove Tree
- Sand Bags
- Silt Fence
- Drain Protection
- Geotextile
- Concrete Washout
- Stockpile
- Stabilised Entry/Exit
- Hay Bale/Mulch Stockade
- Fence
- Air Quality Monitor
- Check Dam
- Earth bund/windrow
- Direction of Flow (CLEAN)
- Direction of Flow (DIRTY)
- Sump
- Chemical Storage
- Spill Kit Area

WORKING HOURS

Monday to Friday – 7am to 5pm
Saturday – 7am to 1pm
No work on Sunday's or Public Holidays

NOISE

High noise activities to be limited where possible and nearby residential noise receptors will be marked on this plan.

OUT OF HOURS WORK

Unless otherwise approved no work outside the allowable hours is permitted.

SITE INDUCTION

All personnel are required to undergo basic environmental training contained within the site specific induction.

EARTHWORKS CONTROLS

- All vegetated areas will remain undisturbed as long as possible.
- Generally, all stockpiles will be covered when not for immediate use or extended periods. Silt fencing around stockpiles will be constructed as per plans.
- All disturbed areas will be fenced off and have sediment controls at the end of each shift.
- Entry and exit points will be stabilised where possible to minimise dirt/mud tracking onto roadways.
- All environmental controls will be installed as per the "Blue Book"
- All excavated material shall be classified prior to disposal off site.
- Contaminated materials will be marked on this plan and procedure in CEMP followed for testing and disposal of waste.

PEDESTRIAN / TRAFFIC CONTROL

- All traffic control will be deployed as per the approved TMP for the site.
- All pedestrian traffic will be moved to clearly marked routes with approved way-finding signage.
- All traffic control will be implemented by a specialist contractor.

BOUNDARY / EXCLUSION ZONES

- All areas marked as exclusion/Boundary zones (incl. tree protection zones) shall be clearly marked on the above plans.

COMMUNITY LIAISON

- All public/community complaints and enquires shall be directed to the 1300 number with community card.
- Public notification signs shall be placed on site boundary fences. The local community shall be notified 7 days prior to starting work.

PROJECT START / FINISH: May 2022 – June, 2022

THIS LAYOUT SHALL BE DISPLAYED IN A PROMINENT POSITION ON SITE FOR VIEWING BY ALL PERSONNEL

APPENDIX I ENVIRONMENTAL SITE INSPECTION CHECKLIST



Project Name:		Project Number:	
Area Inspected:		Date:	
Person(s) conducting inspection:		Prevailing weather conditions	

Item	Description	Yes	No	N/A
1.	Stabilised site access /driveway and cattle grids working effectively with no dirt and mud on roads? Do they need cleaning out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Are gutters and drains are free of dirt / sediment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Are gutter drains adequately protected from dirty water entering? eg. geofabric / sediment bags / silt socks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Are on site dust suppression practices effective?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Are erosion and sediment controls in correct locations (as per Environmental Management Plan) and are they working effectively?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Are Sediment fences maintained free of sediment deposits and are undamaged?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Are Turbidity curtains / sediment booms in effective condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Is all water being contained within the construction site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Is collected water tested prior to discharge Tested for pH, suspended particles, turbidity.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Are on-site drains adequately protected? Are protection controls (geofabric / sediment bags etc) in good condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Disturbed ground area treated to prevent soil erosion eg. ground cover or grass	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Topsoil Stockpiles less than 2m in height (where possible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Stockpiles battered at a 2:1 slope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Have long term stockpiles been stabilised >20days?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Berm/Trench Drain, sediment trap, energy dissipater, sediment basin, check dam or earth / mulch bund is effective?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	Construction waste is contained, placed in waste bin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	Site is free of general rubbish?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18.	Are plant and site vehicle engines not in use switched off?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	Plant and machinery on site are not producing visible emissions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	Concrete Pumps and Trucks are washing out in the designated wash out areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Trucks and trailers carrying loose materials have covered loads?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	Are all hazardous materials or dangerous goods stored in bunded areas or hazardous goods containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Spill kits nearby work site and are readily accessible	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Are vibration management controls appropriate and effective? Has there been levels recorded that exceed the allowable limit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	Noise management controls are appropriate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Hours of work maintained to minimise noise disturbance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Have protected sensitive areas or items been identified, are they adequately protected /sign -posted? Eg. Wet Lands, Aboriginal, Heritage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Issues Identified and required corrective action	Action By

Actions Closed Out:

Date:

APPENDIX J WASTE AND MATERIAL TRACKING LOG



Revision Date: 16/05/2022

Page 364 of 556



WASTE AND MATERIAL TRACKING LOG

1. I = Import (material brought on-site) E= Export (material sent off-site)

2. Waste Classification Codes: SPECIAL= Clinical, rated, asbestos, tyres; LIQUID= Liquid Waste, HAZARDOUS= Dangerous Goods / Haz Chemicals; RESTRICTED SOLID (RS)= Chemically Assessed waste; GENERAL SOLID (Putrescible) (GSP)= Organics, food waste, human waste; GENERAL SOLID (Non-Putrescible)(GSPN)= General Waste
[Refer to Procedure ENV005 - Waste Management for details of waste classification and examples]

3. Unit: - [volume(m³) / weight(t) / Liquid (l)]

[illegible]

Issue Date: Nov/2012

DOCUMENT UNCONTROLLED WHEN PRINTED

Page 1 of 1

Abergeldie Complex Infrastructure
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APPENDIX K SM-WSA UNEXPECTED HERITAGE FINDS PROCEDURE

Unclassified

Sydney Metro Unexpected Heritage Finds Procedure

SM-18-001105232

Metro Body of Knowledge (MBoK)

Applicable to:	Sydney Metro
Document Owner:	Senior Heritage Advisor
System Owner:	Director Environment, Sustainability and Planning
Status:	Final
Version:	4.1
Date of issue:	May 2021
Review date:	May 2022 (every year or as required)
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Table of contents

1.	Introduction.....	3
1.1.	Purpose.....	3
1.2.	Scope.....	3
1.3.	Definitions and abbreviations	4
1.3.1.	What is an unexpected heritage find?.....	4
1.3.2.	Abbreviations	4
1.4.	Accountabilities	5
2.	Types of unexpected heritage finds and their statutory protections	5
2.1.	Aboriginal objects	6
2.2.	Historic (non-Aboriginal) heritage items.....	6
2.2.1.	Archaeological relics	7
2.2.2.	Other items.....	7
2.3.	Human skeletal remains.....	7
3.	Unexpected heritage finds procedure.....	8
4.	Responsibilities	17
5.	Seeking advice.....	17
6.	Related documents and references.....	18
7.	Superseded documents	18
8.	Document history	18
	Appendix 1: Examples of unexpected heritage finds	19
	Appendix 2: Unexpected Heritage Find Recording Form.....	25
	Appendix 3: Photographing unexpected heritage items	28
	Context and detailed photographs	28
	Photographing distinguishing features	28
	Photographing bones.....	29
	Appendix 4: Archaeological / heritage advice checklist.....	31
	Appendix 5: Template notification letter.....	32

Figures

Figure 1: Summary of steps to be taken on the discovery of an unexpected heritage item	9
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Tables

Table 1: Specific tasks to be implemented following the discovery of an unexpected heritage item ..	10
Table 2: Roles and responsibilities	17



Unclassified

Metro Body of Knowledge (MBoK)

(Uncontrolled when printed)



1. Introduction

1.1. Purpose

This procedure has been prepared to provide a consistent approach to the management of unexpected Aboriginal and non-Aboriginal heritage uncovered during Sydney Metro activities. It applies to all Sydney Metro activities, both the pre-construction (prior to the Construction Heritage Management Plan approval) and construction phase (post Construction Heritage Management Plan approval) and pre or post-approval activities that are subject to the *NSW Heritage Act (1977)* (Heritage Act) and the *National Parks and Wildlife Act 1974* (NPW Act).

In NSW, there are strict laws to protect and manage both Aboriginal and non-Aboriginal heritage. As a result, appropriate management measures need to be implemented to avoid or minimise impacts, ensure compliance with statutory requirements, and to minimise the risk of penalties to individuals, Sydney Metro and its contractors. This procedure includes Sydney Metro's heritage notification obligations under the Heritage Act, NPW Act and the *Coroner's Act 2009* and the requirements of the conditions of approval (CoA) issued by NSW Department of Planning, Industry and Environment.

Note that a Contractor must not amend the *Sydney Metro Unexpected Finds Procedure* or use a different procedure without the prior approval of Sydney Metro.

This procedure must be read in conjunction with the relevant approval conditions, contract documents and other plans and procedures including the *Sydney Metro Exhumation Management Procedure*, in addition to any other relevant documents as developed by the contractor for the delivery of Sydney Metro activities.

1.2. Scope

This procedure applies to the discovery of any unexpected heritage item, where the find is not anticipated in an approved Archaeological Research Design (ARD) or Archaeological Method Statement (AMS) or other project specific document related to heritage. It applies to all Sydney Metro activities.

This procedure must be followed by all Sydney Metro staff, contractors, subcontractors or any person undertaking work for Sydney Metro. It includes references to some of the relevant legislative and regulatory requirements, but is not intended to replace them.

This procedure *does not apply* to:

- the discovery and disturbance of heritage items as a result of investigations being undertaken in accordance with the *Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW* 4376 2010¹; an Aboriginal Heritage Impact Permit (AHIP) issued under the NPW Act; or a permit approval issued under the Heritage Act;
- the discovery and disturbance of heritage items as a result of construction related activities, where the disturbance is permissible in accordance with an AHIP or an approval issued under the Heritage Act or State Significant Infrastructure (SSI) /State Significant Development (SSD) planning approval; or

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- the discovery and disturbance of a heritage item of local significance, where the find is identified and anticipated to occur in an AMS or ARD.

Construction Environment Management Plans (CEMP) should reference or include this procedure. Where there is an approved CEMP, it 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 a reference.

1.3. Definitions and abbreviations

1.3.1. What is an unexpected heritage find?

An 'unexpected heritage find' can be defined as:

- any unanticipated discovery of an Aboriginal object or archaeological work or relic, which Sydney Metro does not have approval to disturb and/or is not covered under an existing management process or plan
- a find that has not been identified or assessed in a project assessment or document related to heritage
- a find that is not referenced in an archaeological research design (ARD) or archaeological method statement (AMS)
- a find that is not covered by an existing approval under the NPW Act or Heritage Act.

1.3.2. Abbreviations

All terminology in this document is taken to mean the generally accepted or dictionary definition. Other terms and jargon specific to this document are defined within the [SM-17-00000203 Sydney Metro glossary](#). Acronyms specific to this document are listed below.

	Definitions
AHIP	Aboriginal Heritage Impact Permit
Aboriginal object	An Aboriginal object is any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains. An Aboriginal object may include a shell midden, stone tools, bones, rock art, Aboriginal-built fences and stockyards, scarred trees and the remains of fringe camps.
ARD	Archaeological Research Design
AMS	Archaeological Method Statement
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CSSI	Critical State Significant Infrastructure
EP&A Act	NSW <i>Environmental Planning and Assessment Act 1979</i>

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Metro Body of Knowledge (MBoK)

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Disturbance	Disturbance is considered to be any physical interference to an item that results in it being destroyed, defaced, damaged, harmed, impacted or altered in any way (this includes archaeological investigation activities).
Excavation Director	A person that has been determined by the Heritage Council of NSW or delegate to meet the Criteria for Assessment of Excavation Directors (4 September 2019 and as updated) and can therefore competently archaeologically investigate a site of either local and/or state significance.
Heritage Act	NSW <i>Heritage Act 1977</i>
NPW Act	NSW <i>National Parks and Wildlife Act 1974</i>
Heritage NSW	Formerly Office of Environment and Heritage (OEH). Now Heritage NSW as part of the Department of Premier and Cabinet NSW.
IMS	Integrated Management System (IMS)
Relic (non-Aboriginal heritage)	A relic means any deposit, artefact, object or material evidence that: a) relates to the settlement of the area that comprises NSW, not being Aboriginal settlement, and b) is of State or local significance.
SSD	State Significant Development
SSI	State Significant Infrastructure
TfNSW	Transport for New South Wales
Work (non-Aboriginal heritage)	Archaeological features such as historic utilities or buried infrastructure that provide evidence of prior occupations such as former rail or tram track, timber sleepers, kerbing, road pavement, fences, culverts, historic pavement, buried retaining walls, cisterns, conduits, sheds or building foundations, but are also subject to assessment by the Excavation Director to determine its classification.

1.4. Accountabilities

The Director Environment, Sustainability and Planning is accountable for this document including approving the document, monitoring its effectiveness and performing a formal document review.

Direct Reports to the Chief Executive are accountable for ensuring the requirements of this document are implemented within their area of responsibility.

Direct Reports to the Chief Executive who are accountable for specific projects/programs are accountable for ensuring associated contractors comply with the requirements of this document.

2. Types of unexpected heritage finds and their statutory protections

Project, field and environmental personnel (including construction contractors) are critical to the early identification and protection of unexpected heritage finds.

Appendix 1 illustrates the wide range of heritage items uncovered to date during Transport for NSW projects and provides an understanding of what unexpected finds may look like.

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Metro Body of Knowledge (MBoK)

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Unexpected heritage finds are categorised as either:

- (a) Aboriginal objects;
- (b) Historic (non-Aboriginal) heritage items; or
- (c) Human skeletal remains.

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

2.1. Aboriginal objects

The NPW Act provides the basis for the care, protection and management of Aboriginal objects and places in NSW.

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

An 'Aboriginal place' is an area declared by the Minister administering the Act to be of special significance with respect to Aboriginal culture. An Aboriginal place does not have to contain physical evidence of occupation (such as Aboriginal objects).

Under section 87 of the Act, it is an offence to harm or desecrate an Aboriginal object or place. There are strict liability offences. An offence cannot be upheld where the harm or desecration was authorised by an AHIP and the permit's conditions were not contravened. Defences and exemptions to the offence of harming an Aboriginal object or Aboriginal place are provided in section 87, 87A and 87B of the Act. A person must notify Heritage NSW if a person is aware of the location of an Aboriginal object.

Penalties for some of the offences can include two years imprisonment and/or up to \$550,000 (for individuals), and a maximum penalty of \$1.1 million (for corporations).

Examples of Aboriginal objects include stone 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 AHIP is usually required from Heritage NSW. When a person becomes aware of an Aboriginal object they must notify the Director-General of Heritage NSW about its location. Assistance on how to do this is provided in section 4 (Step 5).

2.2. Historic (non-Aboriginal) heritage items

The Heritage Act provides for the care, protection and management of heritage items in NSW. Historic (non-Aboriginal) heritage items include:

- archaeological 'relics' as defined under the Heritage Act; and



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- other items such as works, buildings or movable objects, which are not considered 'relics' under the Act.

2.2.1. Archaeological relics

Under section 139, it is an offence to disturb or excavate any land knowing or having reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved, damaged or destroyed, unless the disturbance or excavation is carried out in accordance with an excavation permit issued by Heritage NSW under the Act.

A relic is defined as: *'any deposit, artefact, object or material evidence that: (a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and (b) is of State or local heritage significance.'*

A person must notify Heritage NSW, if a person is aware or believes that they have discovered or located a relic (section 146). Penalties for offences under the Heritage Act can include six months imprisonment and/or a fine of up to \$1.1million.

IMPORTANT!

All relics are subject to statutory controls and protection.

If a relic is likely to be disturbed, an approval is usually required from the Heritage Council of NSW. When a person discovers a relic, they must notify the Heritage Council of NSW of its location.

2.2.2. Other 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 may be encountered include culverts, historic pavements, retaining walls, tramlines, rail tracks, turn tables, timber sleepers, cisterns, fences, sheds, buildings and conduits.

Usually archaeological relics are uncovered via a process of excavation or soil removal. When an unexpected find is uncovered, an archaeological excavation permit under section 140 or section 60 of the Heritage Act may be required to further investigate or remove it if investigation is not covered by an existing approval. In contrast, 'other historic items' either exist above the ground surface (for example a shed), or they are designed to operate and exist beneath the ground surface (for example a culvert). They may also need a permit to alter, disturb or remove them if there is not an approval already in place.

2.3. Human skeletal remains

The *Sydney Metro Exhumation Management Procedure* provides a more detailed explanation of the approval processes related to human skeletal remains.

Human skeletal remains can be classified as:

- reportable deaths
- Aboriginal objects; or

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Page 7 of 32

Unexpected Heritage Finds Procedure Final

Unclassified

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- 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 s35(2) of the Act, a person must report a 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 regardless of ancestry. Public health controls may also apply.

Where the 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 NPW Act, while non-Aboriginal heritage remains are protected under the Heritage Act.

The discovery of Aboriginal human remains also triggers notification requirements to the Commonwealth Minister for the Environment under s20 (1) of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984*.

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 appropriately protected and investigated, the relevant authorities notified and approvals received.

3. Unexpected heritage finds procedure

In the event that an unexpected find is encountered on a Sydney Metro project, the steps summarised in Figure 1 and detailed in Table 1 must be followed. There are seven steps in the procedure.

IMPORTANT!

Sydney Metro may have approval to impact certain heritage items during construction. If you think that you may have discovered a heritage item and you are unsure whether an approval is in place or not, **STOP** work and follow this procedure.

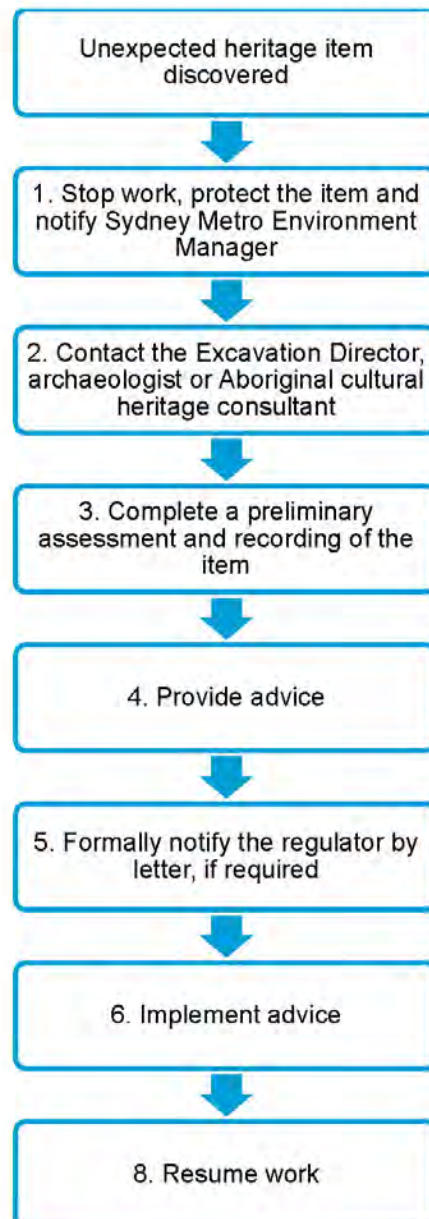
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Figure 1: Summary of steps to be taken on the discovery of an unexpected heritage item



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

Step	Task	Responsibility	Guidance and tools
1	Stop work and protect the item		
1.1	Stop all work in the immediate area of the item and notify the Project Manager	Contractor / Supervisor	Appendix 1 Identifying Unexpected Heritage Items
1.2	Establish a 'no-go zone' around the item. Use high visibility fencing, where practical. No ground disturbing work is to be undertaken within this zone until further archaeological investigations are completed, and if required, appropriate approvals are obtained. Inform all on-site personnel about the no-go zone.	Contractor's Project Manager or Supervisor	
2	Engage an archaeologist		
2.1	Contact the nominated Excavation Director, archaeologist or Aboriginal cultural heritage consultant to discuss the location and nature of the item and arrange an inspection. The project CEMP should contain the contact details of the archaeologist. Provide as much information as possible to the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, including photographs of the item. Inform the Sydney Metro Environment Manager, and keep them involved in the process. The Environment Manager will inform the Sydney Metro Senior Heritage Advisor.	Contractor's Project Manager	
2.2	Where there is no project Excavation Director, archaeologist or Aboriginal cultural heritage consultant engaged for the work, engage a suitably qualified consultant to assess the find. If the find is likely to be an Aboriginal object, engage a suitably qualified and experienced Aboriginal cultural heritage consultant. If the find is a non-Aboriginal heritage item, engage a suitably qualified and experienced historical archaeological consultant.	Contractor's Project Manager	

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Step	Task	Responsibility	Guidance and Tools
3	Preliminary assessment and recording		
3.1	<p>Occasionally, the Excavation Director, archaeologist or Aboriginal cultural heritage consultant may determine from the photographs provided at Step 2.1 that it is not necessary to inspect the item because no heritage constraint exists for the project (for example the item is not an Aboriginal object or archaeological relic).</p> <p>This advice should be provided in writing (for example via email or letter with the consultant's name and company clearly identifiable) to the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Proceed to Step 7
3.2	Arrange access for the Excavation Director, archaeologist or Aboriginal cultural heritage consultant to inspect the item as soon as practicable. In most cases, a site inspection is required to conduct a preliminary assessment.	Contractor's Project Manager / Excavation Director	
3.3	<p>Subject to the Excavation Director, archaeologist or Aboriginal cultural heritage consultant's assessment, work may recommence at a set distance from the item. This is to protect any other archaeological evidence that may exist in the vicinity, which may have not yet been uncovered.</p> <p>The 'no-go zone' established in Step 1.2 may need to be adjusted to reflect the area of archaeological potential, as determined by the Excavation Director, archaeologist or Aboriginal cultural heritage consultant.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
3.4	<p>Has the item been damaged or harmed?</p> <p>If yes, record the incident in the Incident Management System. Implement any additional reporting requirements related to the planning approval and CEMP where relevant.</p>	Contractor's Project Manager / Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
3.5	<p>Can the work avoid further impact to the item?</p> <p>Project Manager to confirm with Sydney Metro Environment Manager.</p>	Contractor's Project Manager	



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Metro Body of Knowledge (MBoK)

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Step	Task	Responsibility	Guidance and Tools
3.6	Record the item and complete the Unexpected Heritage Item Recording Form.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Appendix 2 Unexpected Heritage Item Recording Form Appendix 3 Photographing Unexpected Heritage Items
3.7	Is the item likely to be bone? If yes, follow the steps in Appendix 4 '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. Also refer to the Sydney Metro Exhumation Management Procedure. If no, proceed to the next step.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
3.8	The Excavation Director, archaeologist or Aboriginal cultural heritage consultant may provide advice after the inspection and preliminary assessment that no heritage constraint exists for the project (for example the item is not an Aboriginal object or relic). This advice should be provided in writing (for example via email or letter with the consultant's name and company clearly identifiable) to the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Proceed to Step 7
3.9	Where required, seek additional specialist technical advice (such as a forensic or physical anthropologist to identify skeletal remains). The Excavation Director, archaeologist or Aboriginal cultural heritage consultant can provide contacts for such specialist consultants.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
4	Provide advice		
4.1	The Excavation Director, archaeologist or Aboriginal cultural heritage consultant should provide written advice with input from Registered Aboriginal Parties where appropriate. The plan should include as a minimum a) a description of the item, b) an assessment of the significance of the item, c) approval or statutory notification requirements, d) reporting requirements, e) consultation requirements, and f) relevance	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	Appendix 4 Archaeological / heritage advice checklist Other references DECCW 2010, Aboriginal Cultural Heritage Consultation

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Metro Body of Knowledge (MBoK)

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Step	Task	Responsibility	Guidance and Tools
	to other project approvals or management plans.		Requirements for Proponents 2010 DECCW 2010, Code of Practice for the Archaeological Investigation of Aboriginal Objects in NSW Heritage Branch 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'
4.2	<p>In preparing the advice, the Excavation Director, archaeologist or Aboriginal cultural heritage consultant must review the CEMP, heritage sub-plans, conditions of project approval and associated heritage assessment documentation (for example an Environmental Impact Statement Technical Paper).</p> <p>The Excavation Director, archaeologist or Aboriginal cultural heritage consultant must determine if the item is consistent with previous heritage or project approvals or management plans. The Project Manager must provide all relevant documents to the Excavation Director to assist with this.</p>	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
4.3	The Excavation Director, archaeologist or Aboriginal cultural heritage consultant must submit this advice as a report, letter or email to the Project Manager as soon as practicable.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant	
4.4	The Project Manager, Sydney Metro Environment Manager and Sydney Metro Senior Heritage Advisor should review the advice to ensure that all requirements are addressed and can be reasonably implemented.	Consultant's Project Manager / Sydney Metro Environment Manager / Sydney Metro Senior Heritage Advisor	
5	Notify the regulator, if required		
5.1	<p>Based on the advice and any statutory requirements, is notification to Heritage NSW and the Secretary required?</p> <p>If no, proceed directly to Step 6.</p> <p>If yes, proceed to next step.</p>	Sydney Metro Environment Manager / Sydney Metro Senior Heritage Advisor	

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Page 13 of 32

SM-18-001105232

Unexpected Heritage Finds Procedure Final

Unclassified

Metro Body of Knowledge (MBoK)

(Uncontrolled when printed)



Step	Task	Responsibility	Guidance and Tools
5.2	If notification is required, complete the template notification letter and forward with supporting documentation (including advice obtained at Step 4) to the Sydney Metro Environment Manager. The Environment Manager will seek the approval of the Sydney Metro Senior Heritage Advisor and the signature of the Director Project Environment, Sustainability & Planning or Director Environment, Sustainability & Planning	Sydney Metro Environment Manager	Appendix 5 Template Notification Letter
5.3	Forward the signed notification letter to Heritage NSW once approved and cc Sydney Metro. Informal notification (via a phone call or email) to Heritage NSW prior to sending the letter is appropriate. The advice and completed Unexpected Heritage Item Recording Form (Appendix 2) must be submitted with the notification letter (for both Aboriginal objects and non-Aboriginal relics). If the item is an archaeological relic as defined under the Act, a section 146 notification form must also be completed and sent to Heritage NSW as part of the notification.	Sydney Metro Environment Manager	Appendix 2 Unexpected Heritage Item Recording Form Appendix 5 Template Notification Letter
5.4	A copy of the final signed notification letter, archaeological or heritage management plan and the Unexpected Heritage Item Recording Form is to be kept on file and a copy sent to the Sydney Metro Project Manager	Sydney Metro Environment Manager / Contractor's Project Manager	
6	Implement advice		
6.1	The advice should be modified to take into account any additional advice resulting from notification and discussions with the regulator if required.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
6.2	Implement advice. Where impact cannot be avoided, this could include a formal assessment of heritage significance and impact assessment, preparation of excavation or recording methodologies, consultation with Registered Aboriginal Parties and obtaining heritage approvals if required.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	DECCW 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 DECCW 2010, Code of Practice for the Archaeological Investigation of



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Metro Body of Knowledge (MBoK)

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Step	Task	Responsibility	Guidance and Tools
			Aboriginal Objects in NSW
6.3	Where heritage approvals are required, contact the Sydney Metro Environment Manager for further advice and support. Please note there are time constraints associated with heritage approval preparation and processing.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
6.4	For SSI or SSD projects, or projects approved under Part 5 of the EP&A Act, assess whether the heritage impact is consistent with the project approval or if project approval modification is required from the Department of Planning, Industry and Environment or the relevant consent authority.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
6.5	Where statutory approvals (or project modifications) are required, impact upon Aboriginal objects or relics must not occur until heritage and planning approvals have been issued by the appropriate regulator.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
6.6	Where statutory approval is not required but where recording is recommended by the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, sufficient time and resources must be allowed for this to occur.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
6.7	Ensure short term and permanent storage locations are identified for archaeological material or other heritage material recovered from site, where required. Interested third parties (for example local Aboriginal land councils, local councils or museums) should be consulted on this issue. Contact the Excavation Director, archaeologist or Aboriginal cultural heritage consultant for advice on this issue.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
7	Resume work		
7.1	Seek written clearance to resume project work from the Excavation Director, archaeologist or Aboriginal cultural heritage consultant. Clearance would only be given once all archaeological excavation or heritage recommendations and approvals (where required) are complete. Resumption of	Contractor's Project Manager	

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Step	Task	Responsibility	Guidance and tools
	project work must be in accordance with all the relevant project and heritage approvals / determinations.		
7.2	If required, ensure archaeological excavation / heritage reporting and other heritage approval conditions are completed in the required timeframes. This includes artefact retention repositories, conservation and / or disposal strategies.	Excavation Director, archaeologist or Aboriginal cultural heritage consultant / Contractor's Project Manager	
7.3	If additional unexpected heritage items are discovered, this procedure must begin again from Step 1.	All	

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4. Responsibilities

Table 2: Roles and responsibilities

Role	Responsibility
Contractor / Supervisor	<p>Stop work immediately when an unexpected heritage item is encountered. Cordon off area until Contractor Environmental Manager / Excavation Director, archaeologist or Aboriginal cultural heritage consultant advises that work can recommence.</p> <p>Manage the process of the identification, protection and mitigation of impacts on the heritage item.</p> <p>Liaise with the Sydney Metro Project Manager, Environment Manager and Senior Heritage Advisor.</p> <p>Assist the Excavation Director, archaeologist or Aboriginal cultural heritage consultant with mitigation and statutory requirements.</p> <p>Complete Incident Report and review CEMP for any changes that may be required. Proposed amendments to the CEMP if any changes are required.</p>
Contractor's Project Manager	<p>Ensure all aspects of this procedure are implemented. Advise the Contractor / Supervisor to recommence work if all applicable requirements have been satisfied and the Contractor Environmental Manager/ Excavation Director, archaeologist or aboriginal cultural heritage consultant has approved recommencement of work.</p>
Contractor's Excavation Director / archaeologist or Aboriginal cultural heritage consultant	<p>Provide expert advice to the Contractor and Sydney Metro Environment Manager on find identification, significance, mitigation, legislative procedures and requirements.</p>
Environmental Representative	<p>Ensure compliance with relevant approvals (new and existing) and the Construction Environment Management Plan.</p>
Sydney Metro Environment Manager	<p>Notify the Director Project Environment, Sustainability & Planning of find and help support Contractor with managing Incident Reporting.</p>
Sydney Metro Senior Heritage Advisor	<p>Provide expert advice to Sydney Metro Environment Manager and project as required.</p>

5. Seeking advice

Advice on this procedure should be sought from the Sydney Metro Environment Manager in the first instance. Contractors and delivery partners should ensure their own project environment managers are aware of and understand this procedure.

Technical archaeological or heritage advice regarding an unexpected heritage item should be sought from a suitably qualified and experienced archaeologist / Aboriginal heritage consultant.

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Metro Body of Knowledge (MBoK)

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6. Related documents and references

Related documents and references

- SM ES-PW-315/5.0 Sydney Metro Exhumation Management Procedure
- SM-17-00000096 Sydney Metro Environmental Incident Classification and Reporting
- 3TP-SD-015/7.0 Transport for NSW Guide to Environmental Control Map
- Roads and Maritime Services, November 2015, Unexpected Heritage Items Heritage Procedure 02
- [SM-17-00000203 Sydney Metro glossary](#)
- Department of Environment, Climate Change and Water 2010, Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010
- Department of Environment, Climate Change and Water 2010, Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW
- Heritage Branch Department of Planning 2009, Assessing Significance for Historical Archaeological Sites and 'Relics'

7. Superseded documents

Superseded documents

Sydney Metro Unexpected Heritage Finds Procedure v3.3

8. Document history

Version	Date of approval	Notes
1.1	June 2017	Incorporates Environmental Representative comments
1.2		Amends p13 step 8 reference to s146
1.3		Incorporates Planning Mods 1-4 including amended CoA E20
1.4	March 2018	Incorporates Environmental Representative comments
2.0		Removes SSI 15-7400 COA reference
3.0		Revises definitions
3.1		Revises procedure
3.2		Revises roles and responsibilities
3.3		Minor edits and corrections
4.0	April 2021	Revises definitions and procedure; references the Sydney Metro Exhumation Management Procedure v5 with amendments throughout for consistency with that document.
4.1	April 2021	Updates to related documents and references.

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Metro Body of Knowledge (MBoK)

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Appendix 1: Examples of unexpected heritage finds

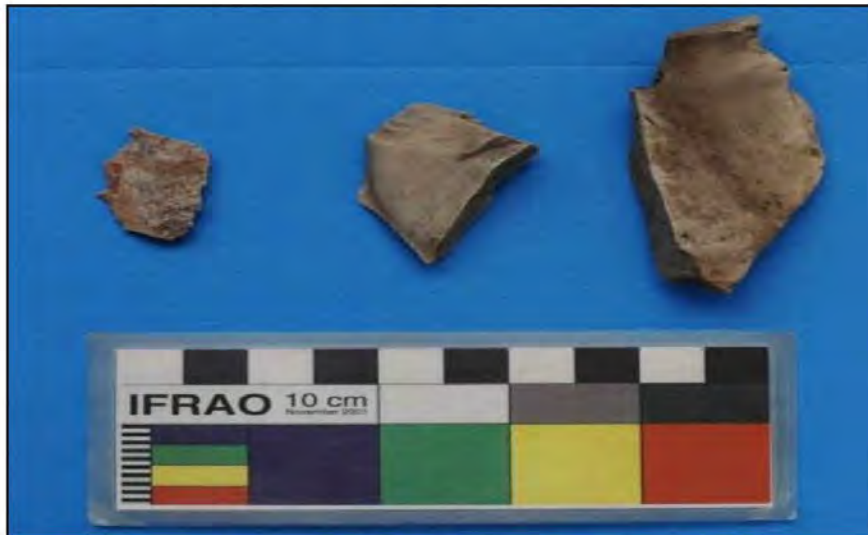


Plate 1: Aboriginal stone artefacts found at the Wickham Transport Interchange, 2015



Plate 2: Aboriginal artefacts (shell material) found at the Wickham Transport Interchange, 2015

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Plate 3: 1840s seawall and 1880s retaining wall uncovered at Balmain East, 2016



Plate 4: Sandstone pavers uncovered at Balmain East, 2016

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SM-18-001105232

Unclassified

Page 20 of 32

Unexpected Heritage Finds Procedure Final

Unclassified

Metro Body of Knowledge (MBoK)

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Plate 5: Platform at Hamilton Station classified as a 'work' by the project archaeologist, Wickham Transport Interchange project, 2015



Plate 6: Sandstone flagging and cesspit, Wynyard Walk project, 2014

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SM-18-001105232

Unclassified

Page 21 of 32

Unexpected Heritage Finds Procedure Final



Unclassified

Metro Body of Knowledge (MBoK)

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Plate 7: Chinese Ming Dynasty pottery and English porcelain / pottery dating back to the early nineteenth century, Wynyard Walk project, 2014



Plate 8: Pottery made by convict potter Thomas Ball during the early settlement, Wynyard Walk project, 2014

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Unclassified

Page 22 of 32

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The following images, obtained from the Roads and Maritime Services Unexpected Heritage Items Heritage Procedure 02.



Plate 9: 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)

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Page 23 of 32

SM-18-001105232

Unexpected Heritage Finds Procedure Final



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Plate 10: Culturally modified stone discovered on Main Road 92, about two kilometres west of Sassafras. The remaining images shown a selection of stone artefacts retrieved from test and salvage archaeological excavations during the Hume Highway Duplication and Bypass projects from 2006-2010.

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Appendix 2: Unexpected Heritage Find Recording Form

This form is to be completed by the Excavation Director on the discovery of an archaeological heritage find during construction or maintenance works

Date:	Recorded by:		
	(include name and position)		
Project name:			
Description of works being undertaken:			
Description of exact location of item			
Description of item found <i>(What type of item is it likely to be? Tick the relevant boxes).</i>			
A. A relic	<input type="checkbox"/>	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 bottle, utensils, plates, cups, household items, tools, implements, and similar items	
B. A 'work', building or structure	<input type="checkbox"/>	A 'work' can generally be defined as a form infrastructure such as track or rail tracks, timber sleepers, a culvert, road base, a bridge pier, kerbing, and similar items	
C. An Aboriginal object	<input type="checkbox"/>	An 'Aboriginal object' may include stone tools, stone flakes, shell middens, rock art, scarred trees and human bones	
D. Bone	<input type="checkbox"/>	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	<input type="checkbox"/>		
Provide a short description of the item <i>(E.g. metal rail tracks running parallel to the rail corridor. Good condition. Tracks set in concrete, approximately 10 cm below the current ground surface).</i>			

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Sketch <i>(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)</i>			
Action taken (Tick either A or B)			
A. Unexpected item would not be further impacted on by the works	<input type="checkbox"/>	Describe how works would avoid impact on the item. (E.g. the rail tracks would be left in situ and recovered with paving).	
B. Unexpected item would be further impacted by the works	<input type="checkbox"/>	Describe how works would impact on the item (E.g. milling is required to be continued to a depth of 200 mm depth to ensure the pavement requirements are met. Rail tracks would need to be removed.)	
Excavation Director, archaeologist or Aboriginal cultural heritage consultant		Name	
		Signature	



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IMPORTANT

It is a statutory offence to disturb Aboriginal objects or relics (including human remains) without an approval. All work affecting Aboriginal objects and relics must cease until an approval is sought.

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Appendix 3: Photographing unexpected heritage items

Photographs of unexpected finds in their current context (*in situ*) may assist archaeologists/Aboriginal heritage consultants 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 etc.) 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 value to the subsequent detailed photographs also required (Figure 2).

Removal of the item from its context (e.g. excavating from the ground) for photographic purposes is not permitted.

Photographing distinguishing features



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.

Where unexpected items have a distinguishing feature, close up detailed photographs must be taken of these features, 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.

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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 be animal bones often requiring no further assessment (unless they are in archaeological context). However, if bones are human, the police must be contacted immediately (see Appendix 5 for detailed guidance). Taking quality photographs of the bones can often resolve this issue quickly. The project archaeologist 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

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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.

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Appendix 4: Archaeological / heritage advice checklist

The archaeologist/Aboriginal heritage consultant must provide advice to the Sydney Metro Environment Manager and Senior Advisor Heritage as soon as possible after an inspection of the site has been completed. This advice can include a range of activities and processes, which differ depending on the find and its significance.

In discussions with the archaeologist/Aboriginal heritage consultant the following checklist can be used as a prompt to ensure all relevant heritage issues are considered when developing this plan. This will allow the project team to receive clear and full advice to move forward quickly. Archaeological and/or heritage advice on how to proceed can be received in a letter or email outlining all relevant archaeological and/or heritage issues.

	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		
• AHIP, section 140, section 139 exceptions, section 60, exemptions etc.	Yes/No	
• Regulator Aboriginal objects / relics notification	Yes/No	
• Notification to the appropriate agency for s170 heritage conservation register	Yes/No	
• Compliance with CEMP or other project heritage approvals	Yes/No	
Stakeholder consultation		
• Consultation with Registered Aboriginal Parties	Yes/No	
Management		
• Retention or conservation strategy (e.g. items may be subject to long conservation and interpretation)	Yes/No	
• Disposal strategy	Yes/No	
• Short term and permanent storage locations (interested third parties should be consulted on this issue).	Yes/No	
• Control Agreement for Aboriginal objects	Yes/No	



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Appendix 5: Template notification letter

Note: Notification of the discovery of a relic is required under section 146 of the Heritage Act 1977. The notification should be submitted through the Heritage Management System (HMS).

Insert on Sydney Metro letterhead

[Name]

Heritage NSW

[Address]

[Select and type salutation and name].

Re: Unexpected heritage item discovered during Sydney Metro activities

I write to inform you of an unexpected [select: Aboriginal object / relic] found during Sydney Metro activities at [insert location] on [insert date] in accordance with the notification requirement under select: [NPW Act, section 146 of the *Heritage Act 1977* (NSW)]. [Where the regulator has been informally notified at an earlier date by telephone, this should be referred to here].

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

[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) (e.g. Part 5). Also include any project approval number, if available].

Sydney Metro [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.

Based on the preliminary findings, Sydney Metro [or contractor] is proposing [provide a summary of the proposed archaeological/heritage approach (e.g. develop archaeological research design (where relevant), seek heritage approvals, undertake archaeological investigation or conservation, interpretation). 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 Heritage NSW staff member.

Should you have any feedback on the proposed approach, or if you require any further information, please do not hesitate to contact [Environment and Planning Project Manager] on [add contact number].

Yours sincerely

[Name]

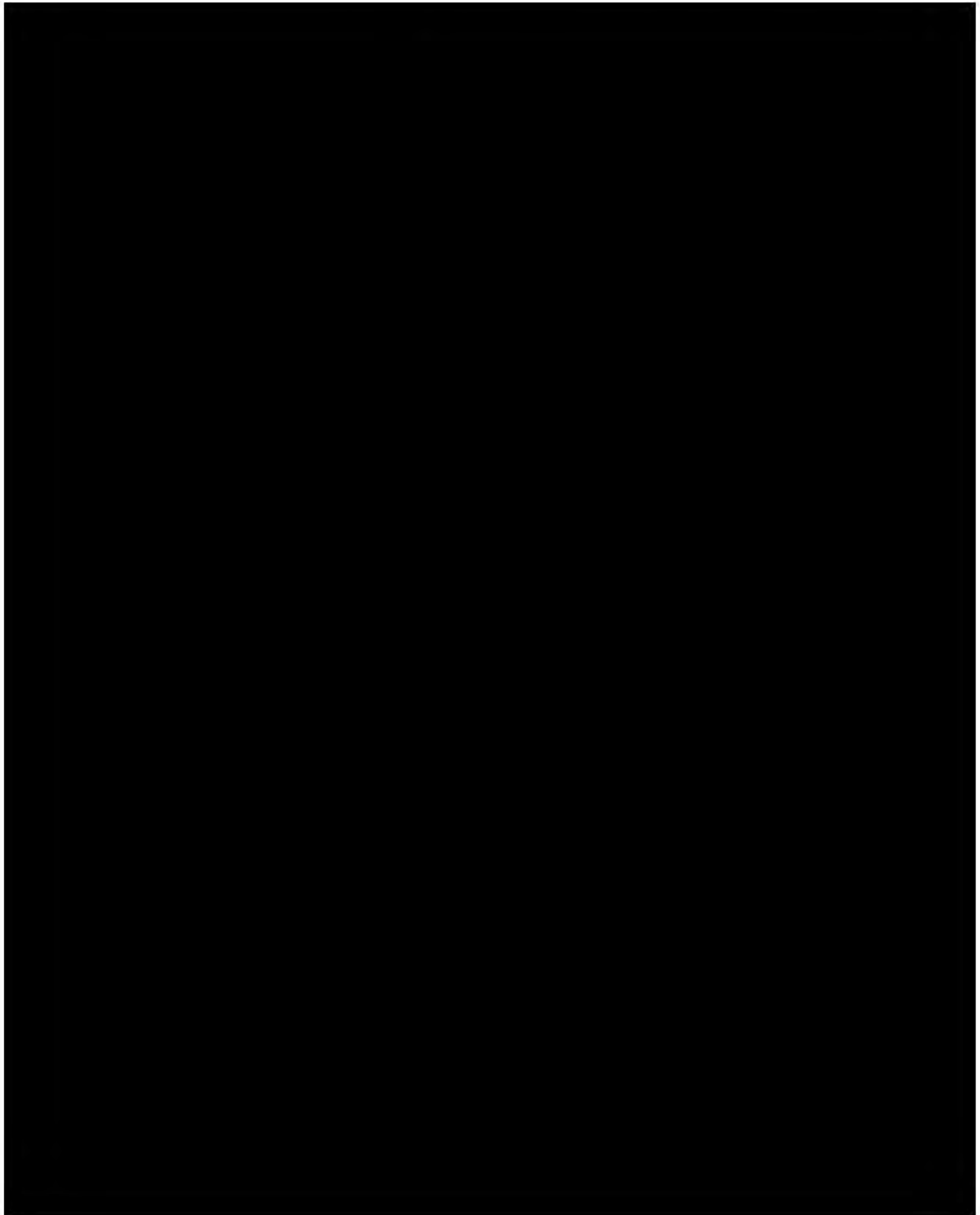
Sydney Metro Director, Environment, Sustainability & Planning

[Attach the advice from the Excavation Director, archaeologist or Aboriginal cultural heritage consultant, completed recording form and section 146 notification]

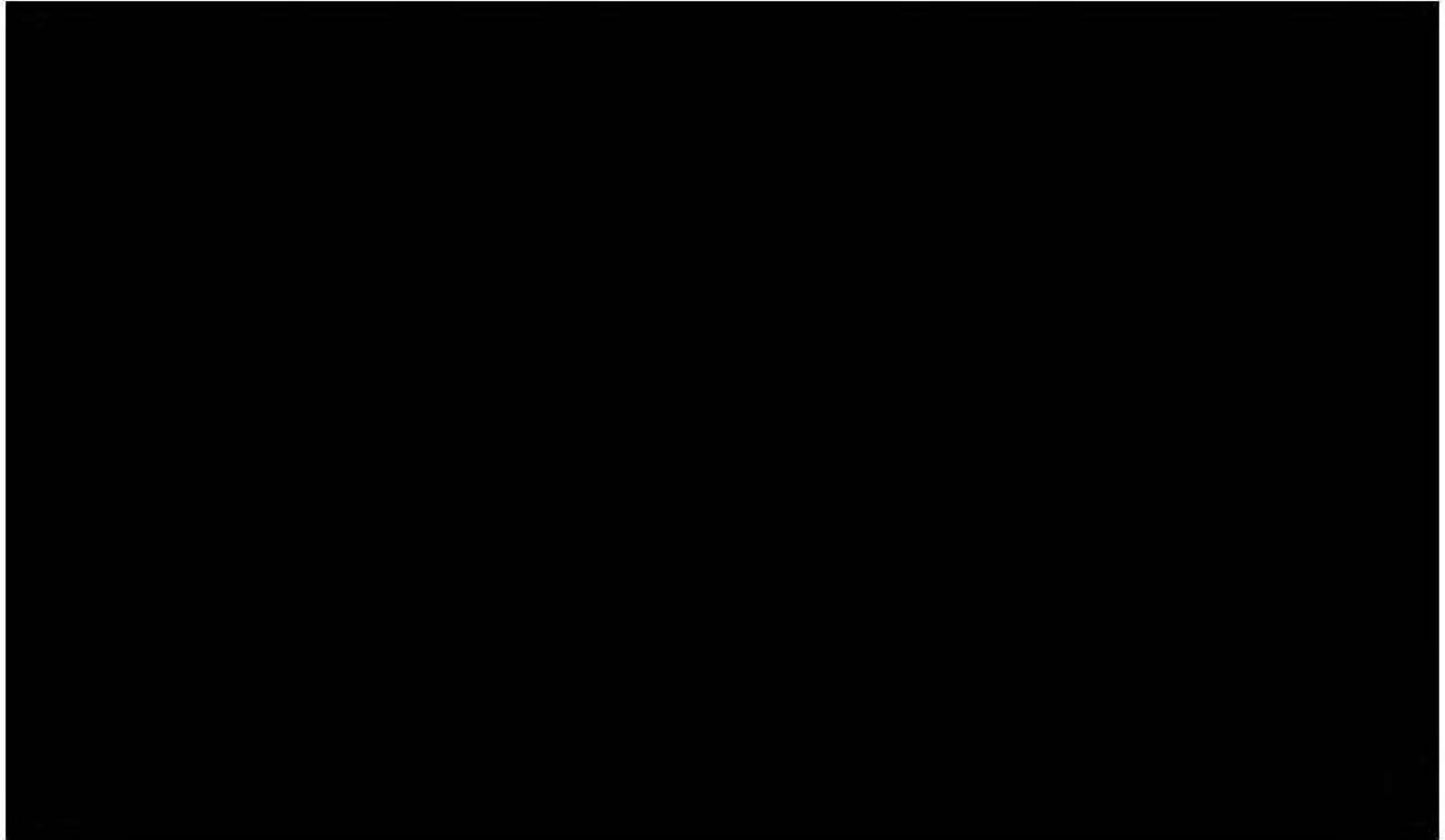
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APPENDIX L SM-WSA EMAIL – M12 SALVAGE WORKS







APPENDIX M SM-WSA ACHMP

Plan removed.

APPENDIX N SM-WSA ENVIRONMENTAL INCIDENT AND NON-COMPLIANCE REPORTING PROCEDURE

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Environmental Incident and Non-compliance Reporting Procedure

SM-17-00000096

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Table of contents

1.	Purpose and scope	4
2.	Introduction	4
3.	Definitions.....	4
4.	Accountabilities	5
5.	Environmental Events	5
5.1.	Worked Example – Classifying Environmental Events	7
5.1.1.	Soil and Water Issue	7
5.1.2.	Soil and Water Non-compliance	7
5.1.3.	Soil and Water Incident.....	7
5.2.	Notifiable Events	8
5.3.	Event Types	8
6.	Environmental Incident Classification and Management.....	10
6.1.	Incident Classification	11
6.1.1.	Class 3 Incidents.....	11
6.1.2.	Class 2 Incidents.....	11
6.1.3.	Class 1 Incidents.....	12
6.2.	Incident Notification.....	12
6.2.1.	Principal's Representative (PR)	12
6.2.2.	Environmental Lead (EL)	13
6.3.	Incident Notification Reports	14
6.4.	Incident Investigations.....	14
6.5.	Environmental Incidents with Health and Safety Impacts	14
6.6.	Reporting Pollution Incidents to Relevant Authorities	15
6.6.1.	Maritime Related Incident Notification and Reporting	16
6.7.	Environmental Compliance Register.....	16
7.	Environmental Non-compliance	17
7.1.	Non-compliance Rate.....	17
8.	Corrective and Preventative Actions	18
8.1.	Action Status	18
9.	Related documents and references	19
10.	Superseded documents	19
11.	Document history.....	19

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Figures

Figure 1: Environmental Event Classification Process	6
Figure 2: Environment Incident notification process for Class 1 and 2 Incidents.....	13

Tables

Table 1: Examples of Notifiable Events	8
Table 2: Environmental Event Types and their descriptions	9
Table 3: Examples of Environmental Incidents	10
Table 4: Classification System for Environmental Incidents	11
Table 5: Contact details for Relevant Authorities	15

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1. Purpose and scope

This procedure documents the process to be used when classifying and reporting Environmental Events.

This procedure applies to Sydney Metro and any contractor Sydney Metro engages to carry out works. Principal Contractors must ensure their processes for managing Environmental Events is consistent with this document. The requirement for consistency is documented in the Construction Environmental Management Framework (Section 3.3(f)) and shall be allocated as a contractual requirement to each delivery partner.

2. Introduction

Sydney Metro is committed to minimising risks to the environment, the rapid identification and rectification of breaches to Environmental Requirements and efficient and effective responses to Environmental Incidents that grows our ability to minimise harm and prevent future re-occurrences.

This procedure defines an approach to classifying Environmental Issues, Incidents and Non-compliances and establishes the immediate, interim and long term actions that are taken in response to Environmental Events.

3. Definitions

All terminology in this Procedure is taken to mean the generally accepted or dictionary definition with the following exceptions:

Term	Definition
Environment	means components of the earth, including: a) land, air and water, and b) any layer of the atmosphere, and c) any organic or inorganic matter and any living organism, and d) human-made or modified structures and areas, and includes interacting natural ecosystems that include components referred to in (a)-(c).
Environmental Event	An occurrence that identifies actual or potential environmental impacts or non-compliances. Events can include conversations, inspections, incidents, or failures of process.
Environmental Harm	Includes any direct or indirect alteration of the environment that has the effect of degrading the environment and, without limiting the generality of the above, includes any act or omission that results in pollution.
Environmental Incident	An occurrence or set of circumstances, as a consequence of which pollution (air, water, noise, and land) or an adverse environmental impact has occurred or is likely to have occurred.
Environmental Issue	An occurrence or set of circumstances where Environmental Harm or Non-compliance could occur if not rectified.
Environmental Non-compliance	A breach of an Environmental Requirement originating from Planning Approvals, Environment Protection Licenses, lease agreements, and other requirements documented in environmental management plans.

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Term	Definition
Material Harm to the Environment	<p>harm to the environment is material if:</p> <ul style="list-style-type: none"> a) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or b) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (or such other amount as is prescribed by the regulations), and c) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment. <p>It does not matter that harm to the environment is caused only in the premises where the pollution incident occurs.</p>

Terms and jargon specific to this procedure are defined within [SM-17-00000203 Sydney Metro Glossary](#).

4. Accountabilities

The Executive Director, Safety, Sustainability & Environment is accountable for this Procedure. Accountability includes authorising the document, monitoring its effectiveness and performing a formal document review.

Direct Reports to the Chief Executive are accountable for ensuring the requirements of this document are implemented within their area of responsibility.

The Direct Reports to the Chief Executive who are accountable for specific projects/programs are accountable for ensuring associated contractors comply with the requirements of this document if specified in the relevant contracts.

5. Environmental Events

Environmental surveillance data is relied upon to inform Sydney Metro of performance trends, to provide assurance that legislative requirements are being met and indicate where surveillance activities should be directed. In order to rely upon environmental data for this purpose there needs to be a high degree of consistency in the manner by which it is collected and interpreted. Due to the need for consistency, any incident/Non-compliance procedure produced by a delivery partner to Sydney Metro is required to be consistent with the requirements of this document.

The concept of Environmental Events forms a common starting point for understanding what types of occurrences should be managed and reported as Incidents and what should be reported as Non-compliances or Issues. When an Environmental Event occurs a series of questions can be asked to consistently determine what type of event it is. Commonly, Environmental Events lead to three different processes:

1. Reporting of an Environmental Incident;
2. Reporting of an Environmental Non-compliance; or
3. Reporting of an Environmental Issue.

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Incidents and Non-compliances are recorded using [SM-17-00000105 Environmental Incident and Non-compliance Notification Report Form](#) and Environmental Issues are recorded through environmental inspection reports using [SM-17-00000107 Environmental Inspection Report Template](#). These paper based records are subsequently entered into the Sydney Metro Compliance Register (Section 6.7) which is used to disseminate the data and facilities reporting internally and externally. Note where a Principal Contractor has submitted alternative processes and these have been approved by Sydney Metro they may also be used.

The figure below shows the process by which Environmental Events are classified (Figure 1).



Figure 1: Environmental Event Classification Process

Where Environmental Harm has been caused the event will always be classified as an Environmental Incident regardless of whether one or more Environmental Requirements have been breached. Only when an event occurs without harm being caused to the environment will it be classified as a Non-compliance or Issue. It should be noted that the Incident management process still captures any breaches of Environmental Requirements and these incidents contribute towards the calculation of the NC Rate (Section 7.1).

This flowchart above is intended to be a guide and there may be situations where it is unclear exactly how an Environmental Event should be classified. In these situations a judgement call should be made in consultation with your Manager.



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5.1. Worked Example – Classifying Environmental Events

This Section provides a fictitious example of Environmental Events which fall into each of the three different categories. The situations outlined below are provided to explain how event classifications are made. The background for these worked examples is as follows:

Sydney Metro is carrying out works in a newly established site and substantial earthworks are occurring to construct piers for an elevated viaduct. A nearby creek contains a variety of important fish species and the local community are known to use this creek for recreational fishing. The Environmental Impact Statement identified the creek as being at risk of increased sedimentation from dirty water run-off and the Conditions of Approval include a requirement to have a Progressive Erosion and Sediment Control Plan in place. This plan has been produced and indicates that sediment fences must be in place at specific locations to capture dirty water run-off. Regular daily inspections of the sediment controls are carried out by the contractor's Environment Manager and an Independent Environmental Representative has commenced a monthly inspection on this site at 7 am on Thursday morning.

5.1.1. Soil and Water Issue

The Environmental Representative notices a sediment fence has been knocked over in one of the areas indicated as requiring fencing on the ERSER plan. It appears to have occurred recently and there is no record of rainfall in the last few days. During the course of the inspection all other ERSER controls appeared to be in good condition and erected in accordance with the requirements of the Blue Book. In this example no harm has yet been caused and no environmental requirement has been breached so the event is classified as an Environmental Issue which is raised on the inspection report with an action to reinstall the fence.

5.1.2. Soil and Water Non-compliance

Alternatively, the Environmental Representative might have noticed many sediment fences had been knocked down and in some areas an absence of sediment fences where the plan indicates they are required. Despite there being no rain in recent days the Environmental Representative concludes that the requirements of the plan are not being followed and have been breached. The event is raised as non-compliance and actions are set in place to re-enforce the requirements of the ERSER plan for that site's workforce as well as the immediate reinstatement of controls.

5.1.3. Soil and Water Incident

Finally, in a third scenario the Environmental Representative notices many sediment fences are down and some are absent where required by the plan. However, significant rainfall has occurred in recent days and the Environmental Representative determines that it is likely dirty water has escaped through the area into the nearby creek potentially causing harm to the fish population. This event is classified as an Incident by the inspector and immediate notification is undertaken. Similar controls are implemented as described above.

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5.2. Notifiable Events

There are a number of Acts and regulations that include a specific requirement to notify a Regulatory Authority. When an Environmental Event triggers one of these notification requirements we then also refer to that event as a Notifiable Event (Table 1).

The Principal Contractor's Environment Manager must determine whether an event is notifiable, and may rely upon advice from Sydney Metro if it is provided.

Table 1: Examples of Notifiable Events

Event type	Legislation		Trigger for Notification
Pollution Incident ¹	POEO Act 1997	Part 5.7	Where Material Harm has occurred contact the EPA Pollution Line as soon as practicable
	POEO (General) Regulation 2009	Section 101	
Land contamination	Contaminated Land Management Act 1997	Section 60(1)	As soon as practicable, after becoming aware of contamination that exceeds the relevant investigation levels in the National Environment Protection Measure, where a person has or will be exposed to the contamination
Discovery of an Aboriginal relic	National Parks & Wildlife Act 1974	Section 89A	Director General of EPA in writing within a reasonable time after becoming aware. Note this is not required for Projects approved under Part 5.2 of the Environmental Planning and Assessment Act (see section 115ZG). Notification and reporting is addressed in the relevant Infrastructure Approval
Discover Aboriginal Remains	Commonwealth Aboriginal & Torres Strait Islanders Heritage Protection Act 1984	Section 20	Commonwealth Minister of the Environment in writing as soon as practicable after becoming aware
Discovery of a relic	Heritage Act 1977	Section 146	Heritage Council in writing within a reasonable time after becoming aware Note -this is not required for Projects approved under Part 5.2 of the Environmental Planning and Assessment Act (see section 115ZG). Notification and reporting is addressed in Infrastructure Approvals

5.3. Event Types

Each Environmental Event is assigned a secondary classification of an Event Type for the purpose of data analysis and general environmental management. They are grouped by areas of environmental management so that targeted auditing, training or awareness initiatives can be initiated in response to emergent trends. Each Event Type is explained in Table 2.

¹ Further information on reporting pollution incidents to EPA is provided in Section 6.6 Environmental Incident/Non-compliance Report

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Table 2: Environmental Event Types and their descriptions

Event Type	Applies To:			Description
	Issue	Incident	Non-compliance	
Soil and Water				Covers the physical location, chemical composition and ecology of soils and waterways. Any event which changes these compositions is a Soil and Water event. Within this event type all instances of contamination, erosion and sedimentation of waterways is covered.
Flora and Fauna				Covers vegetation and vegetation communities as well as animals and animal habitat. Any event where vegetation is felled or damaged, animals are killed or injured, or habitat is harmed or destroyed is covered.
Waste and Spoil				Covers the management of Excavated Natural Material (ENM) and Virgin Excavated Natural Material (VENM) including on-site management, and disposal and also the classification and management of Waste materials. Note: that the transportation of spoil is covered under Traffic, Transport and Access.
Heritage				Covers the management of known heritage artefacts or sites, and the treatment of unexpected finds, archaeological investigations and other impacts.
Air Quality				Covers the management of emissions of particulate matter, odours, and gasses used as air quality parameters from worksites.
Noise and Vibration				Covers the management of airborne and ground borne noise and vibration and includes hold points on the commencement of any work where Out of Hours Works permits or Construction Noise Impact Statements are required.
Community Stakeholder and Business				Covers the management of Community and Stakeholder requirements and includes complaint response procedure, community management protocols, and the maintenance of information on websites.
Traffic Transport and Access				Covers the management of traffic inside and outside of sites including access points and parking requirements. This event type also covers any requirements in relation to vehicles and vehicle maintenance or the transportation of waste and spoil.
Spills and Leaks				Covers all instances where environmentally sensitive substances are held within a container which has the potential to leak or spill and covers pipes, hoses, fuel tanks, storage tanks and plastic containers. Note: Spills and Leaks specifically exclude anything in relation to the transport and deposition of sedimentation.
Management Systems				Covers procedural or administrative processes that are common across all areas. It specifically does not cover procedural or administrative processes which are unique to any of the other event types. For example, not completing a vegetation removal form prior to vegetation clearing is still a Flora and Fauna event. Note: A good example of a Management Systems NC would be not reporting an Environmental Incident within required timeframes.

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6. Environmental Incident Classification and Management

Sydney Metro has defined an Environmental Incident as:

An occurrence or set of circumstances, as a consequence of which pollution (air, water, noise, and land) or an adverse environmental impact has occurred or is likely to have occurred.

Adverse environmental impact includes contamination, harm to flora and fauna (either individual species or communities), damage to heritage items, or adverse community impacts.

Planning Approvals and Environment Protection Licences permit some environmental impacts and these are not intended to be captured as Environmental Incidents.

Table 3: Examples of Environmental Incidents

Type	Example Incident
Air Quality	Odour that travels beyond the site boundary
Air Quality	Dust exceeding reasonable levels without active management measures in place
Air Quality	Operation or maintenance of plant in a manner that causes or has likely caused excessive air pollution
Soil and Water	Discharge of water on or off site in a manner that causes or has likely caused water pollution without required approvals.
Noise and Vibration	Noise that travels beyond the site boundary as a result of poorly maintained plant or operation of plant in an inefficient manner
Noise and Vibration	Failure to comply with the approved hours of work
Soil and Water	Where the chemical composition of soil or water has been detrimentally modified by a contaminant leading to potential or actual environmental harm. For example, rainfall causes a flow of water across a site that erodes soil and enters a waterway increasing the total suspended solids of that water body.
Spills and Leaks	Where a substance has leaked from, or spilt from a container that is designed to prevent that substance from escaping into the environment (including bunds, fuel tanks, chemical bottles and other containers). Spills and Leaks specifically exclude anything in relation to the transport and deposition of sedimentation.
Soil and Water	Dispose of waste in a manner that harms or is likely to harm the environment
Flora and Fauna	Harm or "pick" a threatened species, endangered population or endangered ecological community without required approvals
Flora and Fauna	Damage to vegetation, fauna or habitat including watercourses without required approvals
Heritage	Damage, disturbance, destruction or works to heritage items/relics without required approvals
Heritage	Damage, disturbance, or destruction of Aboriginal objects or places without required approvals

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6.1. Incident Classification

Environmental Incidents are classified into one of three Classes that are based upon the consequence descriptors for environmental risks in the Sydney Metro Risk Matrix (refer to [SM-17-00000182 Risk Management Standard](#)). Each of these classifications trigger a variety of management actions and/or legislative requirements depending on the severity of the consequence described where Class 3 represents minor consequences and Class 1 represents major consequences.

This matrix is further sub-divided into consequence ratings ranging from C6 (low impact) to C1 (high impact). An incident transitions between a Class 3 to a Class 2 incident once material harm has been caused, and transitions into a Class 1 incident once it is determined that the Environmental Harm caused in large-scale and cannot be remediated (Table 4).

Table 4: Classification System for Environmental Incidents

Class 3			Class 2		Class 1
C6	C5	C4	C3	C2	C1
No appreciable changes to environment and/or highly localised event	Change from normal conditions within environmental regulatory limits and environmental effects are within site boundaries	Short-term and/or well-contained environmental effects. Minor remedial actions probably required	Impacts external ecosystem and considerable remediation is required	Long-term environmental impairment in neighbouring or valued ecosystems Extensive remediation required	Irreversible large-scale environmental impact with loss of valued ecosystems

6.1.1. Class 3 Incidents

These Incidents are events which cause Environmental Harm, but do not cause Material Harm to the environment. Normally Class 3 Incidents are not Notifiable Events and therefore a simple notification protocol is adopted whereby Sydney Metro must be notified within 48 hours verbally, and in writing.

In some cases it will be unclear whether Material Harm has been caused in the early stages of Incident Management. If this is the case then the process for Class 2 Incidents is followed (see Section [Class 2 Incidents](#)) until it is clear that Material Harm has not been caused.

A formal Incident Investigation report is not required for Class 3 Incidents, however, it is expected that the person responsible for completing the Incident Notification Report makes appropriate enquiries to determine the likely causal factors involved and assigns effective corrective actions.

6.1.2. Class 2 Incidents

These Incidents are events which cause Material Harm to the environment and they always trigger notification of Regulatory Authorities. These Incidents represent events that are far more serious than Class 3 Incidents and therefore strict communication protocols are required to ensure that effective and informed decisions are made (Figure 2).



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The Environmental Lead, contract Environment Manager and the Independent Environmental Representative must be notified verbally as soon as possible after the observer becomes aware of a Class 2 Incident.

Class 2 Incidents must be investigated and the investigation must produce an investigation report containing corrective or preventative actions. This investigation report must be provided to Sydney Metro within 7 days of the event unless another timeframe is agreed with the EL.

Despite any arrangements for the submission of investigation reports, an Incident Notification Report must be provided with all available information and submitted to Sydney Metro within 48 hours. It is not expected that initial Incident Notification Reports for Incidents under investigation initially include actions as these will be informed by the findings of the investigation. The report should be updated with actions resulting from the investigation when available.

6.1.3. Class 1 Incidents

Class 1 Environmental Incidents are managed in the same manner as Class 2 Incidents expect where a determination is made by the Chief Executive (or delegate) that a Crisis Management Team should be activated. In this situation [SM-19-00053243 Crisis Management Procedure](#) is followed.

6.2. Incident Notification

When an Environmental Event occurs which causes Environmental Harm in all cases both verbal and written communication of the incident must be carried out immediately and within 48 hours respectively. For Class 1 and 2 Incidents the notification process shown in Figure 2 must be followed. Written communication of Environmental Incidents is via an Incident Notification Report (Section 6.3).

This process includes specific roles and responsibilities within Sydney Metro and our delivery Partners who are required to take notification actions in response to Incidents.

This notification process has been developed to ensure that crucial information about Incidents is captured early and communicated to specific individuals who can ensure the Environmental Impacts are minimised and efficient and effective responses to the event are implemented.

In particular the Principals Representative and the Environmental Lead for Sydney Metro play a crucial role in the communication of Incidents within Sydney Metro and these roles are explained in more detail below.

6.2.1. Principal's Representative (PR)

Each works package establishes a contractual interface for communication between the contracted party and Sydney Metro. Generally this interface is between the Principal Contractors Project Director and an appointed representative of Sydney Metro called the Principals Representative.



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All formal written communications must pass between these two individuals electronically using TeamBinder. The Principals Representative holds certain responsibilities in the Incident management Process outlined in Figure 2.

6.2.2. Environmental Lead (EL)

Where this procedure is applied to a works package an Environmental Lead (EL) will be selected for the relevant works package. The Environmental Lead must possess environmental experience and competency in managing Incidents and be a representative of Sydney Metro for those works. This representative holds specific responsibilities outlined in Figure 2.

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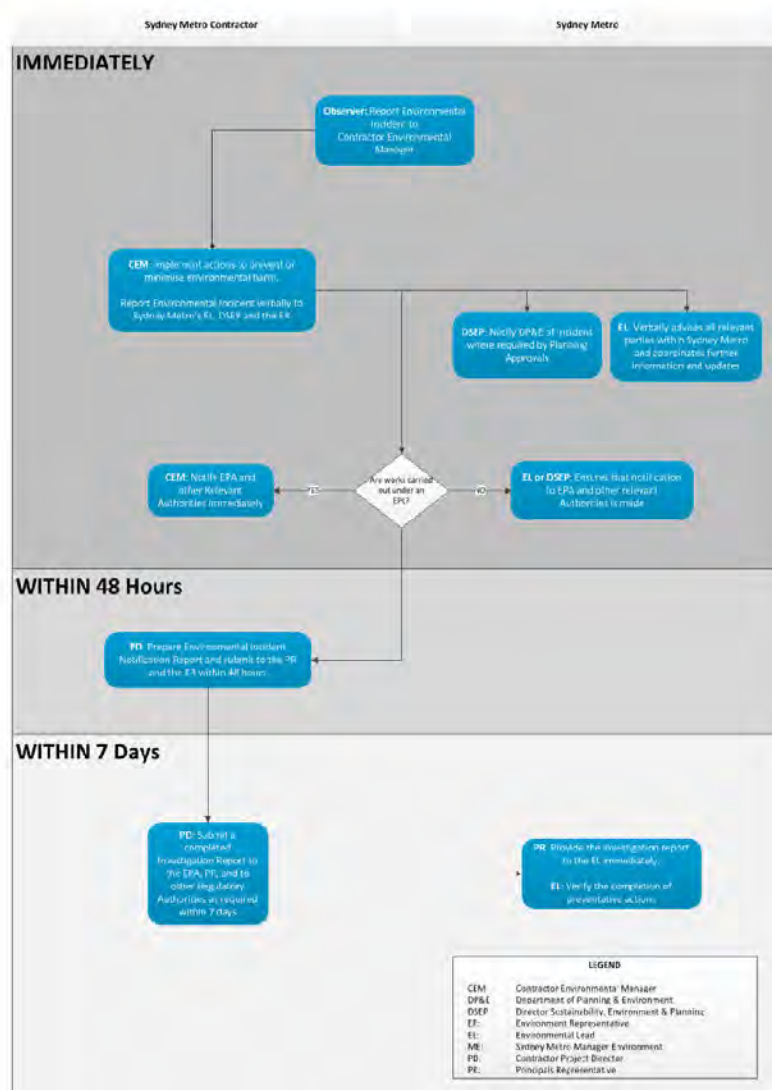


Figure 2: Environment Incident notification process for Class 1 and 2 Incidents

6.3. Incident Notification Reports

For all Incidents an Incident Notification Report must be completed and submitted to Sydney Metro within 48 hours. These reports satisfy the requirement for written communication to Sydney Metro and are completed using [SM-17-00000105 Environmental Incident and Non-compliance Notification Report Form](#) or a similar and consistent form approved by Sydney Metro.



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6.4. Incident Investigations

Environmental Incident Investigations must be carried out for all Class 1 and Class 2 Incidents. Investigations may also be requested for any other Environmental Event at the discretion of Sydney Metro. This discretion is likely to be exercised where incidents of a similar nature are occurring repetitively.

When conducting an Environmental Incident investigation, they must:

- Be led by a lead investigator who is suitably independent investigator capable of arriving at objective findings and is experienced in conducting environmental incident investigations;
- Consider the need for legal privilege during the investigation process in consultation with legal counsel;
- Be informed by all available information that is relevant to the investigation;
- Analyse the timeline of events which led up to and followed the occurrence of Environmental Harm including the immediate incident response;
- Be conducted in a manner that is consistent with recognised investigation techniques such as ICAMS;
- Gather and record evidence;
- Seek the input of key stakeholders; and
- Identify Preventative and Corrective actions and document these in the Incident Notification Report.

6.5. Environmental Incidents with Health and Safety Impacts

It is possible that where an Event occurs that causes Environmental Harm, harm is also caused to the health, safety or wellbeing of people. In these situations there will also be a Health and Safety Incident process undertaken which is separate to the process outlined in this document.

While the definition of the Environment covers people under the POEO Act, the management of impacts upon them are carried out using the Health and Safety Incident Management protocols. This is because Health, Safety and Wellbeing requirements are governed by a range of legislation other than the POEO Act and this procedure is not comprehensive in that regard. Sydney Metro has well established processes to manage impacts on people without the need for the Environmental Incident Process to intervene.

Furthermore, where Environmental Events cause harm to both the 'environment' and people it is possible that the root causes for the respective impacts are different. It is also possible that differences in the severity of the impacts trigger inconsistent notification requirements and investigation levels. It is prudent to identify appropriate and effective corrective actions that reduce the risk of impacts to both people and the environment, therefore separate Incident Management Processes are undertaken in these situations.

For more detail on the management of Health and Safety Incidents please refer to [SM-17-0000040 Health & Safety Incident Reporting & Investigation Standard](#).

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6.6. Reporting Pollution Incidents to Relevant Authorities

If an Incident or Non-compliance is a Notifiable Event, then a report must be provided to the relevant Regulatory Authority within the timeframe(s) specified by the relevant legislation. Pollution Incidents which are causing or threatening Material Harm to the environment must be reported to each of the following authorities immediately after project personnel become aware of the Incident, as required by Section 148 of the POEO Act 1997. The contact numbers for these authorities are listed in Table 5.

Table 5: Contact details for Relevant Authorities

Type	Example incident
EPA Environment Line	131 555
Local Authority	Local Council (specific to area)
Ministry of Health	Public Health Unit (refer to http://www.health.nsw.gov.au/Pages/default.aspx to confirm local area contact details)
SafeWork NSW	131 050 or contact@safework.nsw.gov.au
Fire and Rescue NSW	000

Relevant information required to be given to EPA when making a notification is specified in Section 150 of the POEO Act 1997 as follows:

- Time, date, nature, duration and location of the incident;
- Location of the place where pollution is occurring or is likely to occur;
- Nature, the estimated quantity or volume and the concentration of any pollutants involved;
- Circumstances in which the Incident occurred (including the cause of the Incident, if known);
- Action taken or proposed to be taken to deal with the Incident and any resulting pollution or threatened pollution; and
- Other information prescribed by the regulations.

All relevant information known at the time of making the notification must be reported. If the information required by (c), (d) or (e) above is not known at the time of initial notification but becomes known afterwards, it must be reported to each authority immediately after it becomes known. Verbal notification must be followed by notification in writing within seven days of the date on which the Incident occurred.

Pollution Incidents are not required to be reported if the Incident has already come to the attention of the EPA or the Incident involves only the emission of an odour.

Failure to report a pollution Incident as required by the POEO Act 1997 is an offence.



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Where any work or activity is regulated by an Environment Protection License (EPL), notification of a pollution Incident to the EPA should be made by the licensee. Thus, where the contractor holds the EPL for the project, notification to EPA shall be made by the contractor.

For any work or activity that is not regulated by an EPL, notification of pollution Incidents to EPA shall be made by Sydney Metro, unless the contractor is instructed otherwise by Sydney Metro. This includes pollution Incidents that occur as a result of pre-construction activities which may be undertaken prior to an EPL being required for a project. Pre-construction activities are determined by the Planning Approval and may include, for example, geotechnical investigations or surveys.

Where the Environmental Representative determines there to have been a significant off-site impact on people or the biophysical environment, the program Director Sustainability Environment and Planning will notify the Secretary of the Department of Environment and Planning within 48 hours in accordance with Project Infrastructure Approval Conditions. This notification will be followed by a full written report within seven days of the date on which the incident occurred.

6.6.1. Maritime Related Incident Notification and Reporting

Marine Incidents involving vessels and personnel on board vessels must be reported to the Australian Maritime Safety Authority in accordance with the guidance published on their website at:

- [Australian Maritime Safety Authority Incident Reporting](#); and
- [Reporting obligations of owners and masters of domestic commercial vessels](#).

6.7. Environmental Compliance Register

The Environmental Compliance Register is used to manage the information associated with reporting of Environmental Events. This register is maintained by the Manager Environment and may be used by a variety of individuals to input data. For access to the register or information on its use contact the Manager Environment.

This register analyses the data it contains and produces environmental compliance statistics that are used to meet a range of reporting and environmental management requirements.

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7. Environmental Non-compliance

An Environmental Non-compliance is a breach of an Environmental Requirement originating from Planning Approvals, Environment Protection Licenses, lease agreements, and other requirements documented in environmental management plans. It is important to note that regardless of whether an event is classified as a Non-compliance or an Incident the process behind managing the event remains the same, with the following exceptions:

- Non-compliances are not notifiable to Regulatory Authorities under the POEO Act;
- Non-compliances are reported to have occurred on the day the breach was raised as opposed to the date when the requirement was breached (this is to preserve historical reporting and analysis – see Section 7.1);
- Non-compliances are not divided into severity classes (Section 5.2);
- Non-compliances do not have the potential to trigger crisis or emergency management processes; and
- There is an informal notification process in the immediate timeframe following a Non-compliance being raised.

When an Environmental Event occurs that causes Environmental Harm and also breaches one or more Environmental Requirements, then an Incident Notification Report will be created which records what requirements were breached.

If a Non-compliance is identified then it must be raised using [SM-17-00000105 Environmental Incident and Non-compliance Notification Report Form](#) within 48 hours by the party responsible for the breach.

7.1. Non-compliance Rate

A key environmental performance statistic used by Sydney Metro is the Non-compliance Rate. This statistic provides a standardised way of comparing the performance of different projects or contractors. The NC Rate is calculated using the following formula:

$$= \left(\frac{NCs + Incidents\ with\ breaches\ raised\ in\ month + (Open\ NCs + Open\ Incidents\ with\ breaches\ from\ previous\ months)}{Total\ Number\ of\ Ongoing\ Requirements} \right) \times 100$$

Each month a count of the number of NCs raised, and Incident raised where Environmental Requirements have also been breached is counted. Added to this number is the number of these events which were raised in previous months that still held an Open status in the current reporting period. Non-compliance and incident Events are considered Open if any of the associated Actions are Open. The total is divided by the number of Environmental Requirements which are actively being complied with (Ongoing Requirements) and a multiplying factor of 100 is applied.



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8. Corrective and Preventative Actions

Whenever an Environmental Event is raised actions will be assigned to the event irrespective of whether it is an Issue, Incident or Non-compliance. These actions will generally be Corrective Actions which are implemented to eliminate the cause of the Incident, Non-compliance or Issue and can be thought of as reactive measures in response to the Environmental Event.

Preventative Actions may also be assigned to prevent the occurrence of an Incident, Non-compliance or Issue and can be considered pro-active measures which may be recommended following a detailed investigation of the event.

Actions must:

- Limit impacts as far as is reasonably practicable;
- Eliminate risk where practicable;
- Where it is not practicable to eliminate the risk, follow the hierarchy of controls;
- Address root causes and contributing factors; and
- Be prioritised based on risk.

The Executive Director, Safety Sustainability & Environment must ensure there are systems in place to:

- Monitor corrective action status;
- Escalate issues to the executive where progress on a corrective action is inadequate; and
- Retain all corrective action responses for recording purposes.

8.1. Action Status

Actions are allocated to a person who will take accountability for ensuring it is carried out within a timely manner and completed by the due date.

Actions are either closed immediately if the Action has already been carried out and verified by Sydney Metro, or are created with an open status. The Action will remain in an open state until such a time as Sydney Metro verifies that the responsible person has completed the Action in a satisfactory manner. Until all actions associated with an Incident, Non-compliance or Issue are closed the original Environmental Event is considered to be open as well. This is relevant when calculating the NC Rate as open Non-compliances and Incidents contribute toward the calculation of this statistic.

Verification is determined by the Environmental Lead by sighting evidence of the Actions implementation.



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9. Related documents and references

Related documents and references

- [SM-17-0000022 Environmental & Sustainability Management Manual](#)
- [SM-17-0000182 Risk Management Standard](#)
- [SM-17-0000040 Health & Safety Incident Reporting & Investigation Standard](#)
- [SM-19-00053243 Crisis Management Procedure](#)
- [SM-17-0000105 Environmental Incident and Non-compliance Notification Report Form](#)
- [SM-17-0000107 Environmental Inspection Report Template](#)
- [SM-17-0000203 Sydney Metro Glossary](#)

10. Superseded documents

Superseded documents

There are no documents superseded as a result of this document.

11. Document history

Version	Date of approval	Notes
1.0	31 March 2015	New document
2.0	7 July 2016	IMS Review
3.0	7 April 2017	IMS Review
4.0	23 November 2018	IMS Review
5.0	11 February 2019	IMS Review
5.1	18 February 2019	Minor correction to formula

APPENDIX P DETAILED NOISE AND VIBRATION IMPACT STATEMENT

Plan Removed



