Construction Environmental Management Plan

M12 Motorway West

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Document Approval

Rev.	Date	Prepared by	Reviewed by	Approved by	Remarks
D	19/07/2022	A. Zvirzdinas		N. Fryday	
Signature:					
E	25/07/2022	A. Zvirzdinas		N. Fryday	
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00	27/07/2022	A. Zvirzdinas		N. Fryday	
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F	19/01/2023	K.Purkiss		N. Fryday	
Signature:					
01	16/03/2023	A.Brajlih		N. Fryday	
Signature:					

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

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A	18/02/2022	A. Zvirzdinas	First Draft
B	13/05/2022	A. Zvirzdinas	Second Draft following TfNSW/Arcadis review and comments
C	29/06/2022	A. Zvirzdinas	Third draft following TfNSW/Arcadis review and comments on Rev B
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00	27/07/2022	A. Zvirzdinas	First Controlled Issue
F	19/01/2023	K. Purkiss	6-monthly review & Design Changes
01	16/03/2023	A.Brajlih	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	Nick Fryday	[redacted]	~~16/03/2023~~ 27/3/23

Distribution of controlled copies

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List of emergency and key contacts

Position	Name	Phone
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)
NSW Health – South Western Sydney Local Health District	-	02 8738 5755
SafeWork NSW	-	131 050
Liverpool City Council	[redacted]	02 8711 7000
Penrith City Council	[redacted]	02 4732 7777
24 hour community information line	-	1800 517 155
Construction Environment Site Representative	[redacted]	[redacted]
Project Director	[redacted]	[redacted]
Superintendent	[redacted]	[redacted]
Environmental Representative	[redacted]	[redacted]
Transport for NSW Representative	[redacted]	[redacted]
Transport for NSW Environment Representative	[redacted]	[redacted]

Acronyms and Abbreviations

Abbreviation	Definition
AR	Amendment Report
Areas of vegetation to be retained	These areas present potential opportunities for the Construction Contractor to avoid and minimise potential vegetation impacts if possible. As vegetation impacts may occur during construction, these impacts have been considered in biodiversity off-set calculations.
ARSR	Amendment Report to the Submissions Report
BC Act	Biodiversity Conservation Act 2016 (NSW)
CA	Consistency Assessment
CAQMP	Construction Air Quality Management Sub-plan
CCHMP	Construction Cultural Heritage Management Sub-plan
CCLMP	Construction Contaminated Land Management Sub-plan
CEMP	Construction Environmental Management Plan
CFFMP	Construction Flora and Fauna Management Sub-plan
CFMP	Construction Flood Management Sub-plan
CLM Act	*Contaminated Land Management Act 1997*
CMS	Complaints Management System
CNVMP	Construction Noise and Vibration Management Sub-plan
CoA	Conditions of Approval
Commonwealth CoA	Federal Conditions of Approval under the EPBC Act
Construction	Includes all activities required to construct the CSSI as described in the documents listed in Condition A1, including commissioning trials of equipment and temporary use of any part of the CSSI, but excluding Low Impact Work which is carried out to complete prior to the approval of the CEMP, works approved under a Site Establishment Management Plan, approved under a Consistency Assessment, demolition of acquired residential houses, structures and sheds, and works specified in Appendix B and approved under an environmental management plan(s) in accordance with Condition A24.
Compliance audit	Verification of how implementation is proceeding with respect to a CEMP (which incorporates the relevant approval conditions)
CPBGG JV	CPB Contractors and Georgiou Group Joint Venture
CSEP	Community and Stakeholder Engagement Plan
CSSI	Critical State Significant Infrastructure
CSWMP	Construction Soil and Water Management Sub-plan
CTTMP	Construction Transport and Traffic Management Sub-plan
CWRMP	Construction Waste and Resource Management Sub-plan

Abbreviation	Definition
DAWE	Commonwealth Department of Agriculture, Water and the Environment
DEC	NSW Department of Environment and Conservation, now Environment and Heritage Group (a part of NSW DPE) (EHG)
DECC	Commonwealth Department of Environment and Climate Change, now DCCEEW
DIPNR	Former Department of Infrastructure, Planning and Natural Resources
Division 5.2 Approval	Approval issued by the NSW Minister for Planning and Public Spaces for the M12 Motorway
DPC Heritage	NSW Department of Premier and Cabinet (Heritage)
DPE	NSW Department of Planning and Environment (formerly DPIE)
DPIE	NSW Department of Planning, Industry and Environment (former)
EAD	Environmental Assessment Documentation
EAP	Environmental Audit Program
Ecologically sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992).
EIS	Environmental Impact Statement
EEC	Endangered Ecological Community
EES	Environmental, Energy and Science (a part of NSW DPIE)
EMM	Environmental Management Measure as outlined in the project EIS documentation
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 Assessment Documentation	The set of documents that comprise the Division 5.2 Approval: • Roads and Maritime Services (October, 2019) M12 Motorway, Environmental Impact Statement (EIS) • Transport for NSW (October, 2020) M12 Motorway, Submissions Report (the Submissions Report) • Transport for NSW (October, 2020) M12 Motorway, Amendment Report (AR) • Transport for NSW (December, 2020) M12 Motorway, Amendment Report submissions report (ARSR) • Transport for NSW (March, 2021) The M12 Motorway Amendment Report Submissions Report – Amendment (ARSR amendment) • WSP (October, 2021) M12 Motorway – West Package Detailed Design Consistency Assessment

Abbreviation	Definition
	• GHD (October, 2021) M12 Motorway – Central Package Detailed Design Consistency Assessment • Arcadis (June, 2022) M12 Motorway – Sydney Water Crossings Consistency Assessment • Arcadis (July, 2022) M12 Motorway – Design Boundary Changes Consistency Assessment • Arcadis (August, 2022) M12 Motorway – Minor Change Consistency Assessment. The documents that comprise the EPBC referral: • Submission #3486 – The M12 Motorway Project between the M7 Motorway, Cecil Hills and The Northern Road, Luddenham, NSW Notification of referral decision and designated proponent - controlled action; date of decision 19 October 2018; ID: 2018-8286.
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.
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 in order to achieve those objectives.
Environmental Representative (ER)	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. A key point of contact for the Planning Secretary in relation to environmental performance of the CSSI.
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPA	NSW Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPBC referral	A Proponent must refer a proposed action to the Australian Government Minister for the Environment (the Minister) for assessment, if it has, will have, or is likely to have a significant impact on the world heritage values of a declared World Heritage property, or is likely to have a significant impact on the National Heritage values of a National Heritage place.
EPL	Environmental Protection Licence
ERG	Environmental Review Group – generally comprising representatives of TfNSW, ER, Project delivery team, regulatory authorities (EPA, EES) and councils (Penrith City Council and Liverpool City Council)). The ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role

Abbreviation	Definition
	the ERG is to work collaboratively with the project team to provide proactive advice on environmental management issues on the Project.
ESCP	Erosion and Sediment Control Plan
ESM	Environment and Sustainability Manager (TfNSW)
ESR	Environmental Site Representative (CPBGG JV)
EWMS	Environmental Work Method Statement
Exclusion zones	Exclusion zones are areas of environmental importance (e.g., threatened vegetation or heritage items) that need to be protected. These exclusion zones are defined as no-go areas and are to be protected for the duration of construction in that particular footprint area.
FM Act	*Fisheries Management Act 1994*
Hold point	Is a verification point that prevents work from commencing prior to approval from TfNSW Services
Infrastructure Approval	Approval (SSI 9364) for carrying out of the M12 Project under Section 5.19 of the *Environmental Planning and Assessment Act 1979* subject to specific CoA as detailed in Schedule 2 of the approval.
ISC	The Infrastructure Sustainability Council of Australia who issues IS Ratings valuating sustainability across the construction phases for the Project
km	kilometres
LGA	Local Government Area
LLEP	Liverpool Local Environmental Plan
Minister, the	Minister of the NSW Department of Planning and Environment (or delegate)
MNES	Matters of Environmental Significance
NCR	Non-conformance report
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.
Notifiable event	Any environmental incident, report-only event or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.
NRAR	Natural Resources Access Regulator
NSW CoA	NSW Conditions of Approval
OCS	Overarching Communication Strategy
OCEMP	Overarching Construction Environmental Management Plan prepared by TfNSW
OOHW	Out-of-hours work

Abbreviation	Definition
Operational footprint	Generally includes the M12 Motorway and additional areas required for operation and maintenance of the Project.
OSO	Western Sydney Orbital
PDLP	Place, Design and Landscape Plan
PIRMP	Pollution Incident Response Management Plan
Planning Secretary	Secretary of the NSW Department of Infrastructure, Planning and Environment, or delegate
Primary CoA/REMM	CoA that are specific to the development of this Plan
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Pollution	Pollution (including air pollution, water pollution, noise pollution and land pollution) as defined in the dictionary to the POEO Act
Pollution incident	Has the same meaning as defined in the dictionary to the POEO Act.
Project, the	M12 Motorway Project
QA	Quality Assurance
RAP	Registered Aboriginal Party
Regulatory action	Any formal regulatory response from an environmental regulator including but not limited to penalty notices, clean-up notices, prevention notices, official cautions, show cause notices and formal warnings.
REMM	Revised Environmental Management Measures
Report-only event	An environmental incident or unexpected find resulting from circumstances outside the scope of controls and of an activity.
Roads and Maritime (RMS)	Former Roads and Maritime, now Transport for New South Wales
ROL	Road Occupancy Licence
SAP	Sensitive Area Plan
SEAR's	Secretary's Environmental Assessment Requirements
Secondary CoA/ REMM	CoA that are related to, but not specific to, the development of this Plan
SEMP	Site Establishment Management Plan
Significant incident	An environmental incident that is likely to receive a classification of C3, C2 or C1, OR the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to receive a penalty notice or be subject to prosecution, and therefore requires escalation to the Secretary and other TfNSW senior management.
SS	Sustainability Strategy
TECs	Threatened Ecological Communities
TfNSW	Transport for New South Wales (formerly Roads and Maritime Services)

Abbreviation	Definition
TSC Act	*Threatened Species Conservation Act 1995* (NSW) (repealed) but relevant for this assessment due to being assessed under the Biodiversity Conservation Transitional arrangements.
Unexpected find	An unexpected discovery such as a heritage item, threatened species, contamination, asbestos or hazardous substance.
Work	Any physical work to build or facilitate the building of the CSSI, including low impact work, environmental management measures and utility works. However, it does not include activities that inform or enable detailed design of the CSSI and generate noise that is no more than 5 dB(A) above the rating background level at any sensitive receiver.
WSP	Western Sydney Parklands
WSA Co	Western Sydney Airport Corporation
WSIA	Western Sydney International Airport
WSIP	Western Sydney Infrastructure Plan

1 Introduction

1.1 Background

Western Sydney's population is anticipated to increase from 2.5 million in 2021 to 3 million by 2036, which is an average of 46,000 additional residents per year. This strong forecast growth is driven by a number of transformational changes in the region, including the Western Sydney International Airport (WSIA), South West Growth Area, Western Sydney Employment Area and Western Sydney Aerotropolis. Additional travel demand associated with these planned developments is expected to put significant pressure on the existing transport network and negatively impact traffic efficiency and road safety in the region.

The M12 Motorway will connect The Northern Road at Luddenham and the M7 Motorway at Cecil Hills, over a distance of about 16 km. The M12 Motorway project will provide the main access from the WSIA at Badgerys Creek to Sydney's motorway network and must be opened to traffic six months before the opening of the WSIA.

The M12 Motorway will provide the capacity to meet traffic demand generated by Western Sydney urban development, provide a high standard connection to WSIA to meet future freight and passenger needs and will support and integrate with the broader transport network. The M12 Motorway Project objectives include:

- Provide direct access from the M7 Motorway to the planned Western Sydney airport at Badgerys Creek, and from the M4 via The Northern Road.
- Provide sufficient road capacity to meet traffic demand generated by the planned Western Sydney urban development.
- Provide a road which supports and integrates with the broader transport network.
- Support the provision of an integrated regional and local public transport system.
- Provide active local transport within the east-west corridor.

Approval for the Project under the EP&A Act was granted by the Minister for Planning on 23 April 2021. Approval for the Project under the EPBC Act was granted by the Federal Minister for the Environment on 3 June 2021. The project must be carried out in accordance with the terms of the NSW and Federal Approvals.

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) outlines how we will achieve environmental management obligations and outcomes on M12 Motorway (Western Section - between Northern Road and about 500 metres west of South Creek) by the application of the CPB Contractors Management System (CMS).

An Overarching Construction Environmental Management Plan (OCEMP) M12 Motorway, November 2021, and associated sub plans and monitoring programs have been prepared by TfNSW, and approved by the Department of Planning and Environment (DPE) on 21/12/2022. The strategies defined in the OCEMP have been developed to address the State (NSW) and Federal conditions of approval and the management measures presented in the Environmental Impact Statements (EIS), Submissions Report, Amendment Report, Amendment Report-Submissions Report (ARSR). The OCEMP includes general requirements for implementation, monitoring and auditing which have been further developed and included within this CEMP where relevant to construction activities. A detailed description of the Project is provided in section 1.3 of this CEMP.

This CEMP and sub-plans have been prepared by CPBGG JV in accordance with the following:

- the NSW Minister for Planning's Conditions of Approval (CoA) SSI 9364 dated 23 April 2021
- Commonwealth controlled action approval EPBC 2018/8286 dated 3 June 2021
- Environmental Protection Licence (EPL number 21595) issued by the NSW Environmental Protection Authority (EPA) to TfNSW on 21st March 2022 and transferred to CPB on 17th June 2022.
- TfNSW QA Specifications and Guidelines

- OCEMP dated November 2021 (including subsequent sub-plans and monitoring programs) approved by DPE 21/12/2022.
- Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPIE, 2020),
- AS/NZS ISO 14001:2015 Environmental Management Systems.
- ISO 9001: Quality Management Systems;
- AS/NZS 4801: Safety Management Systems.

The purpose of this CEMP and sub-plans is to provide a structured approach to the management of environmental issues during construction of the Project. Implementing this CEMP and sub-plans effectively will ensure that the Project team meets regulatory and policy requirements in a systematic manner and continually improves its performance.

In particular, this CEMP:

- Describes the Project in detail including activities to be undertaken and relative timing
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts
- Provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation
- Describes the environmental-management related roles and responsibilities of Project personnel
- States the objectives and targets for issues which are important to the environmental performance of the Project
- Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.

The requirements of the State conditions relevant to the development of this CEMP are shown in Table 1-1. The requirements of the Commonwealth CoA and where they are met in this CEMP is shown in Table 1-2. The primary and secondary requirements of the Revised Environmental Management Measures (REMM) presented in the Environmental Assessment Documentation relevant to the development of this CEMP are shown in Table 1-3. Secondary REMMs not specifically related, but relevant to this Plan and have been listed in Appendix A1. A cross reference is also included to indicate where the REMM is addressed in this Plan for other Project management documents.

Table 1-1 NSW CoA requirements for the CEMP

No.	Requirement	Reference
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.	This Document Section 1.2
C1	A Construction Environmental Management Plan (CEMP) must be prepared having regard to the Environmental Management Plan Guideline for Infrastructure Projects (Department Planning, Industry and Environment, 2020). The CEMP must detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 will be implemented and achieved during construction.	This CEMP Document Table 1-4
C2	The CEMP must provide:	
	(a) a description of activities to be undertaken during construction (including the scheduling of construction);	Section 1.3
	(b) details of environmental policies, guidelines and principles to be followed in the construction of the CSSI;	Section 3.2.3
	(c) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of construction of the CSSI;	Section 3.2.1
	(d) details of how the 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	Section 4 Appendix B
	(ii) manage the risks identified in the risk analysis undertaken in subsection (c) of this condition;	Section 4 Appendix B

No.	Requirement	Reference
	(e) an inspection program detailing the activities to be inspected and frequency of inspections;	Section 3.9 Appendix B
	(f) a protocol for managing and reporting any:	
	(i) incidents; and	Section 3.8
	(ii) non-compliances with this approval or statutory requirements;	Section 3.10
	(g) procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction;	Section 3.10
	(h) a list of all the CEMP Sub-plans required in respect of construction, as set out in Condition C5. Where staged construction of the CSSI is proposed, the CEMP must also identify which CEMP Sub-plan applies to each of the proposed stages of construction;	Section 1.5.2 Appendix B
	(i) a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER;	Section 3.3.1
	(j) for training and induction for employees, including Construction Contractors and sub-contractors, in relation to environmental and compliance obligations under the terms of this approval; and	Section 3.5
	(k) for periodic review and update of the CEMP and all associated plans and programs.	Section 3.13
	(l) the outcomes of consultation with government agencies in accordance with Condition A5.	Undertaken as part of overarching documents approval by TfNSW
C3	The CEMP 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.	Section 2
C4	The following CEMP Sub-plans must be prepared in consultation with the relevant government and other agencies identified for each CEMP Sub-plan. Details of all information requested by an agency during consultation must be provided to the Planning Secretary as part of any submission of the relevant CEMP Sub-plan, including copies of all correspondence from those agencies as required by Condition A5.	OCEMP and Overarching Sub-Plans developed by TfNSW
	(a) Traffic and Transport - Relevant Council(s)	Appendix B1
	(b) Noise and vibration - WaterNSW, Sydney Water and pipeline operators (where vibration generating activities will impact on their assets) and relevant council(s)	Appendix B4
	(c) Flora and Fauna - DPI Fisheries, ES, DAWE (now DCCEEW) and relevant council(s)	Appendix B2
	(d) Soils and contamination - DPE Water, WaterNSW and relevant council(s)	Appendix B3
	(e) Surface water and groundwater - DPE Water, WaterNSW and Sydney Water (if there are discharges to its assets) and relevant council(s)	Appendix B8
	(f) Heritage (including Aboriginal and non-Aboriginal Heritage) - Heritage Council of NSW, Heritage NSW, WaterNSW and relevant council(s)	Appendix B7
	(g) Air Quality and Odour - Relevant Council(s)	Appendix B6
	Note: Nothing in this condition prevents the Proponent from combining any of the above CEMP Sub-plans.	-
C5	The CEMP Sub-plans must state how:	Appendix B CEMP Sub-Plans
	(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;	Appendix B CEMP Sub-Plans
	(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Appendix B CEMP Sub-Plans
	(c) the relevant terms of this approval will be complied with; and	Appendix B CEMP Sub-Plans

No.	Requirement	Reference
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART (Specific, Measurable, Achievable, Realistic and Timely) principles.	Appendix B CEMP Sub-Plans
C9	Any of the CEMP Sub-plans may be submitted to the Planning Secretary for approval along with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before the commencement of construction.	Section 1.10 OCEMP Section 2.1 Appendix B CEMP Sub-Plans
C10	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved, unless otherwise agreed by the Planning Secretary. The CEMP and CEMP Sub-plans, as approved by the Planning Secretary, including any minor amendments approved by the ER must be implemented for the duration of construction. Where construction of the CSSI is staged, construction of a stage must not commence until the CEMP and sub-plans for that stage have been endorsed by the ER and approved by the Planning Secretary.	Overarching CEMP and Sub-Plans approved by DPE 21/12/2021

Table 1-2 Commonwealth CoA requirements for the CEMP

No.	Requirement	Reference
8	The approval holder must maintain accurate and complete compliance records.	Section 3.11
9	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.	Section 3.7.2
10	The approval holder must prepare a compliance report 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 60 business days 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 this approval expires or as otherwise agreed by the Department in writing; (d) exclude or redact sensitive ecological data from compliance reports published on the website; and (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.	Section 3.9.4.1

No.	Requirement	Reference
11	The approval holder must notify the Department in writing of any: incident affecting protected matters; non-compliance with the conditions; or non-compliance with the commitments made in plans required in accordance with conditions 5a or 5b. The notification must be given as soon as practicable, and no later than 2 business days after becoming aware of the incident affecting protected matters or non-compliance. The notification must specify: (a) any condition which is or may be in breach (b) a short description of the incident affecting protected matters and/or non-compliance (c) the location (including co-ordinates), date, and time of the incident affecting protected matters and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.	Section 3.8 Table 3-8
12	The approval holder must provide to the Department the details of any incident affecting protected matters or non-compliance with the conditions or commitments made in plans required in accordance with conditions 5a or 5b as soon as practicable and no later than 10 business days after becoming aware of the incident affecting protected matters 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 affecting protected matters or non-compliance; and (c) the method and timing of any remedial action that will be undertaken by the approval holder.	Section 3.8 Table 3-8
13	The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister.	Section 3.9.1.2
14	For each independent audit requested by the Minister under condition 13, 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 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.	Section 3.9.3.2
15	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 the end date of this approval, or as otherwise agreed by the Department in writing.	Section 3.9.3.2
16	The approval holder must: (a) submit plans electronically to the Department for information; (b) unless otherwise agreed to in writing by the Minister, publish each plan on the website within 20 business days of the date: (i) that the plan was approved under the State Infrastructure approval, if the plan requires approval under the State Infrastructure approval; or (ii) that the plan was finalised and provided to the NSW Planning Secretary, if the plan is required for information under the State Infrastructure approval. (c) exclude or redact sensitive ecological data from plans that are to be published on the website or provided to a member of the public; and (d) keep plans published on the website for the period for which this approval has effect, or as otherwise agreed by the Department in writing.	Section 3.7.4

Table 1-3 Primary REMMs relevant to the development of the CEMP

REMM Reference	Measure/Requirement	Timing	CEMP Reference
G02	A CEMP will be prepared and implemented for the project in accordance with the Department of Infrastructure, Planning and Natural Resources Guideline for the Preparation of Environmental Management Plans (DIPNR 2004), for the ongoing management of environmental issues during construction of the project.	Prior to construction and during construction	This CEMP Table 1-4
TT01	A construction transport and traffic management plan (CTTMP) will be prepared as part of the CEMP in consultation with relevant local Councils, and in accordance with relevant guidelines. The CTTMP will outline: • Staging and planning of works to minimise the need to occupy roads where practicable, including identification of haulage routes • Safe alternative routes for pedestrians and cyclists in accordance with relevant safety and accessibility standards • The requirements for traffic control plans to be prepared for each work area which will include details of site access and specific traffic control measures (including signage) to manage traffic movements • Road safety audit requirements • Parking arrangements for construction staff • Identification of access arrangements at construction sites detailing vehicle access movements • Measures to minimise changes to the existing road network, property access, bus stops and pedestrian/cyclist facilities where feasible • Measures to communicate and notify of any changes in traffic conditions on roads or paths to road users, emergency services, public transport operators, and other relevant stakeholders • Measures to manage construction traffic interfaces and access arrangements with WSIA and Sydney Metro – Western Sydney Airport • Requirements for appropriate warning and signage for traffic and other road users such as cyclists and pedestrians in the vicinity of work areas and work site access, and road diversions.	Prior to construction	Appendix B1
B19	Emergency response protocols and procedures will be included in the Project CEMP and implemented in the event of a contaminant spill or leak.	During construction	Section 3.8
NAH01	A construction cultural heritage management plan (CCHMP) will be prepared for the project as part of the CEMP in consultation with DPC (Heritage). The CCHMP will include as a minimum: • A list, plan and maps with GIS layers showing the location of identified heritage items both within, and near, the construction footprint • A significance assessment and statement of significance for each item	Prior to construction	Appendix B6

REMM Reference	Measure/Requirement	Timing	CEMP Reference
	• Protocols and procedures including inductions and toolbox talks for all contractors and subcontractors working in the area to be informed of all exclusion zones, the elements and their significance, to prevent accidental damage or encroachment • Protocols and procedures to be implemented during construction to avoid or minimise impacts on items of heritage significance including protective fencing • The TfNSW Unexpected Heritage Items Procedure (Roads and Maritime, 2015) which would be followed in the event that unexpected heritage finds are uncovered during construction.		
AQ01	A Construction Air Quality Management Sub-plan (CAQMP) will be developed and implemented as part of the CEMP to manage potential air quality impacts associated with construction. The CAQMP will identify activities that may results in air quality impacts and associated mitigation measures to avoid or minimise these impacts. The CAQMP will provide: • Measures to minimise dust generation associated with earthworks and other activities that disturb the ground surface, stockpiles, and haulage routes • Measures to minimise emissions from machinery and vehicles associated with the project • Procedures for inspection, monitoring and addressing any impacts where required. The CAQMP will be implemented for the duration of construction.	Prior to construction	Appendix B7
F03	A flood management plan will be prepared as part of the CEMP for the project and will detail the processes for flood preparedness, materials management, weather monitoring, site management and flood incident management. The flood management plan will be developed in accordance with: • Managing Urban Stormwater, Soils and Construction, Volume 1 4th Edition, March 2004 (Landcom 2004) and Managing Urban Stormwater, Volume 2D – Main Road Construction (DECC 2008) • TfNSW Erosion and Sedimentation Management Procedure (Roads and Traffic Authority 2009) • TfNSW Technical Guideline: Temporary Stormwater Drainage for Road Construction (Roads and Maritime 2011) • TfNSW Stockpile Management Guideline (Roads and Maritime 2011).	Prior to construction	Appendix B8
W01	A construction waste and resource management plan (CWRMP) will be prepared for the project and outline appropriate management procedures. It will include, but not be limited to: • Identification of the waste types and volumes that are likely to be generated by the project • Adherence to the waste minimisation hierarchy principles of avoid/reduce/ reuse/recycle/dispose • Waste management procedures to manage the handling and disposal of waste, including unsuitable material or unexpected waste volumes • Identification of reporting requirements and procedures for tracking of waste types and quantities	Prior to construction	Appendix B9

REMM Reference	Measure/Requirement	Timing	CEMP Reference
	• A resource management strategy detailing the process to identify reuse options for surplus materials • A procurement strategy to minimise unnecessary consumption of materials and waste generation in accordance with relevant legislation and guidelines.		
AH01	A construction cultural heritage management plan (CCHMP) will be developed for the project in consultation with the project RAPs and EHG. The CCHMP will include: • An unexpected finds procedure for the discovery of Aboriginal ancestral remains, Aboriginal objects or new Aboriginal sites consistent with TfNSW Standard Management Procedure Unexpected Heritage Items (Roads and Maritime, 2015). This procedure will also outline requirements to manage unexpected human remains finds in accordance with NSW statutory requirements, and relevant guidelines and standards prepared by EESG. The Procedure will outline the process for consulting with the RAPs in the event that previously unidentified Aboriginal heritage is discovered. • Procedures for the management and curation of salvaged Aboriginal objects • Detailed locations and installation procedures for fencing and protective coverings • Details of permissible activities inside protected Aboriginal areas • Details of permissible activities inside protected Aboriginal areas • Procedures for consideration of heritage aspects within site inductions and toolbox talks for construction workers and supervisors.	Prior to construction	Appendix B6
NV01	A construction noise and vibration management plan (CNVMP) will be prepared for the project to mitigate and manage noise and vibration impacts during construction. The CNVMP will be implemented for the duration of construction of the project and will: • Identify nearby sensitive receivers • Include a description of the construction activities equipment and working hours • Identify relevant noise and vibration performance criteria for the project and license and approval conditions. • Include modelling results showing construction noise impacts based on detailed design information • Outline standard and additional mitigation measures from the Construction Noise and Vibration Guideline (CNVG) (Roads and Maritime 2016) and information about when each will be applied • Outline requirements for the development and implementation of an Out-of-hours Work Protocol • Outline requirements for noise and vibration monitoring that will be carried out to monitor project performance associated with the noise and vibration criteria • Describe community consultation and complaints handling procedures in accordance with the Community Communication Strategy to be developed for the project	Prior to construction	Appendix B2

REMM Reference	Measure/Requirement	Timing	CEMP Reference
	• Outline measures to manage noise impacts associated with heavy vehicle movements both on and offsite • Outline measures to minimise cumulative construction impacts and the likelihood for 'construction fatigue' from concurrent and consecutive projects in the area • Outline requirements to minimise and manage construction fatigue, in consultation with the community.		
B01	A CFFMP will be prepared. The measures in the CFFMP will include: • A site specific induction • Identification of clearing limits and exclusion fencing • Pre-clearance surveys • Vegetation clearing procedures • An unexpected finds procedure • Procedures for weed management and monitoring • A process for de-watering farm dams and the relocation of aquatic fauna • Provision of supplementary fauna habitat (eg nest boxes).	Prior to construction	Appendix B3
SWH01	A construction soil and water management plan (CSWMP) will be prepared for the project. The plan will outline measures to manage soil and water impacts associated with the construction works, including contaminated land. The CSWMP will provide: • Measures to minimise/manage erosion and sediment transport both within the construction footprint and offsite including requirements for the preparation of erosion and sediment control plans (ESCP) for all progressive stages of construction • Measures to manage waste including the classification and handling of spoil • Procedures to manage unexpected contaminated finds including asbestos which would be outlined in the contaminated land management plan and asbestos management plan to be prepared for the project • Measures to manage stockpiles including locations, separation of waste types, sediment controls and stabilisation • Measures to manage groundwater de-watering and impacts including mitigation required • Processes for de-watering of water that has accumulated on site and from sediment basins, including relevant discharge criteria • Measures to manage potential tannin leachate • Measures to manage accidental spills including the requirement to maintain materials such as spill kits • Measures to manage potential saline soils • Details of surface water and groundwater quality monitoring to be carried out before, throughout, and following construction	Prior to construction	Appendix B4

REMM Reference	Measure/Requirement	Timing	CEMP Reference
	• Controls for sensitive receiving environments including SEPP Coastal Wetlands which may include but not be limited to: - Designation of 'no go' zones for construction plant and equipment - Creation of catch/diversion drains and sediment fences at the downstream boundary of construction activities where practicable to ensure containment of sediment-laden runoff and diversion toward sediment sump treatment areas (not sediment basins) to prevent flow of runoff to the SEPP Coastal Wetland. • Erosion and sediment control measures will be implemented and maintained at all work sites in accordance with the principles and requirements in Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom 2004) and Volume 2D (NSW Department of Environment, Climate Change and Water 2008), commonly referred to as the "Blue Book", as well as relevant TfNSW Guidelines.		
SC03	A contaminated land management plan (CLMP) will be prepared for the project. The CLMP will include: • Control measures to manage identified areas of contamination, including surface soils in the vicinity of TP303, TP304, TP310 and TP311 containing heavy metal and PAH concentrations • Procedures for unexpected contamination • Measures to manage potential ASS (as required based on testing results) within sediments of the creeks in the construction footprint to minimise impacts to the environment • Requirements for excavation of unexpected contaminants to be carried out in consultation with project Remedial Actions Plans.	Prior to construction	Appendix B5

Table 1-4 DPE Guideline for the Preparation of Environmental Management Plans Content Checklist

Does your EMP contain	Yes	Reference
Background (EMP Guideline Section 4.3.1)		
Introduction	✓	Section 1
Project Description	✓	Section 1.3
EMP context	✓	Section 1.2
EMP objectives	✓	Section 3.2.4
Environmental Policy	✓	Section 3.2.3
Environmental Management (EMP Guideline Section 4.3.2)		
Environmental management structure and responsibility	✓	Section 1.5 Section 3.3
Approval and licensing requirements	✓	Section 1.2 Section 3.2.2
Reporting	✓	Section 3.9 Section 3.11
Environmental training	✓	Section 3.5
Emergency contacts and response	✓	Section 3.8
Implementation (EMP Guideline Section 4.3.3)		
Risk Assessment	✓	Section 3.2.1
Environmental management activities and controls	✓	Section 4 Appendix B
Environmental control plans or Maps	✓	Section 3.2.6 Appendix A6
Environmental schedule	✓	Section 3 Section 4
Implementation (EMP Guideline Section 4.3.4)		
Environmental monitoring	✓	Section 3.9 Appendix B
Environmental Auditing	✓	Section 3.9.3
Corrective Action	✓	Section 3.10
EMP review	✓	Section 3.12 Section 3.13

This CEMP is the overarching document in the environmental management system for the M12 Motorway West Project that includes a number of other management documents and sub-plans. It is applicable to all staff and sub-contractors associated with the construction of the Project.

1.3 Project description

The M12 West Motorway Project involves construction of a new approximately 6km of dual carriageway motorway predominantly through greenfield area between The Northern Road, Luddenham and approximately 250m east of Badgerys Creek, including WSIA Interchange and Elizabeth Drive Interchange. The works are within the Liverpool and Penrith City Councils (Council) local government areas (LGA).

Features of these Works include:

- Construction of 6km of dual carriageway motorway predominantly through greenfield area between The Northern Road, Luddenham and approximately 250m east of Badgerys Creek.
- Construction of 11 bridges.

- A grade-separated interchange referred to as the Western Sydney International Airport interchange, including a dual-carriageway four-lane airport access road (two lanes in each direction for about 1.5 kilometres) connecting with the Western Sydney International Airport Main Access Road.
- Connection to the signalised at grade intersection at The Northern Road with provision for grade separation in the future as part of the future Outer Sydney Orbital.
- Realignment and duplication of approximately 1,500m of Elizabeth Drive with a new bridge over the Airport Access Road and Metro Rail corridor including associated utility adjustments.
- A four-way signalised intersection east of Airport Access Road.
- A left-in/left-out intersection west of Airport Access Road.
- A signalised single point interchange with north facing ramps from Elizabeth Drive to M12 and south facing ramps from Elizabeth Drive to Airport Access Road.
- Utility crossings pipelines for Sydney Water

Activities included in the Works:

- site establishment
- control of traffic including the provision of approved Traffic Management Plans to facilitate the construction of the works
- provision for pedestrians and cyclists
- provision of site accommodation for the Principal
- searching for and protecting public utility services
- maintenance of the existing roadways
- drainage works (both surface and subsurface)
- permanent and temporary erosion and sedimentation controls
- removal and disposal of some existing roads, kerbs, gutters, footpaths, stormwater and other minor structures
- demolition of structures including houses and sheds
- earthworks including clearing and grubbing, removal and stockpiling of topsoil, excavation of cuttings, placing of general fill, management of potentially/ actually contaminated materials, possible off-Site disposal of spoil material, foundation treatments, placement of upper zone material and Selected Material Zone using imported materials
- construction of rigid pavements including lean-mix concrete sub-base, continuously reinforced concrete pavement, dense grade asphalt intermediate and wearing courses
- flexible sub-base and base pavements
- ancillary works, including new kerbs and/or gutters and paving of cycleways/footpaths
- construction of bridges
  - Bridge over Luddenham Road (BR01)
  - Bridge over Cosgroves Creek (BR02)
  - Bridge over Airport Access Road (AAR) on Elizabeth Drive (BR04A)
  - Bridge over Sydney Metro on Elizabeth Drive (BR04B)
  - Bridge over Western Sydney Airport (WSA) Channel on Northbound Off Ramp (BR04C)
  - Bridge over WSA Channel on Southbound On Ramp (BR04D)
  - Twin Bridges over Badgerys Creek (BR05)
  - Bridge over M12 Motorway and Airport Access Road Ramps (BR21)
  - Bridge over M12 (BR22)
  - Bridge over M12 Motorway on ramp (BR24)
- construction of a RCBC as a stock underpass
- construction of precast arch structures as a shared use path underpass
- construction of retaining walls

- construction of reinforced soil walls
- design development and installation of pits and conduits for an underground Intelligent Transport System cableway including supply and installation of Closed-Circuit Television Cameras , Electronic Message Signs , Emergency Telephones, Vehicle Detection Sites and Permanent Automatic Weather Stations
- relocation of existing and installation of new (or upgraded) public utilities
- property access and property adjustments
- Road furniture
- pavement marking and raised pavement markers
- signposting including sign structures
- opening to traffic
- revegetation and landscaping of exposed new works and of areas disturbed by construction activities
- clean up and restoration of work areas and the areas disturbed by utility authorities in carrying out adjustments within the Site
- preparation of “work-as-executed” drawings and asset acceptance documentation
- all other work which CPBGG JV are obliged to undertake by the terms of the Contract.

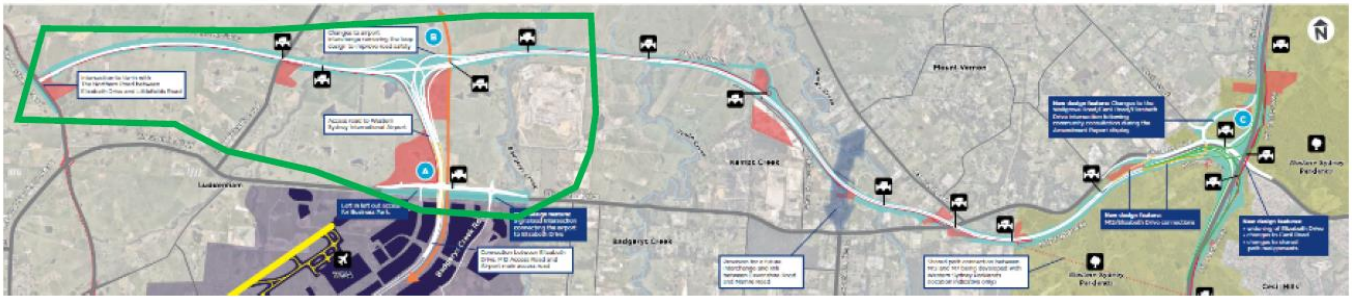


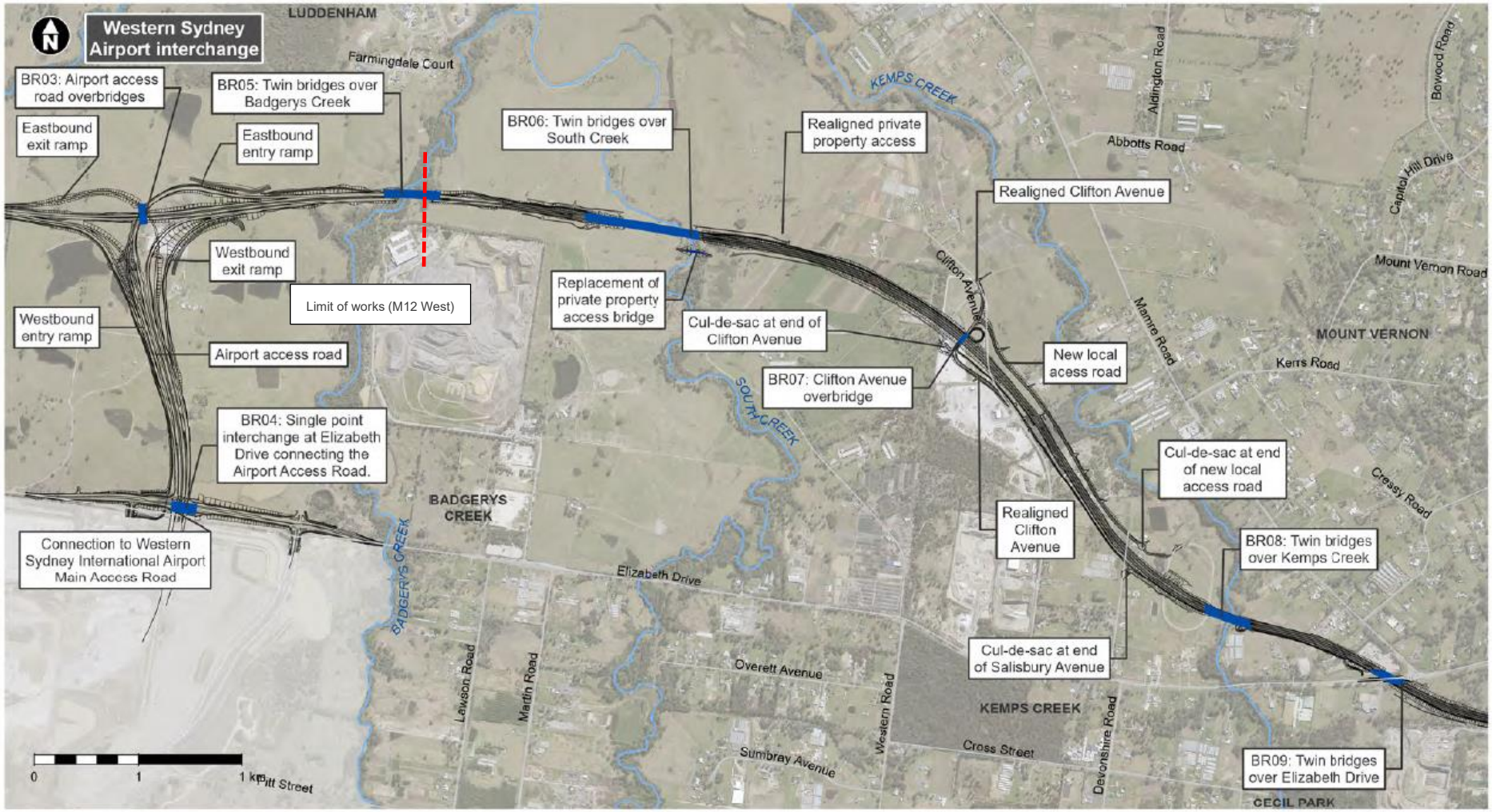
Figure 1-1 Project Location

Table 1-5 below provides an indicative construction program for the construction of the M12 Motorway West.

Table 1-5 M12 West Indicative Construction Program

Construction Activity	M12 West Indicative Construction Program																			
	2022				2023				2024				2025				2026			
Mobilisation / Site Compounds																				
Property Adjustments																				
Utilities relocation																				
Fencing																				
Demolition / clearing																				
Bulk Earthworks																				
Bridgeworks																				
Drainage																				
Pavement																				
Barriers																				
Landscaping																				
Intelligent transport systems																				
Lighting																				
Signage																				
Decommission ancillary facilities																				

Figure 1-2 Keys features of the Project


Western Sydney Airport interchange
LUDDENHAM
Farmingdale Court
BR03: Airport access road overbridges
BR05: Twin bridges over Badgerys Creek
Eastbound exit ramp
Eastbound entry ramp
BR06: Twin bridges over South Creek
Realigned private property access
KEMPS CREEK
Aldington Road
Boxwood Road
Abbotts Road
Capitol Hill Drive
Realigned Clifton Avenue
Westbound exit ramp
Limit of works (M12 West)
Replacement of private property access bridge
Clifton Avenue
Mount Vernon Road
Manns Road
MOUNT VERNON
Kerrs Road
Westbound entry ramp
Airport access road
Cul-de-sac at end of Clifton Avenue
New local acess road
BR07: Clifton Avenue overbridge
SOUTH CREEK
BR04: Single point interchange at Elizabeth Drive connecting the Airport Access Road.
Cul-de-sac at end of new local access road
Cressy Road
BADGERYS CREEK
Realigned Clifton Avenue
BR08: Twin bridges over Kemps Creek
Connection to Western Sydney International Airport Main Access Road
Elizabeth Drive
BADGERYS CREEK
Lawson Road
Martin Road
Overett Avenue
Western Road
Cul-de-sac at end of Salisbury Avenue
KEMPS CREEK
Devonshire Road
Sumbray Avenue
Cross Street
BR09: Twin bridges over Elizabeth Drive
Pitt Street
CECIL PARK
0
1
1 km
Western Sydney International Airport
Bridge
M12 Motorway (The Project)
Existing road
Waterways
Imagery: Aerometrex August 2020
HORNSBY
PENRITH
PARRAMATTA
SYDNEY
BANKSTOWN
BRINGELLY

1.3.1 Works within Western Sydney International Airport

As noted in the above figures, The M12 Motorway West Project requires construction work associated with tie in and intersection work to be carried out within Western Sydney International Airport (WSIA). WSIA is on Commonwealth land, therefore NSW State planning instruments and environmental legislation do not apply. Construction works to be undertaken on WSIA must comply with Commonwealth legislation specifically the *Airports Act 1996* and the *Environment Protection and Biodiversity Conservation Act 1999*. This work has therefore been excluded from the NSW planning approval process for the Project and will be carried out under the provisions of the Western Sydney Airport Plan.

CPBGG JV's CEMP for works in WSIA has been developed in accordance with the OCEMP. This CEMP and associated sub-plans will be updated to include the requirements of the Western Sydney Airport Plan and the WSIA Construction Environmental Management Framework at a later date which will require approval from the WSIA Environmental Manager prior to commencement of any works on WSIA land.

CPBGG JV's CEMP for works in WSIA will be prepared to support both the Airport Lessee Company (ALC) consent and Airport Building Control (ABC) permit applications. CPBGG JV will prepare the required documentation and obtain all approvals prior to working on WSIA, including the approval of the updated CEMP and sub-plans.

1.4 Scope of the CEMP

This CEMP has been developed in accordance with CPB's 'The Way We Operate' framework. The framework aligns with AS/NZ ISO 9004:2011 Managing for the sustained success of an organisation – a quality management approach which has been specifically adapted for CPBGG JV.

As a key project document, the CEMP integrates environmental management requirements, client obligations and community expectations during project delivery. It provides environmental management protocols for the construction stage of the Project.

Specifically, the CEMP:

- Identifies the environmental management obligations relevant to the project and lists all applicable environmental legislation, permits and approvals
- Identifies environmental hazards (aspects), potential impacts and risks associated with the works
- Identifies reasonable and feasible measures to reduce the environmental impact of the Project
- Assists in the prevention of unauthorised environmental impacts
- Fulfils CPB Contractors' EMS requirements, enabling continued certification to ISO14001.

CPB Contractors Environmental Policy and ISO 14001 Certification is contained in Appendix A3.

The CPBGG JV Project Director, with input from the CPBGG JV Environmental Representative is responsible for implementation of the Plan. Environmental Roles and Responsibilities are set out in section 3.3.1.

1.5 Environmental Management System overview

For construction of the M12 Motorway West Project (the Project), the CPBGG JV will utilise CPB's Management Systems (CMS), a proven and experienced management system that provides the environmental management tools, procedures, forms, templates and guidance documents to support the development and implementation of the CEMP.

1.5.1 Governance Documentation

The CPB Environmental Management System (EMS) is based on the requirements of the CPB Management System (CMS).

The CMS is certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use.

Evidence of certification is included in Appendix A3

The CMS has been developed and implemented to ensure a consistent approach to project delivery and foster continual improvement.

As shown in Figure 1-3 the management system comprises the following components:

Figure 1-3 CPB Contractors Management System

- Overarching Board Governance
- A Policy is a statement of commitment and lists the mandatory requirements for individuals of the organisation to comply with.
- Procedures and Work Instructions specify how to undertake and control specific activities. Where appropriate, and following CPB Business Unit approval, project specific procedures are produced to include specific project details.
- Tools are preformatted documents such as forms and templates that are required to be completed as part of following a Procedure.
- Knowledge documents are reference material to provide context, additional information or guidance to a Policy or Procedure.
- Business Applications are the software tools used to support CPB activities and Procedures.

1.5.2 Interface with Other Plans

The CEMP supports the Project Management Plan, which provides an overview of the Project's management system in accordance with the contract. The Project Management Plans overarching framework governs interactions between the functional management plans and sub-plans to ensure the management system's seamless implementation of the scope of works throughout project delivery.

The CEMP interfaces with the management plans, as shown in Figure 1-4.

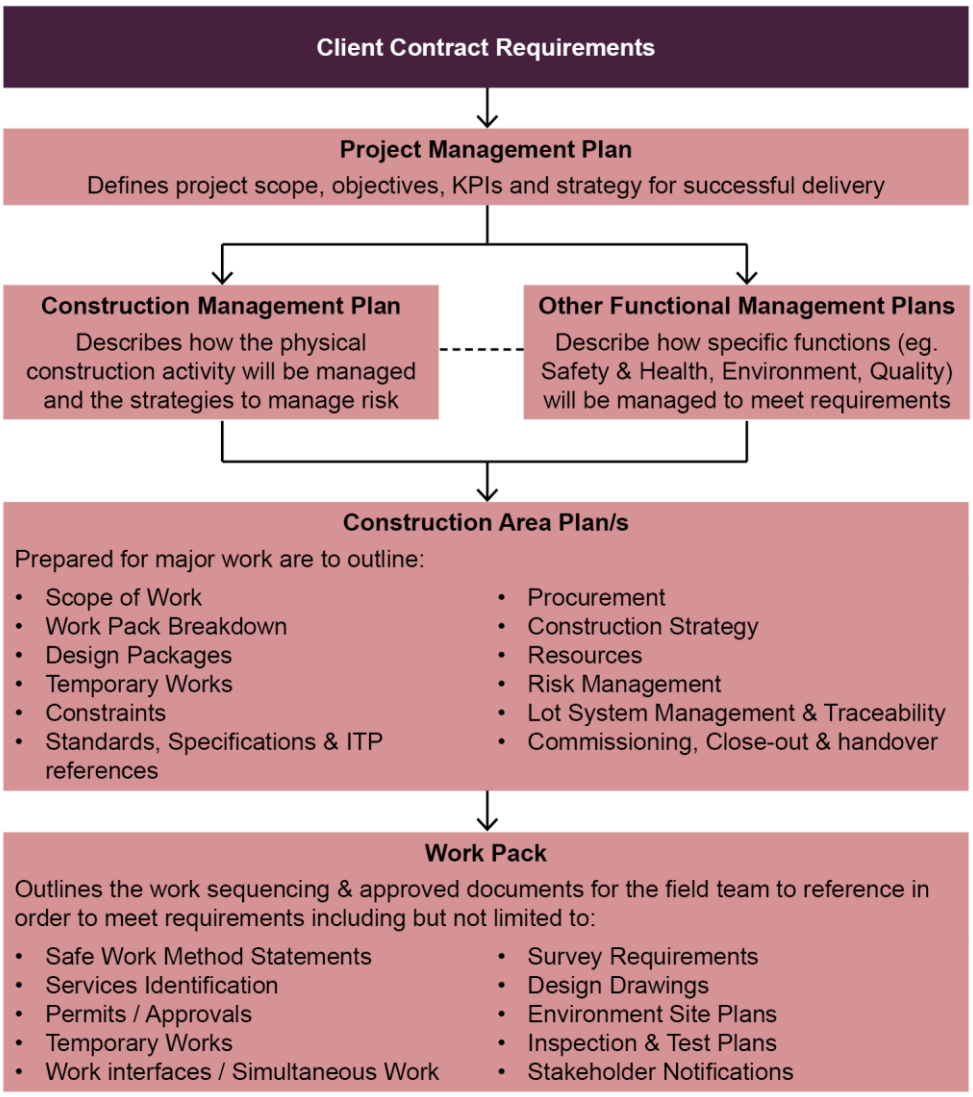


Figure 1-4 Interface with other plans as part of the construction planning process

The CEMP is the overarching Project document for a suite of environmental management documents. These are shown in Figure 1-5.

The supporting appendices prepared under the CEMP comprise:

- Appendix A1 Legal requirements and compliance tracking
- Appendix A2 Environmental aspects and impacts
- Appendix A3 Environment and Sustainability Policies and ISO14001 Certification
- Appendix A4 Document Register
- Appendix A5 CPBGG JV Organisational chart
- Appendix A6 Sensitive Area Plans
- Appendix A7 Environment incident classification and reporting procedure
- Appendix A8 Monitoring Inspection Reporting Review Audit (MIRRA) schedule
- Appendix A9 Pollution Incident Response Management Plan
- Appendix A10 Climate Change Monitoring and Adaptive Management Plan
- Appendix B1 Construction Traffic and Transport Management Sub-Plan
- Appendix B2 Construction Flora and Fauna Management Sub-Plan

- Appendix B3 Construction Contaminated Land Management Sub-Plan
- Appendix B4 Construction Noise and Vibration Management Sub-Plan
- Appendix B5 Construction Waste and Resource Management Sub-Plan
- Appendix B6 Construction Air Quality Management Sub-Plan
- Appendix B7 Construction Cultural Heritage Management Sub-Plan
- Appendix B8 Construction Soil and Water Management Sub-Plan
- Appendix B9 Flood Management Plan
- Appendix B10 Site Establishment Management Plan

Any document that is submitted or action taken within a timeframe specified in or under the terms of the Infrastructure Approval may be submitted or undertaken within a later timeframe agreed with the Planning Secretary. This does not apply to NSW CoA A44 and A46.

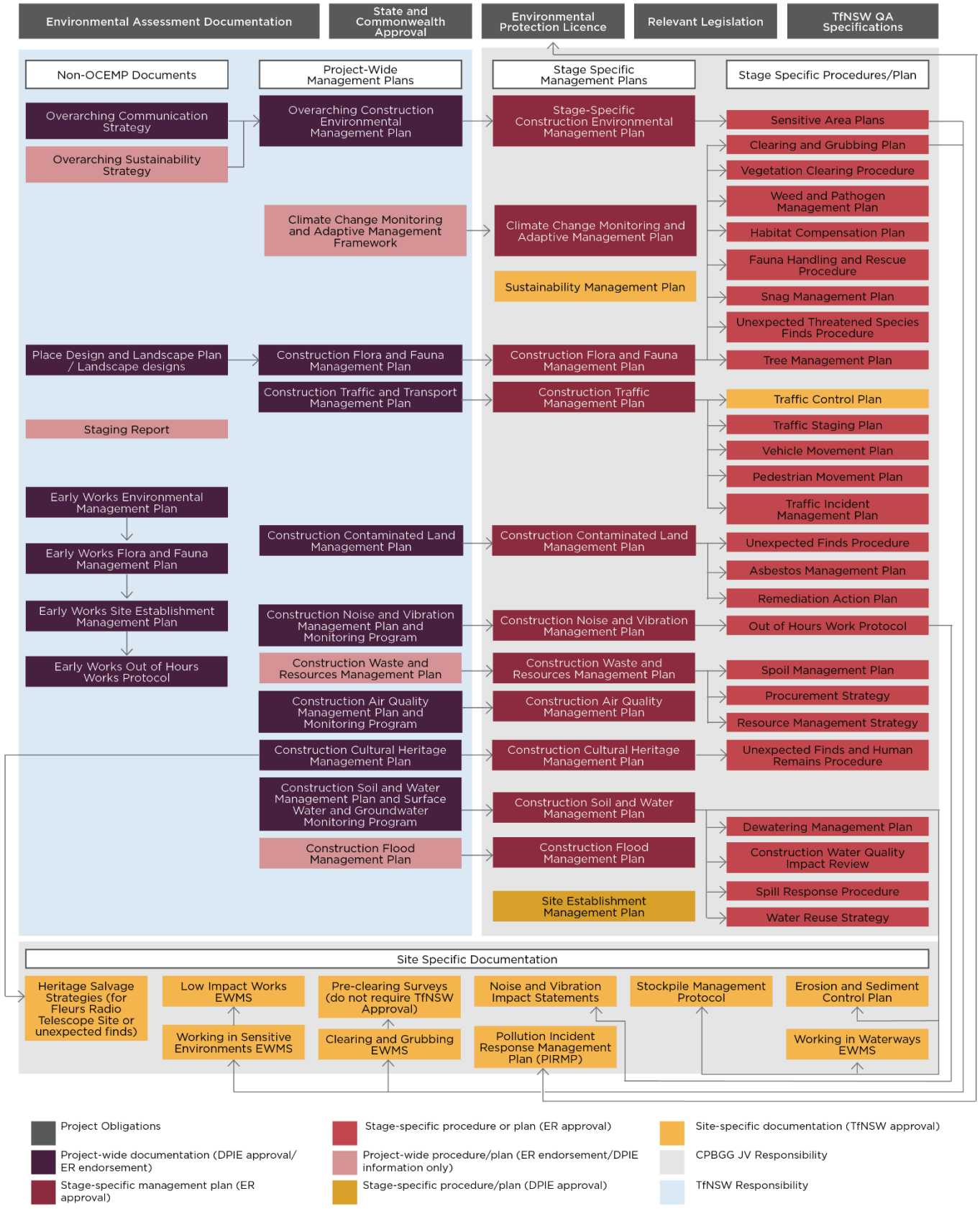


Figure 1-5 Environmental Documentation (Source adopted from OCEMP)

1.5.3 Continual Improvement

In addition to specifying the day-to-day environmental management of a project, each CEMP details activities to be performed to deliver continual improvement in environmental performance.

The CPBGG JV's continual improvement process is achieved via the following steps:

- Undertaking comprehensive planning activities to assess environmental risks and design effective controls
- Identifying design and construction technique refinements to reduce risk and improve project environmental management outcomes, as well as
- Implementing audit and review of both project specific CEMP and the CMS.

Appendix A4 contains the initial document register for the project which will be maintained as a live document throughout construction.

2 Endorsement and approval

2.1 CEMP Acceptance

This CEMP will be approved by the CPBGG JV Project Director and Environmental Site Representative (ESR) prior to submission to TfNSW.

The CEMP, Sub-Plans and monitoring programs will go through a review and update process as described in section 3.1 of TfNSW Specification G36 to ensure the CEMP and associated documents have been developed in accordance with the OCEMP. TfNSW will provide the CEMP to the ER for approval.

A hold point shall be submitted in accordance with G36 Section 3.1 - Preparation and submission of CEMP. TfNSW shall consider the documents prior to authorising the release of the Hold Point. TfNSW may request additional information for inclusion in the CEMP before authorising the release of the Hold Point. CPBGG JV are to address all issues / comments raised by TfNSW and other parties by way of a tabulated response spreadsheet at all stages of CEMP, Sub-Plan and Monitoring Program review and any subsequent amendments/updates.

The Site Establishment Management Plan (SEMP) in Appendix B10 requires DPE Approval. Once the ER has approved this document, it will be submitted to DPE for comment and approval.

Once approved by the ER, the CEMP will be issued for information to the relevant government authorities (eg. DPI Fisheries, DPE Water, Heritage Council NSW etc).

Construction will not commence until the ER has approved the CEMP, sub-plans and monitoring programs. CPBGG JV to notify TfNSW of the date construction is to commence to allow for TfNSW to notify DAWE (now DCCEEW) in accordance with Commonwealth CoA 6.

Management review and revisions of this document are to be outlined in Sections 3.11 and 3.12 of this document.

3 Environmental Management Plan

3.1 Preparation and availability of the CEMP

The CEMP for this project has been prepared in accordance with the 'Environmental Management Plan Guideline: Guideline for Infrastructure Projects' (DPIE 2020) and the CPB Environmental Policy (Appendix A3). It incorporates all requirements of the EIS documentation and all relevant licences, permits and approvals for the project.

The environmental policy is displayed on the M12 Motorway Project website and at the site office and communicated to staff and other interested parties via inductions and ongoing awareness programs.

This CEMP is available to all personnel and subcontractors via the Project document control management system.

The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documentation will be maintained by the ESR at the Project office.

Registered copies and revised documents will be distributed to:

- CPBGG JV Project Director
- CPBGG JV ESR
- CPBGG JV Construction Director
- CPBGG JV Quality Manager
- CPBGG JV Communications Manager
- ER
- TfNSW Project Manager
- TfNSW Environment and Sustainability Manager.

This CEMP will be made available for public inspection on request and published on the TfNSW project website. Confidential information, which may include the location of threatened species, Aboriginal objects or places and personnel contact details, will be removed from all documents provided or made available to the public.

3.2 Planning

3.2.1 Environmental Risk Assessment

3.2.1.1 Environmental aspects and impacts

A risk management approach has been used to determine the severity and likelihood of an activity's impact on the environment and to prioritise its significance. This process considers potential regulatory and legal risks, TfNSW QA specifications, CoA and REMMs as well as taking into consideration the concerns of community and other key stakeholders.

The objectives of the risk assessment are to:

- Identify activities, events or outcomes that have the potential to adversely affect the local environment and/or human health/property
- Qualitatively evaluate and categorise each risk item
- Assess whether risk issues can be managed by environmental protection measures
- Qualitatively evaluate residual risk with implementation of measures.

Risk assessments for the Project are based on AS/NZS 4360:1999, the Australian standard for risk assessments and further details of the process are detailed below.

Appendix A2 contains a list of overall Project environmental aspects and impacts.

The identification of construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental control measures.

CPBGG JV have prepared an initial environmental risk register (Appendix A2) following review of OCEMP, TfNSW QA Specifications, CoA, REMMs and the environmental assessment documentation. This register shall be further reviewed following the facilitation of an environmental risk assessment

workshop with TfNSW, CPBGG JV's site management and environmental staff, representatives from relevant regulatory Authorities, the ER and any other personnel including subcontractors who will be performing the Work as agreed with TfNSW. The risk workshop will identify high risk activities and assess each activity to identify the associated environmental hazards, risk levels and mitigation measures to manage/minimise the activity risks. Where residual risk is assessed as high during this process, or if required under the Contract Specification and outlined in section 3.2.5, an Environmental Work Method Statement will be developed for that activity. This workshop will also be used to raise general environmental awareness of good environmental management practices, and ideas and actions to improve environmental practices.

The identification of risks includes a review of the proposed works and all environmental assessment documentation.

This risk register will be regularly reviewed and updated where:

- New activities and potential impacts are identified
- The likelihood or consequence of potential impacts for existing activities changes
- Inspection, monitoring or auditing reports identify changes that warrant a review of the register
- Where there is change in work systems, materials, equipment, practices or procedures on site
- In response to incidents
- Periodic reviews are identified in this CEMP.

3.2.1.2 Risk Assessment Process

The following risk assessment process is to be implemented, together with a review of proposed activities and known risks based on past project experience and the CPB CMS requirements.

The risk assessment process uses the following three steps to identify the risk level and determine the appropriate management measures required. These steps are shown in Figure 3-1 to Figure 3-3 below

- Step 1. Consequence criteria is used to determine the most credible consequence rating of the risk identified
- Step 2. Likelihood criteria is used to determine the likelihood of that consequence occurring in the circumstances
- Step 3. From these above two steps, determine the risk level using the matrix.

Step 1 - What is the Most Credible Consequence?

Consequence Rating	1 Negligible	2 Minor	3 Moderate	4 Major	5 Substantial
Safety and Health	First Aid Treatment (or No treatment)	Medical Treatment Injury	Lost Time Injury	Permanent Injury (Paraplegia, Amputation)	Fatality (Single or multiple)
Environment and Heritage	Small, contained localised impact / Low level repairable damage	Short lived, well contained environmental impact / Minor remedial action required	Medium term, contained impact / Significant remedial action required	Impacts extend off-site / external ecosystem. Considerable remediation required	Lonr Term irreversible damage / Long Term Remediation required
Plant Damage	Little or No Damage	Damage less than $15,000	Damage between $15,000 and $50,000	Damage between $50,000 and $100, 000	Damage greater than $100, 000
Reputation	Brief local negative media coverage.	Local negative media coverage. Site or project problem.	Regional/short negative media coverage. Loss of Client / project.	Sustained national negative media coverage. Loss of long term key client.	International negative media coverage. Loss of business from key sector.
Time	Delay / Business interruption <1% of program days	Delay / Business interruption between 1%-3% of program days	Delay / Business interruption between 4%-6% of program days	Delay / Business interruption between 7%-10% of program days	Delay / Business interruption >10% of program days
Cost	Additional cost to the business / project <1% revenue	Additional cost to the business / project between 1%-3% revenue	Additional cost to the business / project between 4%-6% of revenue	Additional cost to the business / project between 7%-10% of revenue	Additional cost to the business / project >10% of revenue

Figure 3-1 Consequence criteria

Step 2 - What is the likelihood of that Consequence occurring in the circumstances?				
Likelihood Ranking				
Score	Description		Percentage	Expected Frequency
5	Almost Certain	Common / Frequent Occurrence	Can be expected to occur 75% - 99%	More than 1 event per month
4	Likely	Is known to occur or "It has happened regularly"	Can quite commonly occur 50% - 75%	More than 1 event per year
3	Possible	Could occur or "I've heard of it happening"	May occasionally occur 25% - 50%	1 event per 1 to 10 years
2	Unlikely	Not likely to occur very often	May infrequently occur 10% - 25%	1 event per 10 to 100 years
1	Rare	Conceivable but only in exceptional circumstances	May occur in exceptional circumstances 0% – 10%	Less than 1 event per 100 years

Figure 3-2 Likelihood Criteria

A Risk Rating Table (Figure 3-3) is used to evaluate the severity of the risk for each environmental aspect. As shown, the matrix axes are those of likelihood and consequence using the measures given above. A scale of consequences from 1 to 5 is used to indicate increasing severity. The consequences are potential outcomes as a result of a hazard occurring. The severity of the risk determines the level of management action required as detailed in Table 3-1.

Step 3 – Determine the Risk Level Determine the risk score by combining most credilble consequence with likelihood						
Likelihood \ Consequence	Rating	Negligible 1	Minor 2	Moderate 3	Major 4	Substantial 5
Almost Certain	5	5 (Low)	10 (Moderate)	18 (Very High)	23 (Extreme)	25 (Extreme)
Likely	4	4 (Low)	9 (Moderate)	17 (Very High)	20 (Very High)	24 (Extreme)
Possible	3	3 (Low)	8 (Moderate)	13 (High)	19 (Very High)	22 (Very High)
Unlikely	2	2 (Low)	7 (Low)	12 (High)	15 (High)	21 (Very High)
Rare	1	1 (Low)	6 (Low)	11 (Moderate)	14 (High)	16 (High)

Figure 3-3 Risk Rating

Table 3-1 Risk severity

Risk Severity	Management Required
Extreme	Approval to work cannot be given. A work method that has a lesser residual risk must be used.
Very High	Immediate management action required. EWMS approved by the BU Environmental Manager. Supervision must be present whilst the activity is being undertaken.
High	Priority management action warranted. An EWMS or SEP must be approved by ESR. Daily inspection by Supervisor completed.
Moderate	Management action warranted.
Low	Management action should be considered, particularly for low-level impacts that nevertheless occur on a continual basis.

The hazards and risk assessment uses Table 3-1 to consider the potential consequences, probability and risk of several hazards and allows management of specific risks to be prioritised. The risk rankings were developed further by taking control and mitigation measures into consideration and providing a subsequent risk ranking based on the implementation of these measures.

3.2.1.3 Ongoing risk analysis

Risk identification and management processes are a key focus in developing and implementing all CMS documentation. The objective of these processes is to confirm that the Project is constructed within acceptable limits of risk to personnel and the environment.

To assist in initial environmental risk identification, a review of potentially significant environmental aspects and impacts has been undertaken in Section 3.2.1.4 to determine the specific environmental sub-plans required.

Ongoing environmental risk and opportunities identification will be a key consideration during all Project risk assessments, as per our Risk Management Plan, including:

- Project Risk Register
- Construction Area Plan (CAP) risk assessments
- Work Packs, including Work Pack Risk Assessment
- Environmental Work Method Statements (EWMS) which address environmental risks (as applicable)
- Pre-start meetings.

CPBGG JV will prepare the risk assessment and planning documents detailed in Table 3-2 to ensure the Project is constructed safely, that we minimise environmental impacts and comply with Approval, licence and contractual obligations. Our robust process will include a cross-functional review and sign-off at key stages.

Table 3-2 Key Construction Planning Documents

Key Planning Document	Description
CAP	The planning document for each construction area, CAPs will include overall construction approach and methodology, Construction Area Plan Risk Assessment (CAPRA), constructability reviews and associated Work Pack listing
Work Pack	A Work Pack is a document containing all the information required to manage an activity. There will be multiple Work Packs referenced in each CAP. Each Work Pack will include a step-by-step breakdown of the activity to be undertaken, work method statement, sequencing, inspection and test plans (ITPs), EWMSs, relevant drawings, and environmental controls. Work Packs will be developed to provide an integrated approach to the management of safety, quality and environmental risks, as set out in our Construction Management Plan. During construction planning for each work area, work methods will be reviewed, the risks identified during the design phase will be re-assessed, and new risks identified and recorded in the Work Pack for communication to field staff. All controls necessary to ensure compliance will be included in the Work Packs, which will reference the relevant Site Environment Plans (SEPs), procedures, checklists and forms. Work Packs may identify the need for amendment to an existing SEP or preparation of a new SEP. Work Packs will be approved by the ESR or delegate prior to commencement of works described in their scope. Relevance and adequacy of environmental controls identified in Work Packs will be reviewed and where required, updated.
EWMS	An EWMS description of methodology will be required to complete an activity. It will describe the prescriptive sequence of tasks to be undertaken. Depending on the activity's complexity or if the same activity is being repeated elsewhere, the work method statement may be a separate document included in the Work Pack. The development of EWMSs will be conducted in accordance with section 3.2.4 and formally recorded for relevant activities prior to their commencement. They will include environmental hazards and their mitigation for that task. Its purpose will be to communicate task methodology in detail to the workplace personnel who are completing the task. Field staff will review and sign onto these documents, including the risk assessment and safe work systems, as part of a pre-start meeting.

Key Planning Document	Description
	EWMS task-specific information will include work steps (in sequence) with work-step precautions, associated hazard(s) and hazard control(s), specific personal protective equipment, equipment available onsite, responsibilities, competencies and where applicable, permit conditions. The environmental context of an EWMS will be included to prompt consideration in the task steps, to address the positive actions of environmental care (i.e. dust control, erosion prevention, waste recycling, etc.) and address negative actions that may introduce an environmental impact (i.e. contamination, pollution, etc.).
Pre-start meeting	A pre-start meeting is a review of work progress and activities planned for the incoming shift focused on creating a positive environment, safety and quality culture and continually improving work habits, generating greater workforce involvement and increasing accountability. It will: Identify any changes that are to be made to the work or work environment, including impacts of nearby or interfacing work Include any environment or safety hazards reported and incidents that were reported on previous shifts. Construction Director and Project Director will ensure that site supervisors conduct daily pre-start meetings with all members of the work team prior to commencing work for each shift. These meetings will typically be conducted by a Supervisor or his/her approved delegate with individual work crews. Attendance at the pre-start meeting will be mandatory. Content of the pre-start meeting will be recorded, including any issues raised as well as attendance. Pre-start meetings will be held to ensure all workers are informed about hazards in their work area prior to start of the work. It will be used in conjunction with the SWMS document to ensure current on-site conditions (and hazards) are considered with those identified in the SWMS document, particularly looking for what conditions have changed (e.g. new workers, weather, changed materials, etc.) since the work was previously undertaken, i.e. the day or shift before. The pre-start meetings will contribute to implementing a safe work habit of checking the immediate surroundings and workplace conditions before starting, including considering potential environmental impacts.
Site Environment Plans (SEPs)	SEPs are site specific A3 sheets that include detailed plans illustrating key environmental controls, and tables documenting key requirements. These will inform and fully integrate with detailed construction planning.

The ESR or delegate will have approval authority for all risk assessment types (except Safe Work Method Statements and pre-start meetings – these will be signed by supervisors) to ensure environmental risks and opportunities are adequately raised and addressed.

In addition, as set out below, sub-plans will include a section that identifies key aspects and potential environmental impacts, which will also be used to inform development of specific management strategies to be applied across the Project.

Identified environmental risks, controls and accountabilities will be communicated to all relevant personnel through preparation and communication of our environmental Sub-plans, CAPs, Work Packs, EWMSs, SEPs, toolbox meetings, and pre-start meetings.

3.2.1.4 Significant Environmental Aspects and Impacts

Significant environmental impacts associated with aspects of the Project are detailed in Appendix A2. Each environmental sub-plan will identify further aspects and impacts associated with each element of the Project, including a detailed list of mitigation strategies and procedures to address each identified impact. Each sub-plan provides a range of measures that will be implemented to:

- Control the occurrence of the identified environmental impacts

- Protect the environment from harm
- Safeguard the local community
- Satisfy the environmental requirements of the Project and relevant agencies
- Provide positive environmental offsets to unavoidable environmental impacts (where practical and cost effective to do so).

Each Sub-plan contains a list of measures to minimise and/or control the environmental impacts associated with that aspect of the Project. Where required, documented actions to minimise the risks are addressed in the development of Work Packs and EWMS for each activity associated with the Project.

The timing of installation of control measures will be critical to ensuring that environmental obligations are met within the required timeframe and that controls are effective in achieving their purpose. For example, the installation of controls or crossings in a watercourse must consider seasonal weather patterns (flooding or scouring) and general disturbance issues. Specific measures and procedures have been identified to address each of the Project obligations and are included in the relevant sub-plan.

3.2.2 Regulatory requirements and compliance

3.2.2.1 Legislation

A register of legal and other requirements for the Project is contained in Appendix A1. This register will be maintained as a checklist and forms part of the Compliance Tracking Program for the project. This register will be reviewed at regular intervals (e.g. during management reviews) and updated with any applicable changes. Any changes made to the legal and other requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other methods detailed in Section 3.5.

3.2.2.2 Compliance tracking

The Project Approvals and REMMS are also contained in a Compliance Tracking Program and provide a reference to where each requirement is addressed by this CEMP or other Project documentation. Evidence of this can be seen in the various sub-plans and Appendix A1.

3.2.2.3 CoA Relevant to the CEMP

This CEMP has been prepared in accordance with the CoA SSI-9364 as shown in Table 3-3 and the Commonwealth controlled action approval EPBC 2018/8286 as shown in Table 3-4.

It is noted that the Infrastructure Approval (SSI-9362) will lapse on 23 April 2026, unless Work has physically commenced on or before that date.

3.2.2.4 Approvals, permits and licences

A number of approvals, permits and licenses have and/or will be obtained for the Project. Appendix A1 contains a register of all relevant environmental approvals, permits and licenses. The register will be maintained by the ESR and will be reviewed prior to the commencement of construction and/or stages of construction, and at regular intervals during construction and at least annually as part of the management review.

The following approvals and licences have been or will be obtained by TfNSW:

- Infrastructure Approval under Part 5, Division 5.2 of the EP&A Act – SSI 9364 granted by the Minister for Planning on 23 April 2021
- A Commonwealth controlled action approval from the Department of Agriculture, Water and the Environment (now DCCEEW) under Part 8 of the EPBC Act – EPBC 2018/8286 granted by the Minister for Environment on 3 June 2021
- An EPL under Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act) for 'road construction' where the Project meets the criteria. The EPL for M12 West project (No.21595) was obtained by TfNSW on 21st March 2022 and has been transferred to CPBGG JV on 17th June 2022. The EPL was issued by the NSW EPA to control the impacts of pollution from the construction of the M12 Motorway West. CPBGG JV are required to:
    - Comply with all conditions of the EPL

- Develop, annually test/update and publicly display the Pollution Incident Response Management Plan (PIRMP) for the project
- Make available publicly all monitoring data where required under the EPL

Other licences, approvals or exemptions that CPBGG JV may require during construction include:

- Road Occupancy Licence (ROL) under Section 138 of the Roads Act 1993
- An aquifer interference approval under the Water Management Act 2000 as necessary if construction requires intersection of a groundwater source. It is understood that a person can take up to 3 megalitres of groundwater through an aquifer interference activity per authorised project per water year without needing to obtain a water access licence.
- Exemptions to allow hot works to be undertaken on Total Fire Ban days as detailed under Section 99 of the Rural Fires Act 1997
- To undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes, as detailed under s28 of Environmentally Hazardous Chemicals Act 1985
- For construction or use of 'work' for purposes including the taking and using of water, as detailed under S21B of the Water Act 1912.
- WSIA requirements including Airport Lessee Consent (ALC) and Airport Building Controller (ABC) approval.

All necessary licences, permits and approvals required for the development of the project will be obtained and maintained as required throughout the life of the Project. No condition of the CoA removes the obligation for TfNSW or CPBGG JV to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 5.23 of the EP&A Act.

CPBGG JV will comply with all written requirements or directions of the Planning Secretary in accordance with NSW CoA A4.

3.2.2.5 TfNSW Requirements

The contract and project specifications which detail environmental requirements and measures to be implemented by CPBGG JV are identified below.

- TfNSW QA Specification G1 – Job Specific Requirements provides a summary of the requirements of the overall job including environmental issues
- TfNSW QA Specification G04 – Principal's Project Accommodation identifies the process to be followed by TfNSW contractors in relation to the construction and maintenance of site accommodation facilities for TfNSW including site office building(s), furniture, utility services, carparking areas, access road, security fence and other security measures for the construction of the project including the removal at the end of the project.
- TfNSW QA Specification G10 – Traffic Management identifies the process to be followed by TfNSW and its contractors in relation to the safe movement of traffic, including through traffic, within the project site.
- TfNSW QA Specification G36 – Environmental Protection identifies the environmental protection management process that must be followed by TfNSW and its contractors
- TfNSW QA Specification G38 – Soil and Water Management identifies the process to be followed by TfNSW and its contractors in relation to soil and water management issues
- TfNSW QA Specification G40 – Clearing and Grubbing identifies the process to be followed by TfNSW and its contractors in relation to clearing of all vegetation, both living and dead, all minor built structures, all rubbish and other materials which are unsuitable for use in Project and the grubbing of trees and stumps.
- TfNSW QA Specification R44 – Earthworks identifies the process to be followed by TfNSW and its contractors in relation to earthworks including contaminated land.
- TfNSW QA Specification G61 – Communication and Community Engagement identifies the process to be followed by TfNSW and its contractors in relation to communication and community engagement.

- TfNSW QA Specification GWS61 – Community and Community Engagement identifies communication and community engagement requirements that must be implement, as a minimum, to provide information to community and stakeholders and to respond to issues they raise during execution of the Work Under the Contract.
- TfNSW QA Specification R178 – Vegetation identifies the process to be followed by TfNSW and its contractors in relation to vegetation of cut and fill batters, median areas, open drains and other areas within the project site. Including surface preparation, topsoiling, fertilising, soring of seed, watering requirements, maintenance and monitoring.
- TfNSW QA Specification R179 – Landscape Planting identifies the process to be followed by TfNSW and its contractors in relation to landscape works including site preparation, supply and planting of containerised plant materials (including mulching, fertilising and staking), turfing, watering and maintenance after planting.
- TfNSW QA Specification R201 – Fencing identifies the process to be followed by TfNSW and its contractors in relation to fencing.

The CEMP has been developed to address the requirements contained in the above specifications.

In accordance with clause 4 of G1, CPBGG JV will confirm with TfNSW the extents of purchased or leased areas prior to planning to utilise these areas.

3.2.2.6 Guidelines and standards

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

- Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPIE, April 2020)
- Department of Infrastructure, Planning and Natural Resources Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004)
- Managing Urban Stormwater: Soils and Construction Volume 1, Landcom, (4th Edition) March 2004 (reprinted 2006) (the “Blue Book”).
- Interim Construction Noise Guideline (DECC, 2009)
- Construction Noise and Vibration Guidelines (RMS, 2016)
- AS/NZS ISO 14001: Environmental Management Systems (EMS)
- AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems
- AS/NZS 4801: Safety Management Systems.
- ISO 9001: Quality Management Systems

The guidelines and standards listed above are specifically relevant to this plan. Relevant guidelines and standards will vary for each Sub-plan and refer to the standards in their current version at the time of the project approval (SSI-9364). Specific guidelines and standards are included within each Sub-plan.

3.2.2.7 ISC requirements

The Project is targeting an ‘Excellent’ rating under the Infrastructure Sustainability (IS) Rating Scheme, administered by the Infrastructure Sustainability Council (ISC). The IS Rating is an assessment of a Project’s sustainability performance across a number of categories, including climate change. The Sustainability Management Plan addresses IS rating credit requirements.

3.2.3 Environment and culture

The Environment Policy (Appendix A3) describes CPBGG JV’s commitment to continual improvement in environmental performance and compliance with applicable legal requirements (Appendix A1).

CPBGG JV will seek to ensure that the Environment Policy, environmental procedures and construction methods are understood, implemented and maintained by personnel at all levels involved with the Project. The Environment Policy will be displayed at the site office and communicated to staff and other interested parties via inductions and ongoing awareness programs.

A positive environmental management culture will be established and fostered throughout the Project duration. This will be developed and maintained using the following proven techniques:

- Environmental responsibilities will be included in all relevant Position Descriptions. Roles that carry specific environmental accountabilities (e.g. those that supervise or manage work with specific environmental risks) will contain more detailed environmental management content
- The environmental responsibilities contained in Position Descriptions will be communicated to each person by their immediate supervisor upon commencing in their role
- All personnel in leadership roles on the Project will participate in environmental management activities, including task observations, incident reviews and Safety, Health, Environment and/or Quality meetings.

The Project management team will:

- Regularly review environmental performance against objectives and targets and raise corrective actions to maintain or improve environmental performance as necessary
- Address pertinent environmental matters at communication forums.

The Project Director and ESR will assist in development of 'Project Rules' during the start-up phase to address key environmental management matters. These rules will be documented, communicated and prominently displayed at the Project site and will be reviewed at least every six months. Any person who breaches these rules will be managed in accordance with CPB Contractors' performance management protocols.

Environmental key performance indicators (KPIs) for the Project are identified in Section 3.2.4. The associated KPIs include lead and lag indicators. Measurable targets will be set for each KPI and an applicable time frame nominated. The targets will be in line with CPB Contractors Group level and Business Unit targets.

Environmental management performance goals will be set and reviewed for individuals with environmental leadership roles during the performance and development review process.

Early and Project specific communication with regulatory agencies and the community will be prioritised during the Project start–up phase and will continue throughout construction. Adoption of environmental regulatory guidelines and advice is standard practice for CPBGG JV during the development of Project specific documents and construction techniques.

An initial workshop will be held with key Project staff, regulatory agency representatives and TfNSW representatives at the commencement of the Project to discuss CPBGG JV's techniques to foster and maintain a positive environmental management culture for the Project team and promote environmental management best practice and sustainability initiatives. The risk workshop will also identify high risk activities. Each activity will be assessed to identify the relevant steps in the activity and the associated environmental hazards, initial risk levels, mitigation measures and to avoid, manage and/or minimise the risks and residual risks.

3.2.4 Environmental objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key issues identified through the environmental assessment and risk assessment process. The objectives and targets are consistent with the Environment Policy will assist in monitoring whether the commitments of the policies are being met.

Each Sub-plan also includes a section for aspect specific objectives and targets. These aspect specific targets reflect compliance with relevant Approvals and Licence conditions.

The performance of the Project against the following objectives and targets and those listed in the sub plans will be assessed and documented in the Project monthly performance reports, bi-annual construction compliance reports and assessed annually as part of the management review. Refer to Section 3.9 for all reporting requirements and timeframes.

All environmental management documentation including relevant environmental management procedures are listed in Appendix A4 Document Register.

Environmental objectives and targets for the Project are provided in Table 3-3 and Table 3-4.

Table 3-3 Leading Indicators

Key Performance Indicator	Target	Timeframe	Actions to be taken	Accountability
Environmental training	100% of scheduled training completed on time	Prior to relevant activities	Based on environmental risks and the qualifications and experience of the Project workforce	CPBGG JV Project Director
Significant Environmental Aspect Management	Significant Environmental Aspect (SEA) Review	Each quarter	SEA Review Template	CPBGG JV Project Director
Environmental management review of Work Packs	100%	Prior to activity commencement / quarterly reviews	Work Pack sign-off/	Environmental management review of Work Packs
Env. Audits	100% of scheduled audits completed.	As per project obligations and (minimum 1 per annum)	Synergy / Monthly environment and sustainability dashboards	CPBGG JV ESR
Completion of inspections	100%	Each month	Inspections of environmental controls to be identified, scheduled and conducted	CPBGG JV ESR (or delegate)
Action Management	>80% of all env actions raised are completed on time. Calculated as actions closed on time/ actions due during period.	Each month	Synergy / Monthly environment and sustainability dashboards	CPBGG JV Project Director
Engagement	Subcontractor forums	1 per Project / quarter	Synergy	CPBGG JV Project Director

Table 3-4 Lagging Indicators

Key Performance Indicator	Target	Timeframe	Actions to be taken	Accountability
Level 1, 2 & HPI environmental incidents	Zero	Ongoing	Implementation of the CEMP	CPBGG JV Project Director
Number of actions taken by regulators and/or client	Zero	At all times	Implementation of the CEMP	CPBGG JV Project Director
Area of land cleared or disturbed without authorisation	Zero ha	At all times	Implementation of the Construction Fauna and Fauna Management Sub-plan (CFFMP)	CPBGG JV Project Director
Number of unauthorised discharges	Zero	At all times	Implementation of Construction Soil and Water Management Sub-plan (CSWMP)	CPBGG JV Project Director
Damage to heritage items or places without relevant approvals	Zero	At all times	Implementation of Construction Cultural Heritage Management Sub-plan (CCHMP)	CPBGG JV Project Director

100% of all fuel use and GHG emissions generated by the project is captured and entered into JDE (NGER reporting requirement).	All use / emissions entered into JDE System	Monthly	Implementation of Sustainability Management Plan	CPBGG JV ESR
% of waste reused or recycled	75% of waste generated [note waste types excluded from calculation must be defined]	12 months	Implementation of Construction Waste and Resources Management Sub-plan (CWMP)	CPBGG JV Project Director

3.2.5 Environmental Work Method Statement

EWMS and Work Packs are the main site-based documents used by CPBGG JV to identify and manage environmental risks associated with all construction activities especially in or adjacent to environmentally sensitive areas.

A series of EWMS's and Work Packs will be prepared to address the combined impacts of erosion and sedimentation, water quality control, impacts on fauna, property access, access across creeks, noise, dust and vegetation removal. All EWMS will be prepared by CPBGG JV and reviewed by TfNSW Project Manager, TfNSW Environment and Sustainability Manager (or delegate) and the ER prior to the commencement of the construction activities to which they apply.

The EWMS's and Work Packs will utilise specific information from the CEMP as it applies to each activity and work zone and must include a sequence of work and environmental controls to be implemented in each work phase. As such, they will include but not be limited to the following:

- Description of the works/activities including machinery
- Outline of the sequence of the work/activities
- Identification of potential environmental risks/impacts due to the works/activities
- Evaluation of methods to eliminate/reduce the environmental risk
- Mitigation measures to reduce the environmental risk
- Any safeguards resulting from consultation with public authorities and other stakeholders
- A map indicating the locations of sensitive locations (i.e. threatened species) and likely potential impacts
- Identification of work area and exclusion areas
- Operation and monitoring measures to eliminate/reduce environmental impacts
- A process for assessing and reporting the performance of the implemented environmental control measures
- A process for resolving environmental issues or conflicts and reporting outcomes.

All CPBGG JV personnel and subcontractors undertaking a task governed by a EWMS and Work Packs shall have signed on to the documents, which demonstrates that they have participated in training and awareness of the specific EWMS and Work Pack, and that they have understood their obligations prior to commencing work.

EWMS shall be prepared for activities outlined in Table 3-5.

Table 3-5 Activities requiring an EWMS

Activity	M12 West
Low impact work	✓
Activities with high environmental risk	✓
Activities that impact on or are in proximity to environmentally sensitive areas such as ecological communities and threatened species	✓
Activities that impact on or are in proximity to waterways including:	
• Badgerys Creek	✓
• Cosgroves Creek	✓
Activities that impact on or are in proximity to non-Aboriginal heritage sites including:	
• McGarvie Smith Farm	✓
• Luddenham Road alignment	✓
• McMasters Field Station	✓
Activities that impact on or are in proximity to Aboriginal heritage sites including:	
• CCW	✓
• Isolated artefact	✓
• The Northern Road AFT-14	✓
Pre-construction activities including (as relevant): • Delineation of sensitive areas • Installation of erosion and sedimentation control • Heritage excavation and salvage • Treatment of contamination sites	✓
Topsoil stripping and earthworks including temporary stockpiling and disposal of excavated material and protocols for the management of materials containing asbestos	✓
Utilities relocation	✓
Compound and ancillary facility establishment and use	✓
Piling	✓
Contaminated land	✓
Activities that involve work in waterways or that pose a risk to receiving water quality including:	
• Construction and operation of sediment basins and/ or buffer swales and connecting drainage for the associated catchment area	✓
• Construction of culverts, including associated staging, flow diversions, any dewatering, short- and long-term stabilisation and removal of existing structures	✓
• Vegetation clearing and grubbing	✓
• Installation of temporary construction boundary fencing	✓
• Dewatering activities including activities where construction water may be discharged into natural waterways	✓
• Construction and operation of concrete wash out areas	✓
• Managing runoff from curing processes	✓
Activities that generate high levels of noise and/or vibration (where there are nearby receptors)	✓
All works associated with rehabilitation of farm dams including but not limited to dewatering and filling.	✓

A register of EWMS and Work Packs will be maintained as part of the Document Register in Appendix A4.

EWMS shall be submitted progressively to suit the construction stages. EWMS shall be submitted to TfNSW is accordance with the Hold Point requirements listed in TfNSW Specification G36 Clause 3.2.4, outlined below in section 3.2.7.

EWMS shall be forwarded to the appropriate regulatory Authority (for high risk activities), the ER and TfNSW for review at least 20 working days prior to commencement of the Works and any Temporary Work referred to in the EWMS. TfNSW shall be consulted to determine which EWMSs require consultation with regulatory Authorities prior to being approved.

Proposed changes to EWMS shall be advised to the appropriate regulatory Authority, the ER and TfNSW before the changed work method is adopted.

3.2.6 Sensitive Area Plans

The Project traverses a diversity of environmental and socially sensitive areas and sites. To assist pre-Construction planning and onsite construction management, these site constraints will be consolidated by CPBGG JV a series of map-based sheets that extend the length of the Project.

Sensitive Area Plans (SAPs) include information pertaining, but not limited to:

- Commonwealth and State listed Threatened Ecological Communities (TECs)
- Potential or actual acid sulphate soil areas
- Contaminated sites
- Monitoring locations for groundwater, surface water and dust
- Noise sensitive receivers e.g. residential dwellings, educational institutions
- Flora features, including threatened species and endangered ecological communities and vegetation to be retained/protected.
- Aboriginal and non-Aboriginal heritage sites (eg. Fleurs radio telescope site), including items, places, objects and sites
- Local waterways (South and Kemps Creeks); and
- Actual and potential threatened fauna habitat
- Recorded threatened fauna sightings.

SAPs are included in Appendix A6. They are working elements of the CEMP and will be revised throughout construction to reflect true ground conditions and the most up-to-date information available on sensitive sites.

SAPs will be used in conjunction with EWMS's to help identify key risk areas and to promote ongoing communication to construction personnel during the Project. Prior to the commencement of construction, these SAPs are required to be reviewed by the TfNSW Environment and Sustainability Manager (or delegate).

3.2.7 Hold Points

As nominated in TfNSW Specifications approval is required from the TfNSW Representative prior to commencement, or recommencement, of certain activities. Hold Points will be incorporated into work procedure documentation (e.g. CAPs, Work Packs and/or ITPs). The TfNSW Representative will be provided with reasonable opportunity to witness any inspections and tests preceding the release of Hold Points. The release of a Hold Point by the TfNSW Representative will be documented and controlled. Table 3-6 lists TfNSW hold points relevant to environmental management for the Project.

Table 3-6 Hold points (G2, G36, G38, G40,R44 nd R178)

TfNSW Hold and Witness Point References	Hold or Witness Point Details	Submission Details
G2 cl 14.2	Hold Point: Commencement of work on site. Transfer of Environmental Protection Licence.	At least s**even (7) days** prior to the proposed commencement of work, provide a copy of the transferred environment protection licence to the Principal.
G36 cl3.1	Hold Point: Submission of CEMP and selected CEMS documents Submission of amended CEMP and selected CEMS documents	At least **10 working days** prior to the proposed commencement of the stage of Work Under the Contract and following completion of point 6 in the Review and Acceptance Procedure of G36 clause 3.1, submit the CEMP and associated Plans, Sub-Plans, Monitoring Programs and/or EWMS, as well as the CEMS documents listed in G36 clause 3.1.

TfNSW Hold and Witness Point References	Hold or Witness Point Details	Submission Details
G36 cl3.2.2	Hold Point: Obtaining of approvals, licences and permits	At least **5 working days** prior to the activity, provide to the Principal evidence of receipt of the approval, licence and/or permit from the relevant authority.
G36 cl3.2.4	Hold Point: Submission of EWMSs	At least **20 working days** prior to the proposed commencement of each applicable work activity, submit the EWMS documents, addressing the issues listed in Clause 3.2.4 for the nominated work activity.
G36 cl3.2.5	Hold Point: Submission of Low Impact Work Method Statement prior to approval of the CEMP	At least **10 working days** prior to the activity, provide to the Principal the Low Impact Work Method Statement
G36 cl3.5.2	Hold Point: Submission of Draft Environmental Training Materials	Drafts of all environmental induction and/ or online materials must be provided to the Principal at least **10 working days** before it is planned to be used.
G36 cl3.10	Hold Point: Any activity that causes or has the potential to cause harm to the environment due to your failure to meet your environmental obligations under the contract (including recurring issues from checklists, reviews, improvement notices, inspections, audits and surveillance)	Verification that environmental nonconformities has been rectified.
G36 cl3.11	Hold Point: Submission of the final Pre-Construction Compliance Report	The final Pre-Construction Compliance Report must be provided to the Principal at least **10 working days** before commencement of construction.
G36 cl4.2	Hold Point: Submission of proposed NSW EPA accredited site auditor	At least **5 working days** prior to preparation of the Remedial Action Plan, submit your proposed NSW EPA accredited site auditor, and relevant CV and accreditation.
G36 cl4.2	Hold Point: Submission of Remedial Action Plan for contaminated land	At least **5 working days** prior, submit your Remedial Action Plan to be prepared by you, and relevant procedures.
G36 cl4.2	Hold Point: Completion of implementation of the Remedial Action Plan	Submission of Section A Site Audit Statement and accompanying Site Audit Report.
G36 cl4.2	Hold Point: Submission of the Long Term Environmental Management Plan (LTEMP) to the NSW EPA accredited site auditor for approval	Submission of Draft LTEMP to be provided to TfNSW at least **20 days prior** to sign off by the NSW EPA accredited site auditor.
G36 cl4.7	Hold Point: Commencement of pile driving, excavation by hammering or ripping, dynamic compaction or demolition operations or any other activities which may cause damage through vibration	At least **30 working days** prior, submit to the Principal a copy of the Building Condition Inspection Reports and the Construction Vibration Management Sub-Plan or the combined Noise and Vibration Management Sub-Plan (where blasting is not permitted).
G36 cl4.11	Hold Point: Copy of “s.143 Notice” - Transport of waste generated under the Contract to the “waste site”.	Completed and signed copy of “approved notice” and supporting documents, as listed under items (a) to (g) in G36 Clause 4.11.4.
G36 cl4.13	Hold Point: Working in or near the environmentally sensitive areas	At least **10 working days** prior, provide to the TfNSW Representative a copy of the EWMS for working in or near the ESA and written notice that the ESA are clearly delineated with locations and boundaries signposted.

TfNSW Hold and Witness Point References	Hold or Witness Point Details	Submission Details
G36 cl4.15.2	Hold Point: Taking possession of any land nominated or authorised by the Principal for use for the Contractor's site facilities	Pre-construction land condition assessment report is required for each area intended for use for site facilities, and evidence of any necessary statutory and environmental approvals.
G38 cl1.2.7	Hold Point: Submission of evidence of appropriate Soil and Water Management Plan and Erosion and Sediment Control personnel	Within **2 weeks** of Contract Award, provide a confirmed list of personnel (including subcontractors) who will be working on the Contract, with evidence of pertinent qualifications, to satisfy the requirements of this G38 Clause.
G38 cl2.1.2	Hold Point: Commencement of work activities not previously addressed by SWMP documents and authorised by earlier Hold Point release.	At least **5 working days** prior to the proposed commencement of each applicable work activity, submit the SWMP documents, addressing the issues listed in G38 Clause 2.1.2 for the nominated work activity.
G38 cl3.1.1	Hold Point: Commencement of work in each catchment requiring the installation of erosion control and sediment capture measures not previously addressed by ESCP and authorised by earlier Hold Point release.	Drawings prepared progressively for sections of the Site where work is to commence. The drawing(s) must be signed and approved by your ESR, Construction Superintendent and Project Manager before being submitted at least **ten working days** before disturbance of the surface of the section of the Site. TfNSW are to review the ESCP before releasing the Hold Point.
G38 cl3.1.1	Witness Point: Disturbance of the existing surface on a section of the Site (catchment), other than for the installation of erosion and sediment capture measure	Written advice including signed approval by your ESR and Construction Superintendent, that the measures described in the ESCP and included on the drawing submitted progressively for that section of the Site including sediment basins and other water quality structures together with associated temporary or permanent connecting stormwater drainage lines and/or catch drains, have been implemented or the date by which implementation will be completed. The advice must be forwarded at least **five working days** before the works are to commence.
G38 cl3.9	Hold Point: Commencement of construction of any activities in flood prone areas.	At least **10 working days** prior to commencing construction of any activity in / around waterways, submit your Flood Management Sub-Plan.
G40 cl2.4.2	Hold Point: Submission of Clearing and Grubbing Plan and other required documents prior to clearing any area.	Clearing and Grubbing Plan, Environmental Work Method Statement (Annexure G40/D) and report on your Ecologists pre-clearing survey, Toolijooa clearance, all locations of environmentally sensitive areas, measures to reduce clearing in environmentally sensitive areas, the presence of weeds and unsound trees together with written notice that limits of clearing and areas of weed infestation identified in the ecologist report (Clause 2.4 (a)) are marked), at **least fifteen working days** before starting any clearing.
G40 cl6.1	Hold Point: Submission of Weed, Pest and Pathogen Management Plan prior to clearing in any area.	Weed, Pest and Pathogen Management Plan together with written notice that areas of weed infestation identified in the Ecologist's report (Clause 2.4.1) are marked, at least **15 working days** before starting any clearing.

TfNSW Hold and Witness Point References	Hold or Witness Point Details	Submission Details
R44 cl2.3	Witness Point: Advance topsoil depth and contamination investigations/ inspections.	At least **1 working day** prior to advance topsoil depth and contamination investigations/ inspections, notify the Principal of the time, date and location of the investigations/ inspections.
R44 cl 2.5.2	Hold Point: On-Site Encapsulation of Asbestos Contaminated Material	Submission of an Asbestos Management Sub-Plan (AMSP), including your Remediation Action Plan and details of proposed encapsulation and proposed location. This is to be provided to TfNSW **at least four (4) weeks prior** to on-site encapsulation.
R44 cl 2.5.2	Hold Point: Excavation of Asbestos Contaminated Material	At least **24 Hours prior to excavation**, submit details of: (1) Each proposed location and method of encapsulation, including the exact type and extent of the encapsulation zone and applicable Statutory documentation (2) Air monitoring and dust suppression methodology for management and treatment of ACM (3) If a borrow pit option is proposed submit a Report from your Hydrogeologist confirming and certifying the suitability of the following: - the locations where fill material can be located and the depths at which it can be placed and; - the design of any encapsulation and drainage systems required to minimise interaction of encapsulation material with groundwater
R178 cl2.13	Hold Point: Use of Compost Blanket	At least **10 working days** prior to application of the compost blanket, submit certification for compliance of the compost blanket, supplier's written instructions for installation and details of the locations to be treated

3.2.8 Internal Approvals / Permit Systems

Internal permit systems or processes are tools used by CPBGG JV's ESR and other relevant managers such as the Safety Manager or Construction Director, to assist in assessment of upcoming works such as dewatering activities or clearing activities.

Prior to approving these permits, assessment considerations include:

- Project obligations including but not limited to CoAs, EPL conditions and TfNSW specifications
- Work techniques or methodologies and associated Project procedures
- Any need for external approvals (e.g. EPL variations).

The following internal Permit Systems will be implemented during the delivery of the Project:

- Dewatering Permit
- Land Disturbance Permit (LDP)
- Out of Hours Works (OOHW) Permit
- Permit to Enter Protected or No-Go Area
- Material Movement Permit.

The Permit to Dewater will be used for all dewatering operations, including sediment basins and any other water to be released from the construction site. This internal permit will document measures to avoid pollution, pump location/size and suction heights, release qualities/limits, locations of approved release points, monitoring of discharge, and ESR (or delegate) signoffs before release.

The LDP will be used to identify environmental sensitive areas and utilities in proximity to construction activities. It will cover all clearing and earthworks activities as well as works in new areas, and will document environmental control measures and ESR (or delegate) signoffs.

An OOHW Permit will be implemented for all required OOHW approved in accordance with Instrument of Approval and EPL. This permit will include measures to reduce impacts, location of equipment to minimise impacts, monitoring of OOHW and ESR (or delegate) signoffs on the permit before release.

Entry into Environmentally Sensitive Areas (ESA) will be avoided at all times. However, should entry be required this will be managed in accordance with an authorised Permit to Enter Protected or No-Go Area, approved by the ESR. This permit will include details of proposed works, measures to reduce impacts, consultation with the relevant Authority and TfNSW Representative as required, and sign-offs on the permit before release.

The Material Movement Permit will be used to identify all materials to be exported for appropriateness of receiving facility, material tracking, appropriate stockpiling location and waste classification purposes.

A log of all internal permits issued shall be held and/or reviewed by the ESR.

3.2.9 Erosion and Sediment Control Plans

Appropriate planning is crucial to effective management of erosion and sedimentation on site. Erosion and sediment control plans (ESCP's) are planning documents which clearly show the site layout and the approximate location of erosion and sediment control structures. ESCP's will be developed for all work areas prior to commencing activities.

ESCPs will be developed by the CPBGG JV environmental staff in consultation with Project Engineers, Superintendents, Foremen/Supervisors, other relevant project staff and the Project Soil Conservationist(as required). ESCPs will be developed by personnel who have demonstrated skills and experience in preparing ESCPs in accordance with the Blue Book guidelines. This will ensure that erosion and sediment management is incorporated into the planning phase of Construction activities.

ESCP's will be regularly reviewed as site conditions change and flow paths are altered (e.g. the reshaping of drainage lines to direct sediment laden runoff). Once approved by TfNSW by way of hold point release (as per section 3.2.7), all revisions will be controlled and allocated an appropriate revision number. ESCP's will be maintained in a site specific ESCP register and available to site personnel for reference. A process for the preparation, review and auditing of ESCP's is detailed in CSWMP (Appendix B8).

3.3 Resources, responsibilities and authority

The key environmental management roles and responsibilities for the construction phase of the Project are described below. The structure of these roles is shown in Figure 3-4 and Appendix A5.

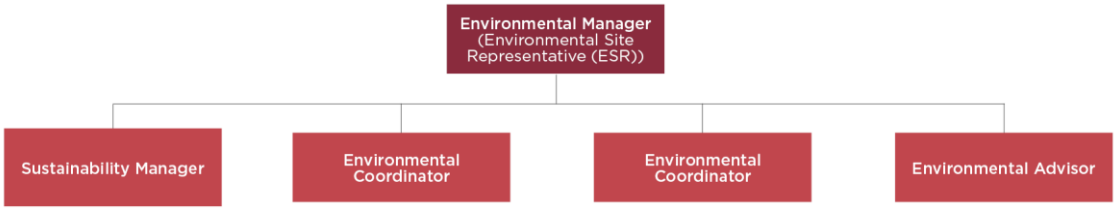


Figure 3-4 Environmental Management structure

3.3.1 Roles and responsibilities

3.3.1.1 CPBGG JV Project Director

The environmental responsibilities of the CPBGG JV Project Director include (but are not limited to):

- Ensure all works comply with relevant regulatory and Project requirements, including compliance with the approvals, EPL, REMMs, TfNSW QA Specifications

- Ensure the requirements of the OCEMP and the CPBGG JV's CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements
- Endorse and support the TfNSW and CPBGG JV's environmental policy attached at Appendix A3 of the OCEMP and Appendix A3 of this CEMP respectively
- Liaise with TfNSW, ER and other government authorities as required
- Participate and provide guidance in the regular review of this CEMP and supporting documentation
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP
- Ensure that all personnel receive appropriate induction training, including details of the environmental and community requirements
- Ensure that complaints are investigated to ensure effective resolution
- Stop work immediately if an unacceptable impact on the environment is likely to occur
- Point of contact in the event of an environmental site emergency
- 24-hour person of contact for environmental regulatory authorities.

3.3.1.2 CPBGG JV Construction Manager

The environmental responsibilities of the CPBGG JV Construction Manager include (but are not limited to):

- Plan construction works in a manner that avoids or minimises impact to environment
- Ensure the requirements of this CEMP are fully implemented
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements
- Support the CPBGG JV's ESR in achieving the Project environmental objectives
- Ensure environmental management procedures and protection measures are implemented
- Ensure all Project personnel attend an induction prior to commencing works
- Liaise with TfNSW, the ER and government authorities as required
- Maintain a relationship with the ER
- Stop work immediately if an unacceptable impact on the environment is likely to occur
- Point of contact in the event of an environmental site emergency
- 24-hour person of contact for environmental regulatory authorities.

3.3.1.3 CPBGG JV Superintendent

The environmental responsibilities of the Superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with the OCEMP, the CPBGG JV's CEMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction prior to the commencement of works
- Co-ordinate the implementation of this CEMP
- Develop EWMS in consultation with CPBGG JV's ESR
- Co-ordinate the implementation and maintenance of pollution control measures
- Identify resources required for implementation of this CEMP
- Support the CPBGG JV's ESR in achieving the Project environmental objectives, including on ground implementation of the EWMS and ESCP
- Maintain a relationship with the ER
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the CPBGG JV's ESR
- Co-ordinate action in emergency situations and allocate required resources
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the CPBGG JV's Construction Manager and CPBGG JV's ESR.

3.3.1.4 CPBGG JV Environmental Site Representative

The environmental responsibilities of the ESR include (but are not limited to) the following:

- Advise on environmental matters specified in TfNSW specifications, the environmental assessment documents, EPL and any other approval/licence/permit;
- Overall responsibility for the implementation of environmental matters on the Project
- Implementation of the CEMP
- The development, implementation, monitoring and updating of this CEMP and sub-plans in accordance with ISO14001
- Report to the CPBGG JV Project Director on the performance and implementation of this CEMP
- Ensure management reviews of this CEMP are undertaken annually, documented and actions implemented
- Ensure environmental risks of the Project are identified ongoing and appropriate mitigation measures implemented
- Identify where environmental measures are not meeting the targets set and where improvement can be achieved
- Ensure environmental protocols are in place and managed
- Ensure environmental compliance
- Obtain and update all environmental licences, approvals and permits as required
- Liaise with the ER, the TfNSW Environment and Sustainability Manager (or delegate) and approval authorities
- Manage environmental document control, reporting, inductions and training
- Manage environmental reporting within CPBGG JV's Project team and to the TfNSW and regulatory authorities
- Prepare reports on a monthly basis outlining the Project works undertaken and the achievements that have been met, as well as identifying those areas where improvements were made
- Oversee site monitoring activities, site inspections, audits and site checklists
- Ensure monitoring records are appropriately maintained, reviewed and any non-compliance issues addressed
- Record and provide written reports to the CPBGG JV's Construction Manager of non-conformances or corrective actions with this CEMP. This may include the need to implement additional, or revise existing, mitigation measures
- Provide reports to the CPBGG JV's Project Director on any major issues resulting from the Project
- Assist all site staff with issues concerning Project environmental matters
- Manage all sub-contractors and consultants with regard to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents
- Develop and facilitate induction, toolbox talks, environment awareness notes and other training programs regarding environmental requirements for all site personnel
- Notify TfNSW and relevant authorities in the event of an environmental incident and manage close-out of these
- Assist in identifying environmental risks and advise the CPBGG JV's Construction Manager of any requirements to avoid or minimise impacts
- Stop activities where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformities, and advise the CPBGG JV's Project Director, CPBGG JV's Construction Director and CPBGG JV's Superintendent
- Assist the CPBGG JV's Communications Manager to resolve environment-related complaints
- Develop, review and approve ESCPs in consultation with the CPBGG JV's Superintendent, Site engineers, Foreman and other relevant site personnel, as required; and

- Manage the day-to-day environmental elements of construction.

The ESR will consult and co-operate with all relevant government agency representatives and will assist during agency compliance audits.

The ESR shall notify TfNSW immediately of any visit to the Project site by a government agency representative. A report would be prepared on each occasion when the site is visited, documenting the purpose and outcome of the visit (including any actions to be undertaken). This report will be submitted to TfNSW within one (1) working day of the government agency visit.

3.3.1.5 CPBGG JV Sustainability Manager

The environmental responsibilities of the Sustainability Manager include (but are not limited to) the following:

- Ensure the development and implementation of the Sustainability Management Plan for each relevant stage of the Project
- Ensure the development, implementation and verification of sustainability measures are carried out for all construction works
- Support the Project Director in achieving sustainability objectives, targets and requirements
- Manage the Sustainability Induction and Training Program for relevant Project personnel
- Ensure relevant Project sustainability personnel are capable and suitability skilled to undertake designated sustainability responsibilities
- Assist and support the CPBGG JV's Project Director to ensure the sub-contractors fulfill sustainability obligations, targets and requirements
- Monitor progress of sustainability targets and ensure actions are initiated and performed throughout the Project
- Coordinate and prepare the sustainability initiative progress reports for TfNSW.

3.3.1.6 CPBGG JV Environmental Coordinators/Advisors

The environmental responsibilities of the Environmental Coordinators/Advisors include, but are not limited to, the following:

- Assist in preparing the CEMP (including any future revisions) in accordance with all relevant requirements
- Develop PESCP in consultation with the soil conservationist, superintendent, site engineers, foreman and other relevant site personnel, as required
- Undertake site inspections, carry out monitoring activities and complete site checklists
- Ensure monitoring records are appropriately maintained, reviewed and any non-compliance issues addressed
- Manage the day-to-day environmental elements of construction
- Record and provide written reports to the ESR of nonconformances or corrective actions with the CEMP. This may include the need to implement additional, or revise existing, mitigation measures
- Assist in identifying environmental risks
- Stop work immediately if an unacceptable impact on the environment is likely to occur or to require other reasonable steps to be taken by the Construction Manager or site construction staff to avoid or minimise impacts
- Provide reports to the ESR on any major issues resulting from the Project
- Assist all site staff with issues concerning Project environmental matters
- Assist in developing training programs regarding environmental requirements and deliver where required, including delivery of the environmental component of toolbox talks
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Manager, Construction Manager, Superintendent and ESR.

3.3.1.7 CPBGG JV Communications Manager

The environmental responsibilities of the Communications Manager include (but are not limited to) the following:

- Ensure that all community consultation activities are carried out
- Report any environmental issues to the ESR raised by stakeholders or members of the community
- Communicate general Project progress, performance and issues to stakeholders including the community
- Be available for contact by residents and the community at all reasonable times to answer any questions and to address any concerns in relation to construction
- Maintain a relationship with the ER
- Maintain the 24-hour complaints hotline
- Maintain the complaints register in accordance with the Complaints Management System.

The Community and Stakeholder Consultation Sub-plan once developed will contain further details.

3.3.1.8 CPBGG JV Project/Site Engineers

The environmental responsibilities of the Site / Project engineers include (but are not limited to) the following:

- Provide input into the preparation of environmental planning documents as required
- Ensure that instructions are issued and adequate information provided to employees that relate to environmental risks on-site
- Ensure that the works are carried out in accordance with the requirements of this CEMP and supporting documentation, including the implementation of all environmental controls
- Identify any environmental risks
- Identify resource needs for implementation of CEMP requirements and related documents
- Ensure that complaints are investigated to ensure effective resolution
- Act in the event of an emergency and allocate the required resources to minimise the environmental impact
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the CPBGG JV Superintendent and CPBGG JV's ESR.

3.3.1.9 CPBGG JV Foreman / Site Supervisor

The environmental responsibilities of the Foreman / Site Supervisors include (but are not limited to) the following:

- Undertake any environmental duties as defined by the CPBGG JV's Superintendent or CPBGG JV's Project/Site Engineers
- Control field works and implement/maintain effective environmental controls
- Where required, undertake environmental risk assessment of works prior to commencement
- Ensure site activities comply with EWMS and relevant records are kept
- Ensure all site workers are site inducted prior to commencement of works
- Ensure all resources required to perform the works effectively are available and in place
- Attend to any spills or environmental incidents that may occur on site
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the CPBGG JV's Superintendent
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the CPBGG JV's Project Director, CPBGG JV's Construction Manager, CPBGG JV's Superintendent or CPBGG JV's ESR.

3.3.1.10 CPBGG JV Wider project team (including sub-contractors)

The environmental responsibilities of the wider Project Team (including subcontractors) include (but are not limited to) the following:

- Comply with the relevant requirements of this CEMP, or other environmental management guidance as instructed by a member of the Project's management
- Participate in the mandatory Project/site induction program
- Report any environmental incidents to the CPBGG JV foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident
- Undertake remedial action as required to ensure environmental controls are maintained in good working order
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the Project Director, Construction Manager, Superintendent or ESR.

3.3.1.11 CPBGG JV Soil Conservationist

The environmental responsibilities of the Project delegated Soil Conservationist include (but are not limited to) the following:

- Suitably experienced external Certified Practicing Erosion and Sediment Control Professional (CPESCP) as the Soil Conservationist approved under TfNSW at category S1 or higher
- Review all erosion, sediment and water pollution plans, controls and measures prior to installation
- Assist the Project with training relating to project erosion and sediment control issues
- Liaise on a regular basis with any soil conservationist appointed for the project by the Principal
- Undertake site inspections as required, but at least monthly and prepare a report detailing findings from these inspections
- Issues identified in these inspection reports must be acted on and reported to the Principal within 5 working days.

3.3.1.12 CPBGG JV Project Ecologist

The environmental responsibilities of the Project delegated ecologist include (but are not limited to) the following:

- Must have qualifications and experience in fauna identification and handling, botany, environmental science, landscaping or bush regeneration and experience in identifying weeds and other plant species
- Review and provide input to fauna handling procedures and relevant EWMS
- Conduct pre-clearing survey and provide clearing supervision in accordance with TfNSW G40
- Perform fauna handling and relocation where required
- Conduct flora and fauna surveys, weed surveys, ecological constraints assessments, monitoring and trapping where required
- Prepare detailed pre-clearing and post-clearing reports
- Review and advise on the Clearing and Grubbing Plan
- Provide advice on reuse opportunities for hollows, tree trunks, mulch, bushrock and root balls required to be cleared for the project before any clearing activities are undertaken. Opportunities may include habitat enhancement, beneficial re-use and rehabilitation work and are to be informed by the expression of interest process detailed in G40 Clause 4.8(n)
- Provide expert advice on biodiversity related issues.

3.3.1.13 Environmental Representative

In accordance with NSW CoA A30, an Independent ER must be approved by the Planning Secretary prior to the commencement of work. The ER was approved by the Planning Secretary on 03 May 2021. The environmental responsibilities of the ER for the Project are detailed in NSW CoA A34 and include:

- Receive and respond to communication from the Secretary in relation to the environmental performance of the Project
- Consider and inform the Secretary on matters specified in the terms of the Infrastructure Approval
- Consider and recommend to TfNSW and the CPBGG JV any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community

- Review documents identified in NSW CoA A9, A13, A16, A24, C1, C4 and C11 and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under the Infrastructure Approval and if so:
  - Make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary) or
  - Make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary/Department for information or are not required to be submitted to the Secretary/Department)
- Regularly monitor the implementation of the documents listed in NSW CoA A9, A13, A16, A24, C1, C4 and C11 to ensure implementation is being carried out in accordance with the document and the terms of the Infrastructure Approval
- As may be requested by the Secretary, help plan, attend or undertake audits of the Project commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under NSW CoA A38 and A41
- As may be requested by the Secretary, assist DPE in the resolution of community complaints
- Assess the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities as required by NSW CoA A20
- Consider any minor amendments to be made to the CEMP, Sub-plans, Construction Monitoring Programs and SEMPs that involve updating or are of an administrative nature and do not increase impacts to nearby sensitive receivers, and ensure they are consistent with the terms of this approval and the documents 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
- Prepare and submit to the Planning Secretary and relevant regulatory agencies, for information, an ER Monthly Report providing the information set out in the ER Protocol under the heading “Environmental Representative Monthly Reports.” The ER Monthly Report must be submitted within seven days following the end of each month for the duration of the ER’s engagement for the project.

CPBGG JV will assist the ER in fulfilling their roles in accordance with NSW CoA A30 through the following:

- Facilitate ER inspections (refer to Section 3.9.1)
- Notify the ER of any environmental incidents and identify any incident with significant off-site impacts on people or the biophysical environment which will be reported to the Secretary
- Provide the ER with all information and documents, allow the ER to attend meetings and audits of this Plan and access such premises as may be necessary or reasonably required by the ER to allow the ER to perform its functions under the Project Approval
- Update this CEMP to address any relevant requirements and recommendations of the ER
- Review and analyse the cause of any non-conformances raised by the ER and develop a plan of corrective action to minimise the likelihood of recurrence
- Provision of complaints register for any complaints received (on the day they are received
- Comply with the lawful requirements of the ER, so as to allow the ER to discharge any functions under the Planning Approval.

3.3.1.14 Environmental Review Group

The Environmental Review Group (ERG) comprises the ER and representatives of TfNSW, the Project delivery team, regulatory authorities (EPA, DPI Fisheries) and local councils (Penrith, Liverpool and Fairfield City Councils).

The purpose of the ERG is to ensure prompt and effective consultation and resolution of environmental issues raised by or affecting Government agencies, Councils, TfNSW, the community and Project teams. The ERGs role is to work collaboratively with the Project teams to provide proactive advice on environmental management issues on the project and review the environmental performance of the Project.

The ERG will be maintained for the duration of the Project and will meet monthly (or as otherwise agreed by the regulatory agencies and TfNSW) and undertake environmental inspections.

CPBGG JV's relevant personnel including the Project Director and ESR will attend the ERG meetings.

3.3.1.15 TfNSW Environment and Sustainability Manager

TfNSW Environment and Sustainability Manager responsibilities as outlined in the OCEMP include:

- Review any Environmental Management Plans and related documents prepared for the Project
- Review and consider minor Project refinements that are consistent with the Project environmental assessment in accordance with the TfNSW EP&A Act Part 5.1 environmental assessment procedure
- Monitor the environmental performance of the Project in relation to TfNSW requirements
- Provide guidance and where appropriate, monitor compliance with DPE post approval document submission requirements.

3.3.1.16 TfNSW Project Director

TfNSW Project Director responsibilities as outlined in the OCEMP include:

- Evaluate and advise on high risk compliance issues relating to the CPBGG JV and TfNSW environmental requirements
- Provide CPBGG JV management with environmental advice and/or directions, in consultation with TfNSW environmental staff.

3.3.1.17 TfNSW Delivery Manager

TfNSW Delivery Manager responsibilities as outlined in the OCEMP include:

- Evaluate and advise on high risk compliance issues relating to the CPBGG JV and TfNSW environmental requirements
- Review and endorse documentation to be submitted to the Secretary of DPE and the Commonwealth Minister of the Environment for approval
- Have oversight of the review and approve any Environmental Management Plans for the Project or related activities that are not required to be approved by the Secretary of DPE in consultation with TfNSW environmental staff and the ER.
- Provide CPBGG JV management with environmental advice and/or directions, in consultation with TfNSW environmental staff.

3.3.1.18 TfNSW Project Manager

TfNSW Project Manager responsibilities as outlined in the OCEMP include:

- Evaluate and advise on compliance with TfNSW environmental requirements
- Review and approve any Environmental Management Plans for the Project or related activities that are not required to be approved by the Secretary of DPE
- Provide CPBGG JV staff with environmental advice and/or directions, in consultation with TfNSW environmental staff.

3.3.1.19 TfNSW Utilities Manager

TfNSW Utilities Manager responsibilities as outlined in the OCEMP include:

- Evaluate and advise on high risk compliance issues relating to the CPBGG JV and TfNSW environmental requirements
- Review and endorse documentation to be submitted to the Secretary of DPE and the Commonwealth Minister of the Environment for approval
- Have oversight of the review and approve any Environmental Management Plans for the Project or related activities that are not required to be approved by the Secretary of DPE in consultation with TfNSW environmental staff and the ER.
- Provide CPBGG JV management with environmental advice and/or directions, in consultation with TfNSW environmental staff.

3.4 Selection and management of subcontractors

The CPBGG JV's environmental site representatives will participate in tender assessment and selection process. CPBGG JV will be responsible for the environmental performance of subcontractors. CPBGG JV will specify environmental requirements and responsibilities to subcontractors in the contract documentation.

As a minimum, subcontractors and their employees will be required to comply with the requirements of the CEMP. Sub-contractors personnel are considered equivalent to CPBGG JV personnel in all aspects of environmental management and responsibilities.

Subcontractors engaged on the Project will be required to undergo a thorough assessment prior to selection as per the CPB CMS. This assessment includes both a financial and non-financial comparison (including past environmental performance, incidents, breaches or prosecutions) and incorporates sections relating to sustainability and environment as part of the Supplier Prequalification Questionnaires and Subcontractor Agreements. The ESR will be consulted on environmental requirements for subcontracts, and the adequacy of proposed conditions.

Subcontractors will be made aware of CPBGG JV's environmental requirements during the selection process and start-up meetings.

The scope of work to be performed by each subcontractor will be reviewed to determine whether it includes works for which Project planning and environmental risk assessments have been completed. If so, the subcontractor will be formally informed of all relevant risks and existing Project documents, systems and procedures to be followed prior to commencing works (in addition to having been informed of these during the selection process). These may include the contents of the construction methodology, CAPs, Work Packs and environmental management sub-plans.

For high risk environmental activities, the ESR will review the subcontractor's scope of works with the supervising engineer to:

- Identify any new issues relevant to the subcontractor's scope of works
- Identify any additional compliance requirement not captured
- Identify necessary approvals not already in place and obtain those approvals prior to any works commencing
- Update the relevant environmental Sub-plans.

Subcontractors working on the Project shall complete Project inductions before commencing work on site. The induction will address general and Project-specific environmental issues, including:

- Environment and Sustainability Policy
- How the CEMP will be implemented on site – e.g. via site specific Work Packs
- High-risk environmental activities and associated management controls
- What to do in the event of an environmental incident
- An assessment conducted upon completion of the induction.

Subcontractors shall also:

- Observe subcontract and statutory requirements relating to environmental protection and follow instructions issued by CPBGG JV and TfNSW representatives
- Co-operate fully with site emergency incident procedures and consultative arrangements
- If requested by CPBGG JV, produce documentation detailing their own proposed environmental management procedures, and where necessary, to prepare their own environmental management plans and/or environmental procedures to augment the Project's environmental requirements.

Details within the sub-contractor's environmental management plans and/or environmental procedures shall be consistent with this CEMP and the environmental assessment documents. Such documentation will include (as a minimum):

- Responsibilities and authorities
- Training and qualifications in relation to work to be performed
- Environmental procedures in relation to the scope of works

- Control measures adopted by the subcontractor.

The subcontractor will be informed of the requirement to provide all relevant data relating to their works as per the National Greenhouse and Energy Reporting Act 2007 (NGER). Changes and variations to subcontractor scopes of work will be assessed and documentation will be amended accordingly.

Subcontractors will also participate in communication forums and monitoring activities, including toolbox talks, pre-start meetings, task observations, inspections and audits, incident investigations (as required) and the development or review of Work Packs (as required).

Subcontractors will undergo all necessary environmental training. The required training will be determined by reviewing the training matrix relative to the scope of work and roles being filled or supplied by the subcontractor. CPBGG JV will regularly review (eg. during weekly inspections) and keep a record of:

- Subcontractor's general work practices
- The effectiveness of the sub-contractor's environmental protection measures – e.g. via Task Observations (aspect/activity specific inspection)
- The sub-contractor's compliance with the requirements of the OCEMP and this CEMP
- The maintenance of environmental measures.

3.5 Competence, training and awareness

To ensure this CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The ESR will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

Four main forms of training shall be provided, including:

- Site inductions
- Toolbox talks
- Daily pre-start meetings
- Role specific environmental awareness training.

A Project training schedule (or plan) will be developed and will be updated / amended throughout the Project as required. This schedule will describe the minimum level of training, experience and/or qualifications required for staff and subcontractors working on the Site, the proposed frequency of training and the and specific procedures required for the training. An initial training plan relating to environmental topics has been provided in Appendix A11. Records of training will be kept and training gaps for personnel identified throughout the works.

3.5.1 Environmental induction

Prior to working on site all personnel and sub-contractors will undertake a site induction conducted by the CPBGG JV ESR (or delegates (ie someone within the Environment and Sustainability Team)) which includes environmental roles, responsibilities, controls and procedures.

Temporary visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

The following information shall be included in the induction:

- Relevant details of the OCEMP, this CEMP, including all sub-plans, procedures and strategies, their purpose and objectives
- Requirements of due diligence and duty of care
- Conditions of environmental licences, permits and approvals (including requirements detailed in the Environmental Assessment Documentation)
- Key requirements of the Sustainability Management Plan and the Climate Change Monitoring and Adaptive Management Framework.
- Potential environmental emergencies on-site and the emergency response procedures
- Reporting and notification requirements for pollution and other environmental events and reportable events

- High risk activities and associated environmental safeguards, e.g. Earthworks, vegetation clearing, night works, operation and maintenance of concrete washouts, and washing, refueling and maintenance of plant and equipment
- Working in or near environmentally sensitive areas including heritage
- Responsibilities under the POEO Act, and other legislation and the EPL for site specific issues including:
  - site flagging protocol
  - erosion and sediment controls, water quality controls and sediment basin management
  - management of contaminated material (including asbestos impacted material)
  - groundwater and surface water
  - environmentally sensitive locations and no-go/exclusion zones
  - obligation to report and the process for reporting environmental issues on-site including damaged environmental controls
  - obligations under the *Biosecurity Act 2015* to prevent the spread of noxious weeds during construction
  - responsibilities under the *National Parks and Wildlife Act 1974*, including the need to cease work immediately and report any object of potential Aboriginal heritage unearthed during clearing, grubbing and earthworks operations
  - responsibilities under the *Heritage Act 1977* if an object of potential Non-Aboriginal heritage is uncovered during construction
  - responsibilities under the *Contaminated Land Management Act 1997*
  - noise, vibration and air quality management controls and the responsibilities in relation to the POEO Act
  - requirement to maintain surrounding property access for residences, business owners, and their visitors, and to minimise disruptions to these properties for the duration of construction
  - location and use of spill kits, refuse bins, washing, fuelling and maintenance of vehicles, plant and equipment
  - waste minimisation principles
  - boundaries for vegetation clearing, fauna and fauna habitat management, including awareness of threatened fauna species and fauna rescue
  - incident and emergency response and reporting requirements
- Key roles, responsibilities and contact details with regards to environmental management on the site.

The ESR may authorise amendments to the induction where required to address Project modifications, legislative changes or amendments to the OCEMP, this CEMP or related documentation.

Records of induction and training will be kept in a project induction and training register including the topic of the training carried out, dates, names and trainer details. Inductees will be required to sign-off that they have completed the site induction and understand their responsibilities. An assessment will also be conducted upon completion of the induction. The ESR will review and approve the induction program prior to the induction being delivered.

CPBGG JV will provide refresher environmental awareness training as required, but at not less than six monthly intervals, based on the environmental risk assessment and turnover of Project personnel. Refresher environmental awareness training will be included on the register of environmental training.

3.5.2 Toolbox talks, training and awareness

Toolbox talks will be used to raise awareness and educate personnel on construction-related environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction. They are also used to identify environmental issues and controls when works commence in a new area of the site or a new activity, as well as when environmental issues arise on site during the works (e.g. following an incident).

Toolbox talks will include details of EWMS's for relevant personnel. Toolbox talks will be tailored to specific environmental issues and controls relevant to upcoming work including (but not limited to):

- Incident notification requirements and alerts
- Erosion and sedimentation control
- Management of waste concrete
- Management of water / concrete during piling activities
- Dewatering
- Hours of work, including noise management strategies to be implemented for out of hours work
- Emergency and spill response
- Aboriginal and non-Aboriginal heritage
- Threatened species and ecological communities
- Clearing controls and vegetation protection
- Weed management
- Dust control
- Minimising light pollution during night works
- Lessons learnt from other projects where relevant.

Toolbox talk attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

Awareness notes, in the form of posters, booklets, or similar will be developed and distributed to the Superintendent, Project Engineers, Foreman and other personnel with a responsibility for managing specific work locations or activities. This documentation will be distributed to the broader Project workforce through daily pre-starts meetings and made available in Project offices / break facilities.

A Training Register will be maintained on site in the site files

3.5.3 Daily Pre-Start Meetings

Daily pre-start meetings are used to inform the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the work, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Superintendent and/or Foreman will conduct daily pre-start meetings with the site workforce before the commencement of work shift or where changes occur during a shift.

The environmental component of pre-start meetings 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 meeting and acknowledge their understanding of the issues explained.

Pre-start meeting topics, dates delivered and a register of attendees will be recorded and the records maintained.

3.5.4 Task specific Environmental Training

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 in previous sections, or others deemed necessary in the lead up to or during construction.

The CPBGG JV ESR and Sustainability Managers will coordinate the environmental training in conjunction with other training and development activities (e.g. safety). Records of training will be kept and training gaps for personnel identified throughout the works.

No construction personnel or sub-contractors will be allowed to work on the Project without the relevant environmental training requirements being met as per the training program.

The ESR will review and approve the Project training program and monitor implementation.

3.5.4.1 Erosion and sediment control training

Site-specific erosion and sediment control training will be undertaken upon project commencement for key management and supervision staff including:

- Area managers
- Site Engineers, Project Engineers
- Foreman and Leading hands
- Labour and personnel undertaking site activities.

This training will be a one-day BlueBook 2D Main Road Construction training adapted to the project works presented by an external provider including, but not limited to:

- Best practice implementation and maintenance of area-specific controls
- Updating controls in accordance with Project works
- Preparation for rain events
- Review of ESCPs for specific areas.

Refresher courses will be undertaken throughout the Project as required.

3.5.5 Communications Training

All staff (including plant operators and truck drivers) and subcontractor personnel working on the delivery of the project will be required to behave in a courteous and professional manner when in dialogue with any community member. All personnel will be:

- Trained on how to respond to community queries
- Aware of and abide by the requirements for the release of information
- Advised on the identity of the community within which they are working prior to their involvement in the Contractor's Work.

Community involvement obligations will be included in the site induction of all personnel working on the Project.

3.6 Working hours

3.6.1 Hours of Work

In accordance with NSW CoA E34 and the EPL, work will be undertaken during standard construction working hours:

- 7:00 am to 6:00 pm Monday to Friday
- 8:00 am to 6:00 pm Saturday
- At no time on Sunday or public holidays.

Any application to work between 8:00am and 6:00pm on Saturdays (the allowable work hours on Saturdays identified in the Infrastructure Approval) must be submitted to the TfNSW no later than 12:00 pm on the Thursday immediately prior to the Saturday proposed to undertake work. The application must include the details of the work activities to be undertaken. Approval is at the discretion of TfNSW.

As required by NSW CoA E35, except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable noise management level at the relevant receiver must only be undertaken:

- Between 8:00 am to 6:00 pm Monday to Friday
- Between 8:00 am to 1:00 pm Saturday
- In continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block.

'Continuous' includes any period during which there is less than a one hour respite between ceasing and recommencing the work.

All conditions relating to construction hours outlined in the Project EPL will be complied with.

3.6.2 Variation to work hours

Works associated with the delivery of the Project may be undertaken outside the hours of work identified in Section 3.6.1 in the following circumstances, in accordance with NSW CoA E36:

- Safety and emergencies

- For the delivery of materials required by the NSW Police Force or other authority for safety reasons; or
- 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 material environmental harm.

On becoming aware of the need for emergency works, CPBGG JV will notify the TfNSW Project Manager, the Planning Secretary, the ER and the EPA of the need for those works. CPBGG JV will use its best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

- Work that causes:
  - $L_{Aeq(15\ minute)}$ noise levels:
    - No more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009) and
    - No more than the 'Noise affected' NMLs specified in Table 3 of the ICNG at other sensitive land user(s) and
  - $L_{AFmax(15\ minute)}$ noise levels no more than 15 dB(A) above the rating background level at any residence during the night time period; and
  - Continuous or impulsive vibration values, measured at the most affected residence, that 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); and
  - Intermittent vibration values measured at the most affected residence that 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).
- By Approval, including:
  - Where different construction hours are permitted or required under an EPL in force in respect of the Project; or
  - Works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol as required by NSW CoA A37; or
  - Negotiated agreements with directly affected residents and sensitive land uses.

CPBGG JV will prepare an OOHW Protocol, in accordance with the Construction Noise and Vibration Guidelines (Roads and Maritime, 2016). The procedure will be prepared to address the requirements of NSW CoA E37 and the EPL relating to OOHW and will include:

a) Identification of low and high-risk activities and an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where:
   i. the ER reviews all proposed out-of-hours activities and confirm their risk levels
   ii. low risk activities can be approved by the ER
   iii. high risk activities that are approved by the Planning Secretary.
b) A process for the consideration of OOHW against the relevant NML and vibration criteria
c) 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 NSW CoA E47. 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
d) Procedures to facilitate the coordination of OOHW including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided
e) Notification arrangements for affected receivers for all approved OOHW and notification to the Secretary of approved low risk OOHW.

The OOHW Protocol (Appendix B of the CNVMP) will be prepared in consultation with the ER.

3.6.3 Community agreements for work outside of standard construction hours

Works outside of standard construction hours that do not meet the circumstances listed in Section 3.6.1 above may be undertaken if an agreement between CPBGG JV and a substantial majority of noise sensitive receivers has been reached, where approved under the EPL, for OOHW not approved by other EPL conditions. Further details of the requirements, including community consultation, relating to community agreements are provided in the CNVMP (Appendix B4).

3.7 Communication

3.7.1 Internal Communication

Clear lines of communication throughout all levels and functions (e.g. management, staff and sub-contracted service providers) are key to minimising environmental impacts and achieving continual improvements in environmental performance.

The environmental team will meet regularly to discuss any issues with management on-site, any amendments to plans that might be required or any new / changes to construction activities. Regular meetings will also occur between the ER and TfNSW environment staff to discuss ongoing environmental performance and identify any issues to be addressed.

In addition, environmental team members will participate in toolbox talks on at least a regular basis. This forum will provide an opportunity for the environment team members to communicate environmental performance matters, to advise on any upcoming work in or near sensitive environmental areas and receive feedback from onsite personnel.

3.7.2 Liaison with EPA, government authorities or other relevant stakeholders

CPBGG JV's ESR will be the main point of contact regarding specific environmental issues. The ESR is responsible for reporting on the ongoing environmental performance of the project to TfNSW, the ER and the NSW EPA and other government agencies as required. The ESR will report regularly to TfNSW on progress and any key environmental matters. Other relevant government agencies will continue to be consulted throughout construction as and when required.

A list of relevant contact names, telephone numbers and emails for Project stakeholders will be maintained by the ESR onsite.

The name and contact numbers for two site personnel who are available to EPA on a 24-hour basis and who have authority to take immediate action to shut down any activity or to affect any pollution control measure as directed by an authorised officer of EPA are:

- CPBGG JV Environmental Site Representative: Kimberley Purkiss (0416 210 609)
- CPBGG JV Project Director: Nick Fryday (0424 485 763)

TfNSW will be immediately notified on each occasion that the site is visited by EPA and/ or other relevant agencies.

CPBGG JV will prepare a report for each occasion when the Site is visited by the EPA and/ or other relevant agencies, notifying TfNSW of the purpose and outcome of the EPA and/ or other relevant agencies visit, and of all actions taken in response to the EPA visit and/ or other relevant agencies.

The report will be provided to TfNSW within one working day of the visit.

CPBGG JV will provide TfNSW with, when requested in writing from DAWE (now DCCEEW), electronic copies of compliance records within the timeframe nominated in the request in accordance with Commonwealth CoA 9. These records may be subject to an audit by DCCEEW or an independent auditor in accordance with section 458 of the EPBC Act, and/or used to verify compliance with the conditions.

3.7.3 Community liaison and/or notification

TfNSW has prepared an Overarching Communication Strategy (OCS) in accordance with the requirements of NSW-CoA B1 to document the approach to stakeholder and community communications for the Project. The OCS was approved by DPE on 7 July 2021. The OCS identifies opportunities for providing information and consulting with the community and stakeholders during the construction of the project. CPBGG JV will support the delivery of the OCS.

CPBGG JV will prepare and shall implement a Contractor's Community and Stakeholder Engagement Plan (CSEP) in consideration of TfNSW QA Specification GWS61 'Communication and Community Engagement' requirements. The CSEP has been prepared in accordance with the OCS.

The OCS and CSEP will be implemented for the duration of the project. The OCS shall be implemented for 12 months following the completion of all construction stages of the project.

The OCS and CSEP include:

- Principles to guide the overall approach to community and stakeholder involvement
- Identification of the stakeholders and groups to be consulted during the project
- Procedures and tools for the distribution of information about the project, such as regular updates about construction activities, the program for construction activities and key milestone dates
- Opportunities for the community to visit project construction sites
- Methods for involving construction personnel in engaging with the local community
- Methods and tools for engaging with the local community, including community forums to discuss key environmental management issues of concern for the project
- Procedures and mechanisms:
- Detailing how the community can discuss or provide feedback in relation to the project
- Detailing how the project team will respond to community enquiries and feedback
- Describing how issues will be resolved or disputes meditated in relation to environmental management and construction of the project.
- Procedures to consult with local communities potentially affected by the impacts of multiple projects in addition to the project.

The OCS also provides details on the requirements for coordination and communication between all Contractors working on the M12 project stages, which will include:

- Liaison meetings
- Mailing list for all communications (including community updates)
- Email communication
- Project briefings.

Where relevant, the TfNSW Community and Stakeholder Engagement Advisor and the CPBGG JV Communications Manager will undertake consultation with proponents of other nearby developments to review potential cumulative impacts, increase the overall awareness of project timeframes and impacts, plan, co-ordinate and integrate methodologies and activities to minimise cumulative impacts as far as reasonably practicable.

Communication tools defined in the OCS and CSEP include:

- Targeted community open days
- Media releases and advertisements in local and metropolitan papers
- Public displays
- Door-knocks
- Letterbox drops
- Community update newsletters, information brochures and fact sheets
- Community information sessions and community forums
- Signage at construction sites
- Construction updates (including for councils, emergency services and bus operators)
- Project Website
- Focus meetings
- TfNSW 24-hour contact telephone number and email address.

3.7.4 Project Website

A website has been established by TfNSW for the Project (https://www.rms.nsw.gov.au/projects/m12-motorway/index.html) and will be regularly maintained during construction of the project. The website will be kept up to date with the latest Project information, environmental assessments, and will include all community updates. CPBGG JV will provide TfNSW with all relevant documents that are required to be published on the project website but be responsible for uploading any information related to the EPL. The Project website will also publish methods to communicate feedback, enquiries and complaints related to the Project.

In accordance with CoA B10, the following information will be maintained on the project website:

- Information on the current implementation status of the project
- The Environmental Assessment Documentation and any documentation relating to any modifications made to the project
- A copy of the Infrastructure Approval in its original form, a current consolidated copy of the Approval (including any approved modifications to its terms), and copies of any approval granted by the Minister to a modification of the terms of the Approval
- A copy of each statutory approval, licence or permit required and obtained in relation to the project
- A current copy of each document required under the terms of the Approval
- A copy of any audit reports required under CoA A38 and A41.

Where the information/document relates to 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.

Additionally, in accordance with CoA B6, the Collection Statement must be included on the project website to make prospective complainants aware of their rights under the Privacy and Personal Information Protection Act 1998.

Relevant project information will be published on the website for the duration of construction. As required by EPBC Act Approval Condition 16(b), CEMP Sub-plans will be published on the project website within 20 business days of the date of their approval date, unless otherwise agreed to in writing by the Commonwealth Minister for the Environment. This is a TfNSW responsibility.

Confidential information, which may include the location of threatened species, Aboriginal objects or places and personnel contact details, will be removed from all documents provided before being made available to the public.

3.7.5 Complaints Management

TfNSW has developed a Complaints Management System (CMS) as part of the Overarching Communications Strategy (OCS) that documents the overall approach to complaints management for the Project. The CMS is consistent with AS-ISO 10002-2006 Complaints Handling and in accordance with the requirements of NSW CoA B6 to B9. CPBGG JV has incorporated the requirements of the CMS into the Project's Community and Stakeholder Engagement Plan (CSEP).

All community enquiries and complaints related to the construction activities will be referred to the 24-hour toll free community information line (1800 517 155). A Project postal address (Transport for NSW, PO Box 973 Parramatta CBD NSW 2124) and email address (m12motorway@rms.nsw.gov.au) has been provided for receipt of enquiries and complaints. Details of the telephone number, postal address and email address for enquiries and complaints related to the Project will be on the Project website.

Information on all complaints received, including the means by which they are address, whether resolution was reached or mediation required will be included in a complaints register (using Consultation Manager) and include the following as a minimum:

- Date and time of the complaint
- Method by which the complaint was made
- Any personal details of the stakeholder
- Number of people affected in relation to a complaint
- Nature of the complaint
- Action taken in relation to the complaint, means by which the complaint was addressed and any follow up

- Whether resolution was reached, with or without mediation
- If no action taken, reasons why
- The status of resolution of the complaint.

The Complaints Register will be provided to the DPE Planning Secretary on request in accordance with NSW CoA B9 and the ER on the day complaints are received in accordance with NSW CoA A35(a). At the time of this CEMP preparation, the EPL had not yet been to TfNSW for the project. Draft EPL condition R4.1 requires complaints to be reported to the EPA each business day by 2:00pm. The report will be prepared in accordance with the requirements of the EPL conditions. A report is not required for any reporting period where complaints have not been received.

All complaints will be managed in accordance with the TfNSW CMS and CPBGG JV CSEP. Attempts will be made to resolve all complaints in accordance with the CMS. The CSEP contains a detailed flowchart outlining the complaints and enquiries response process. All complaints will be investigated and the source of the complaint determined immediately, with a phone call made to the complainant (when received by phone) within two hours. An initial response will be provided during this phone call, unless the complainant agrees otherwise.

An initial written response to email complaints will be provided within 24 hours (or during the next business day if received out-of-hours) and a resolution provided within seven (7) business days, if the complaint cannot be resolved in the initial contact.

The complainant will be kept informed and updated of the progress until the complaint is resolved. All complaints will be recorded in the Complaints Register (by the Community and Stakeholder Manager) within 24 hours.

The ESR 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 resulting in community complaints.

3.8 Emergency and Incident Planning

3.8.1 Emergency Preparedness

An Emergency Response Plan that addresses all identified potential environmental emergencies with specific emergency procedures for each different potential emergency will be developed. The plan will address or include the following:

- Nominated and trained emergency coordinator and emergency wardens
- Explanation of communications to be performed during an emergency
- Explanation of what a crisis is as compared to an emergency and what to do in the event of a crisis
- The details of emergency services contacts
- Emergency assembly locations
- A detailed location map showing the site in relation to local public roads
- A detailed site layout diagram
- Information about personnel and facilities available to help emergency services
- Specific emergency procedures for each potential emergency identified that aim to protect human health and environmental values, including assessment of resources required to respond to that emergency
- Post-emergency actions.

The Emergency Response Plan will be updated at least annually or when there are significant changes to project activities or in response to revised and new risk assessments. Testing of the Emergency Response Plan by way of emergency response drills will be conducted at intervals not exceeding 6 months.

3.8.2 Incident and Emergency Management

An incident is defined under the NSW Infrastructure Approval as:

- 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

Material harm is defined as 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 harm to the environment).

The environmental emergency contact personnel for the Project are:

- CPBGG JV Environmental Site Representative: [redacted]
- CPBGG JV Project Director:

All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place.

In the event of an environmental incident, the following procedures and plans shall be implemented:

1. TfNSW Environmental Incident Classification and Reporting Procedure (M12PPW-ADAP-ALL-EN-PLN-000003_E_S3_OCEMP APP A7) – contained in Appendix A7 of the OCEMP
2. CPB Contractors' Manage and Report SHE Incidents Procedure will also be implemented.
3. The PIRMP - Refer to Appendix A9

These system documents provide the following details relevant to Construction related incidents and emergencies:

- Types of environmental incidents
- Criteria for classifying of environmental incidents
- Processes for systematically responding to and managing emergency situations
- Processes, and legal requirements (e.g. Acts, Regulations, EPL), for reporting and notification of an environmental incident.

The TfNSW procedure covers the management of environmental events including:

- A report-only event
- A non-compliance
- Regulatory action received
- An environmental incident.

3.8.2.1 TfNSW Incident Classification

As outlined in the OCEMP and in accordance with TfNSW Environmental Incident Procedure, incident definitions are outlined below in

Table 3-7 Incident Definitions (Table 6-1 OCEMP)

Event	Requirement
Environmental Event	A report-only event, non-compliance, regulatory action or environmental incident
Environmental Incident	An environmental incident is an event or set of circumstances, as a consequence of which pollution (air, water, noise, or land) or an adverse environmental impact has occurred, is occurring, or is likely to occur. Adverse environmental impact includes contamination, harm to flora and fauna (either individual species or communities), damage to heritage items and adverse community impacts. An unexpected find that is not managed in accordance with relevant procedures / guidelines is also considered an environmental incident
Non-compliance (as per the TfNSW	A failure to comply with any CoA, REMM, licence condition (where applicable), permit or any other statutory approval relevant to the activity and/or area where the activity occurs

Event	Requirement
Environmental Incident Procedure)	
Notifiable Event	Any environmental incident, report-only event or non-compliance that triggers a specific statutory requirement to notify a regulatory authority i.e. under NSW CoA A44 – A48 and Federal CoA 11 and 12
Report-only event	An environmental incident or unexpected find resulting from circumstances outside the scope of controls and of an activity
Significant incident	An environmental incident that is likely to receive a classification of C3, C2 or C1, OR the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to receive a penalty notice or be subject to prosecution, and therefore requires escalation to the Secretary and other TfNSW senior management.
Incidents affecting protected matter(s)	An event that has the potential to, or does impact, Matters of National Environmental Significance other than as authorised by the M12 Federal approval.

3.8.3 Incident Notification

Section 3.2 of the M12 Environmental Incident Classification and Reporting procedure (M12PPW-ADAP-ALL-EN-PLN-000003_E_S3_OCEMP APP A7) outlines the requirements for the notification of any environmental incident, report only event or non-compliance that triggers a specific statutory requirement to notify an authority. Table 3-8provides a summary of these requirements.

3.8.3.1 TfNSW Notifications

All environmental events (incidents, significant environmental incidents, report only events, non compliances and regulatory action) under the TfNSW Procedure, will be notified immediately to the TfNSW Project Manager and TfNSW Environment and Sustainability Manager (or delegate) and the ER.

Incident reports will be provided to TfNSW Project Manager and the ER in accordance with the TfNSW Procedure, including lessons learnt from each environmental incident and proposed measures to prevent the occurrence of a similar incident.

A summary of incident notification and reporting requirements can be found in Table 3-8 below.

3.8.3.2 EPA Notifications

In accordance with Part 5.7 of the POEO Act, the EPA will be notified of any environmental incidents or pollution incidents on or around the site via the EPA Environment Line. The circumstances where this will take place include:

a) If the actual or potential harm to the health or safety of human beings or ecosystems is not trivial
b) If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds $10,000 (or such other amount as prescribed by the regulations).

When required to notify the EPA, the ESR (or delegated member of the CPBGG JV Management team) will:

1. Notify of a pollution incident 'immediately' (i.e. reported promptly and without delay)
2. Notify all other relevant authorities, such as:

- EPA (131 555)
- Ministry of Health (via the local Public Health Unit (PHU) 02 9840 3603 / 02 9845 5555)
- WorkCover (13 10 50)
- Penrith City Council (02) 4732 7777
- Liverpool City Council (02) 8711 7000
- Fire and Rescue NSW – 1300 729 579 (Note: should any incident involve the actual or potential harm to human safety or health then NSW Fire and Rescue will be contacted on 000).

Copies of all records relating to environmental incidents shall be forwarded to the TfNSW's Representative and the ER.

A record of EPA notification will be provided to the Secretary of DPE upon request.

3.8.3.3 Notification to DPE Secretary

In accordance with NSW CoA A44 for incidents (other than those relating to the POEO Act), TfNSW will notify the Secretary of DPE of incidents with actual or potential significant off-site impacts on people or the biophysical environment no later than 12 hours after becoming aware of the incident. Full written details of the incident will be provided to the Secretary of DPE within seven (7) days of the date on which the incident occurred.

If statutory notification is given to the EPA as required under the POEO Act in relation to the CSSI, such notification will also be provided to the Secretary within 12 hours after the notification was given to the EPA.

Refer to Table 3-8, Appendix A7 and Appendix A9 (CPBGG JV's PIRMP including Emergency Spill Response) for a summary of incident notification requirements.

3.8.3.4 Other Notification Requirements

DAWE (now DCCEEW) are required to be notified in accordance with Commonwealth CoA11 and 12 of any incidents affecting protected matters or non-compliances no later than 2 business days after becoming aware of the incident. This notification will be provided to TfNSW who will in turn notify DCCEEW of any incident affecting protected matters or non-compliance with the conditions or commitments made in plans required in accordance with Commonwealth CoA 5a or 5b. The notification is to specify the following:

- Any condition which is or may be in breach
- A short description of the incident affecting protected matters and/or non-compliance
- The location (inc. coordinates), date, and time of the incident affection protected matters and/or non-compliance. In the event the exact information cannot be provided, provide the best information available.

Information to be provided to DCCEEW within 10 days of the incident affecting protected matters or non-compliance includes:

- Any corrective action or investigation TfNSW has already taken or intends to take in the immediate future
- The potential impacts of the incident affecting protected matters or non-compliance; and
- The method and timing of any remedial actions that will be undertaken.

Where an incident involves an Aboriginal site, the Office of Environment and Heritage and relevant Aboriginal stakeholders will be notified and their input sought in addressing and managing the incident.

- Where an incident involves an impact to a non-Aboriginal heritage item, this will be reported to the Heritage Council and/or councils (depending on whether a state or local item).

Table 3-8 Summary of requirements for incident notification and reporting

Incident Type	Notify	Notification Timeframe	Notification Responsibility	Written Report	Written Report Timeframe	Written Report responsibility
Regulatory Action (material harm under the POEO Act)	EPA environment line Fire and Rescue Ministry of Health Relevant Council TfNSW Project Manager and ESM (or delegate)	Immediately	CPBGG JV	In accordance with Section 3.2 of the reporting procedure in Appendix A7 OCEMP.	In accordance with Section 3.2 of the reporting procedure in Appendix A7 OCEMP	CPBGG JV
	Secretary DPE	As soon as possible, and no later than 12 hours after TfNSW becomes aware of an incident	TfNSW (via the major projects portal)	In accordance with CoA A44 and A45: • Written notification report • Detailed incident report	In accordance with CoA A44 and A45: • Within 7 days • Within 30 days	CPBGG JV/ TfNSW
Regulatory action (other than material harm under the POEO Act): • Discovery of Aboriginal objects	TfNSW Project Manager and ESM (or delegate) RAPs EES	As soon as possible, and no later than 12 hours after TfNSW becomes aware of an incident.	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
• Discovery of all human remains	NSW Police	Immediately	CPBGG JV	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
• If TfNSW activities have contaminated land or if TfNSW owns land that has been contaminated	EPA	Immediately	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting	CPBGG JV / TfNSW

Incident Type	Notify	Notification Timeframe	Notification Responsibility	Written Report	Written Report Timeframe	Written Report responsibility
					procedure in Appendix A7 CEMP	
The location of a relic once a relic has been discovered or located	TfNSW Project Manager and ESM (or delegate) Heritage NSW	Immediately	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
The inability to extinguish a fire burning during a bush fire danger period applicable to the land	An appropriate officer of the NSW Rural Fire Service	Immediately	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
Environmental incident with the potential for unapproved impacts on a drinking water supply	Local water supply authority EPA	Immediately	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
TfNSW C1, C2 or C3 Incidents (excluding material harm)	TfNSW Project Manager and ESM (or delegate) ER	Immediately	CPBGG JV/ TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW
Significant environmental incidents – C1, C2 or C3 incidents with potential for:	TfNSW Director Environment TfNSW Chief Executive and relevant Executive Director	Immediately	TfNSW Director Environment Operation	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting	CPBGG JV / TfNSW

Incident Type	Notify	Notification Timeframe	Notification Responsibility	Written Report	Written Report Timeframe	Written Report responsibility
• Regulatory action (e.g. EPA Penalty Infringement Notice) and/or • Reputational damage (e.g. media coverage) and/or • Significant environmental harm					procedure in Appendix A7 CEMP	
Any incident (as defined in the NSW Infrastructure approval)	Secretary DPE Minister for DAWE (now DCCEEW) ER	As soon as possible and no later than 12 hours after TfNSW becomes aware of an incident.	TfNSW / CPBGG JV	In accordance with NSW CoA A44 and A45: • Written notification report • Detailed incident report	In accordance with NSW CoA A44 and A45: • Within 7 days • Within 30 days	CPBGG JV / TfNSW
Incident affecting protected matters	TfNSW Project Manager and ESM (or delegate) ER	Immediately	CPBGG JV	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV
	DAWE (now DCCEEW)	As soon as practicable, and no later than 2 business days after becoming aware of the incident	TfNSW	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	In accordance with Section 3.2 of the reporting procedure in Appendix A7 CEMP	CPBGG JV / TfNSW

3.8.4 CPB Contractors' Safety, Health & Environment (SH&E) Incident Management System

All Incidents will also be recorded in the CPB SH&E Incident Management System Synergy as soon as possible following the incident (as outlined within the Environmental Incident Classification and Reporting Response Notification and Reporting Procedure (Appendix A7)).

All Level 1 and Level 2 incidents will be reported to the CPB Environment Manager – NSW/ACT.

3.8.5 Incident Investigation

Where required, due to the severity or ongoing nature of the incident, investigations will be conducted and action plans established in order that the event does not occur again.

An environmental investigation includes the following basic elements:

- Identifying the cause, extent and responsibility of the incident
- Identifying and implementing the necessary corrective action
- Identifying the personnel responsible for carrying out the corrective action
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Recording any changes in written procedures required
- Advising the relevant government agencies if any substantial pollution has occurred.

Where there are lessons learnt from the investigation or current procedures are identified as being ineffective, CPBGG JV's CEMP will be revised by the ESR to include the improved procedures or requirement.

In accordance with EPBC Act Approval Conditions 11, DAWE (now DCCEEW) must also be notified in writing of any incident affecting protecting matters. The notification must be submitted as soon as practicable and no later than 2 business days after becoming aware of the incident affecting protected matters.

In accordance with Commonwealth CoA 12, DCCEEW must be provided with details of the incident no later than 10 business days after becoming aware of the incident affecting protected matters.

3.9 Monitoring, inspections and auditing

Appendix A8 contains the M12 Monitoring, Inspections, Reporting, Review, Audit (MIRRA) schedule for the project.

3.9.1 Environmental Inspections

3.9.1.1 Environmental inspections

The purpose of the inspections is to identify environmental management risks and avoid environmental impacts from occurring. A summary of the approach to inspections is provided in the sections below.

Copies of all environmental inspection reports prepared by CPBGG JV will be kept with the project records and closed out within the agreed timeframes.

3.9.1.2 CPBGG JV Site Inspections

Prior to the commencement of works on each shift, an inspection will be carried out and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. Works are not to commence unless inspections are found to be satisfactory. The relevant area Foreman will undertake these inspections.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority. Actions will be closed out in accordance with the identified priority and evidence of close out will be kept on file.

3.9.1.3 Weekly and post rainfall site inspections

The ESR (or delegate) will undertake weekly and post rainfall inspections of the work sites to evaluate the effectiveness of environmental controls. The ESR (or delegate) will record inspection findings on an inspection checklist. Inspections will also be carried out daily during rainfall that causes run-off to occur and prior to any site closure of greater than 24 hours.

'Post rainfall' would typically relate to rainfall events where 10mm or more has fallen within 24 hours as recorded at the Badgerys Creek AWS Bureau of Meteorology (BoM) gauge (#067108) or onsite weather station.

3.9.1.4 Wet weather preparation inspections

CPBGG JV will undertake an inspection of environmental controls where a wet weather event is predicted. A wet weather event is defined as 10 mm or more of rain within 24 hours recorded at the Badgerys Creek AWS Bureau of Meteorology (BoM) gauge (#067108). This definition has been adopted as a wet weather trigger preparedness. This inspection will be of all disturbed areas and revegetated/stabilised areas together with all permanent and temporary erosion and sediment control works as soon as practicable but within 3 hours (during normal work hours and days) or within 24 hours (outside normal work hours and days, including industry rostered days off and public holidays) after the start of all rainfall events exceeding 10mm and during periods of prolonged rainfall.

Erosion and sediment controls and preventions will be inspected by the CPBGG JV and ESR (or delegate) where a flood is predicted to occur. These measures include erosion and sediment controls, protection of disturbed ground from erosion and the prevention of pollution incidents are in place (including items/stockpiles able to be moved from flow-paths, movement of plant and storages of hazardous substances from low lying areas). Following a wet weather event, a post wet weather inspection will be undertaken to review site performance and repair/maintain controls as required.

3.9.1.5 Soil Conservationist inspections

CPBGG JV's Soil Conservationist will undertake formal inspections of the site in accordance with G36 and G38 specifications. These inspections will be undertaken as required, but at least monthly with a report generated detailing the findings from the inspections. Actions identified during these inspections are to be addressed by CPBGG JV and reported to TfNSW within 5 days of the report being provided.

3.9.1.6 Shutdown inspections

Shutdown inspections are aimed at managing potential environmental risks during shutdown periods. Prior to any period where the Project will be shut down for more than four days (i.e. long weekends, the Christmas period, etc.) or a significant weather event is forecast (e.g. storm event requiring shutdown of the site), a shutdown inspection will be undertaken to identify any additional environmental controls needed to minimise the potential for environmental impacts during the site shutdown period.

3.9.1.7 Start-up inspections

Start-up inspections are aimed at managing potential environmental risks during shutdown periods. Start-up inspections will be conducted following the shutdown period if significant weather event has occurred during this time. This will be prior to the recommencement of construction works to ensure no damage to environmental controls have occurred during the significant weather event.

3.9.1.8 Sustainability inspections

Weekly sustainability inspections of site will be undertaken by the Sustainability Manager (or delegate) in accordance with G1 and G36 specifications. These will be recorded on the environmental inspection template which includes items relating to the environmental and social aspects of the project.

3.9.1.9 Environmental Representative and Transport for NSW inspections

The Environmental Representative and the TfNSW Environment Manager will undertake regular inspections of works sites, and in particular during critical activities throughout construction of the project.

These inspections would typically occur on a weekly or fortnightly basis depending on the complexity and anticipated risks associated with the stage of construction.

Inspections carried out will be in accordance with TfNSW inspection procedure. The ESR relevant Project engineer, Superintendent, Foreman/Site Supervisor will participate in all ER/TfNSW inspections

to maintain appropriate records, identify required actions and timeframes for implementation of corrective actions.

3.9.1.10 ERG inspections

ERG inspections will typically occur on monthly timeframe or as otherwise required depending on the staging of the Project.

The role of the ERG is to provide proactive advice on environmental management issues and review the environmental performance of the Project. Section 3.10 describes the process if the ERG raises non-conformances or issues requiring corrective/preventative action during site inspections.

The ESR relevant Project engineer, Superintendent, Foreman/Site Supervisor will participate in all ERG inspections to maintain appropriate records, identify required actions and timeframes for implementation of corrective actions.

3.9.1.11 Inspections by EPA and other agencies

CPBGG JV will prepare a report on each occasion that the site is visited by the EPA and/ or other relevant agencies. The report will advise TfNSW of the purpose and outcome of the EPA and/ or other relevant agencies visit, and of all actions taken by CPBGG JV in response to the EPA visit and/ or other relevant agencies.

3.9.2 Environmental monitoring

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 approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management Sub plans and summarised in Table 3-9 and the MIRRA Schedule in Appendix A8.

Table 3-9 Summary of Environmental Monitoring

Reference	Description	Relevant Sub-Plan	Reporting Requirement
NSW CoA A16 (e)	Program for monitoring the performance outcomes, including a program for noise monitoring consistent with the requirements of NSW CoA C14	Site Establishment Management Plan	Appendix B10 SEMP
NSW CoA C11 (a)	Noise and vibration monitoring	Overarching Construction Noise and Vibration Monitoring Program	Appendix B4 CNVMP
NSW CoA C11 (b) REMM SWH05	Surface water monitoring program	Overarching Construction Soil and Water Monitoring Program	Appendix B8 CSWMP Note: This requirement is being undertaken (with the exception of discharge monitoring) by an external consultant engaged by TfNSW.
NSW CoA C11 (c)	Groundwater monitoring program	Overarching Construction Soil and Water Monitoring Program	OCEMP Appendix B4 Note: This requirement is being undertaken (with the exception of discharge monitoring) by an external consultant engaged by TfNSW CPBGGJV have to undertake monitoring of specific cuts as outlined CSWMP.
G38 EPL#21595 (L2.4)	Discharge monitoring from sediment basins	CSWMP	Appendix B8
G36	Real Time Dust Monitoring	CAQMP	Appendix B6

Monitoring procedures will address how these activities will be undertaken. Monitoring procedures will include:

- Purpose and scope
- Minimum acceptable frequency and standards listed in applicable approvals, licences and regulations
- Relevant EPA approved methods, Australian Standards or, in the absence of an Australian Standard, industry acceptable procedures
- Targets and parameters
- The location of monitoring
- Any consultation to be undertaken in relation to the monitoring
- Processes for response to any exceedances of targets/standards
- Processes for recording and reporting results.

CPBGG JV will prepare Construction Monitoring Reports detailing the results of the monitoring undertaken in accordance with the Construction Monitoring Programs for inclusion in the six-monthly Construction Compliance Reporting required under G36. The reports will be prepared six-monthly for the duration of construction of the project.

Where a non-conformance is detected or monitoring results are exceed the target set in monitoring programs and are directly attributable to the project (i.e. are influenced by factors under the direct control of the project e.g. noise from construction equipment), the process described in section 3.10 will be implemented. Steps in the process will typically include:

- An analysis of the results by the ESR in more detail with a view of determining possible causes for the non-conformance
- A site inspection by the ESR (or delegate)
- Advising relevant personnel of the problem
- Identifying and agreeing on actions to resolve or mitigate the non-conformance
- Implementing actions to rectify or mitigate the non-conformance.

A non-conformance Environmental Incident Report and/or Environmental Improvement Notice may be issued by the ESR in response to the non-conformance problem if it is found to be construction related.

The timing for any improvement will be agreed between the relevant Engineer/Superintendent and ESR based on the level of risk (e.g. a significant risk will require immediate action).

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

3.9.3 Auditing

Table 3-10 below presents auditing requirements that are applicable to the Project.

Auditing will also be undertaken by an independent environment auditor independent to the M12 Motorway West Project in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing.

Table 3-10 Summary of Project Audit requirements

No.	Audit	Requirement	Timing	Responsibility	Recipient	
1	Internal audit	Verify compliance with approval and legal requirements, Transport for NSW specifications and construction documentation		The first audit within three (3) months of the commencement of construction and then at six monthly intervals there-after.	Construction ESR	Project Director TFNSW ER
2	Independent audit (NSW CoA A38)	As detailed in DPIE (2020) Independent Audit – Post Approval Requirements and summarised above.		The first independent environmental audit will be carried out within 12 weeks of	TfNSW to procure suitably qualified, experienced and	Planning Secretary

No.	Audit	Requirement	Timing	Responsibility	Recipient	
		The independent environmental audits of the Project will be conducted by a suitably qualified, experienced and independent team of experts in auditing and the audit will be documented in an Environmental Audit Report.		the commencement of construction. Ongoing independent environmental audits will occur at intervals, no greater than 26 weeks from the date of the initial audit or as agreed by the Planning Secretary.	independent team of auditors Independent auditor to undertake audit and prepare audit report	Minister for DAWE (now DCCEEW)
3	Independent audit Commonwealth CoA Condition 14	DAWE (now DCCEEW) may request independent audits of compliance with the EPBC Act Approval and in accordance with Condition 14		If requested by DAWE	TfNSW/CPBGG JV	Planning Secretary Minister for DAWE (now DCCEEW)
4	G36 section 5.1	CEMP compliance audit in the event that environmental controls are not in place or are not properly maintained as per CEMP		If required following surveillance, inspection or an audit by TfNSW. Minimum 24 hours notice to be provided to CPBGG JV, otherwise at least 5 days notice will be provided.	TfNSW / CPBGG JV	TfNSW

3.9.3.1 CPBGG JV Internal Environmental and Sustainability Audits

Internal auditing will be undertaken generally on a six-monthly basis throughout the Project, noting that the initial audit is to be undertaken within three (3) months of the commencement of construction, six monthly thereafter with the final audit being undertaken within five (5) working days of the contract completion date. The purpose of auditing is to verify compliance with:

- This CEMP and Sub-plans
- Approval requirements (CoA, EPBC Act Approval, EIS and Submissions Report commitments)
- ISC requirements
- Any relevant legal and other requirements (e.g. licenses, permits, regulations, TfNSW contract documentation).

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.

Internal system audits will also be undertaken on the project by the CPBGG JV's parent companies in accordance with their respective business unit audit schedules.

3.9.3.2 Independent audits – Commonwealth Requirements

DAWE (now DCCEEW) may request independent audits of compliance with the EPBC Act Approval and in accordance with Condition 14, audit criteria must be agreed to by DCCEEW and the audit report must address the criteria to the satisfaction of DCCEEW. TfNSW are to publish the Audit Report on the project website within 10 business days of receiving the Planning Secretary's approval of the audit report in accordance with Commonwealth CoA 15.

CPBGG JV will maintain accurate records substantiating all activities associated with or relevant to the EPBC Act Approval, including measures taken to implement all management plans required.

3.9.3.3 Independent audits – State Requirements

In accordance with CoA A38, independent environmental audits for the project will be in accordance with the Independent Audit Post Approval Requirements (DPIE, 2020). These audits will be arranged by TfNSW and conducted by a suitably qualified, experienced and independent team of experts in auditing

that has been approved by DPE. CPBGG JV will participate in these audits where required. Results of the audits will be documented in an Environmental Audit Report which:

- Assesses the environmental performance of the project and its effects on the surrounding environment
- Assesses whether the project is complying with the CoA, EPBC Act Approval and REMMs
- Reviews the adequacy of any document required under the Infrastructure Approval
- Verifies compliance with the OCEMP, CPBGG JV's CEMP and issue-specific plans
- Verifies compliance with any relevant legal and other requirements (e.g. licenses, permits, regulations, TfNSW contract documentation including specifications) and
- Recommends measures or actions to improve the environmental performance of the project, and improvements to any document required under the Approval.

CPBGG JV will maintain accurate records substantiating all activities associated with the Project.

3.9.3.4 TfNSW CEMP Compliance Audit

TfNSW may conduct a CEMP compliance audit (at 24 hours notice) on CPBGG JV in accordance with section 5.1 of G36 in the event that environmental controls are not in place or are not properly maintained as required under this CEMP following TfNSW project surveillance, an inspection or an audit.

In the event that issues are raised during this audit, a written response is required to be provided within 5 working days to the auditor and TfNSW.

3.9.4 Construction Phase Compliance tracking

3.9.4.1 Compliance Monitoring and Reporting Program

The Compliance Monitoring and Reporting Program describes the approach to monitor and track compliance with the terms of approval (CoA, REMMs, permits and licences). A summary of the required compliance reporting is provided in Table 3-11.

Table 3-11 Summary of Compliance Tracking Reporting

Item No.	Report	Requirement	Timing	Responsibility	Recipient
1	Compliance Monitoring and Reporting Program	G36 cl6 Program must track and manage compliance against CoA, REMMs, permits and licences that CPBGG JV are responsible for.	No later than 1 month prior to commencement of construction For the duration of construction and 1 year post construction	Project Director ESR	TfNSW ER
2	Pre Construction Compliance Report	G36 cl3.11.1.1	Draft – 1 month prior to construction commencing Final - At least 10 days prior to commencement of construction	ESR	TfNSW
3	Construction Compliance Report	G36 cl3.11.1.3 and cl6 Reporting on compliance and performance against approval requirements.	Six monthly	ESR	TfNSW ER
4	Pre-Operation Compliance Report	G36 Cl3.11.1.4	3 months prior to operation commencing	ESR	TfNSW ER
5	Compliance Records	Electronic copies of compliance records to be provided to DAWE (now DCCEEW) if requested in writing.	If requested by DAWE (now DCCEEW) in writing and within the	TfNSW	DAWE (now DCCEEW)

		Refer OCEMP section 7.3.3	specified timeframe of that request		
6	DAWE (now DCCEEW) Compliance Report	Compliance report in accordance with Commonwealth CoA 10.	Annually	TfNSW	DAWE (now DCCEEW)

In accordance with EPBC Act Approval Condition 10, a compliance report will be prepared by TfNSW for each 12-month period following the commencement of construction. TfNSW will:

- Publish the report on the website within 60 business days following the relevant 12 month period
- Notify DAWE (now DCCEEW) 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
- Keep all compliance reports publicly available on the website
- Exclude or redact sensitive ecological data from published compliance reports
- Where any sensitive ecological data has been excluded from the version published, submit the full compliance report to DCCEEW within 5 business days of publication.

3.9.4.2 Pre-Construction Compliance

The Pre-Construction Compliance Report provides details of how the CoA that must be addressed before the commencement of Construction have been complied with and identifies the proposed commencement date for Construction.

In accordance with G36, the final Pre-Construction Compliance Report will include the following details:

- details of how the project commitments required to be addressed before construction were complied with;
- the time when each relevant commitment was complied with, including dates of submission of any required reports and/or approval dates; and
- details of any approvals or licences required to be issued by relevant Government Departments before construction commences.

3.9.4.3 Construction Compliance Report

The Construction Compliance Reports (CCR's) will be prepared for inclusion into TfNSW's Construction Compliance Report to DPE. The CCR's will include the following information:

- Compliance with the projects CEMP and COA
- Compliance with any other approvals or licences issued for construction
- A results summary and analysis of environmental monitoring (e.g. Water discharge, flora and fauna, noise and vibration)
- The number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints
- Evidence of implementation of any management strategies
- Details of any review of, and minor amendments made to, the OCEMP or CEMP as a result of construction carried out during the reporting period
- A register of any consistency assessments undertaken and their status
- Results of any environmental audits and details of any actions taken in response to the recommendations of an audit
- A summary of all incidents notified in accordance with CoA A44 and A46
- Any other matter relating to compliance with the approval or as requested by the Secretary.

3.9.4.4 Pre-Operation Compliance Report

The Pre-Operation Compliance reporting details how the CoA that must be addressed before the commencement of operation have been complied with and identifies the proposed commencement date for operation. The Pre-Operation Report will include the following:

- Details of how the project commitments that were required to be addressed before operation were complied with
- The time when each relevant commitment was complied with, including dates of submission of any required reports and/or approval dates
- Details of any approvals or licences required to be issued by relevant Government Departments before operation commences.

3.9.5 Other reporting

Prior to, during and following construction, various reports will be prepared to fulfil internal TfNSW specifications, and CPBGG JV's reporting needs, and commitments under the environmental assessment documentation, and requirements under the Instrument of Approval.

Table 3-12 sets out the reporting requirement applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

The performance of the Project against the objectives and targets will be documented in the Project CCRs and at least on an annual basis as part of the management review.

CPBGG JV will maintain accurate records substantiating all activities associated with the Project or relevant to the conditions of approval, including measures taken to all management plans. Records will be made available to the DPE and DAWE (now DCCEEW) upon request within the timeframe nominated in the request.

Table 3-12 Summary of Reporting Requirements

Item No.	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly Environmental Report	For incorporation in Project Monthly Progress Reports including environmental statistics (i.e. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues in accordance with G1 and G36.	Monthly – by the 10th day of the following month	ESR	TfNSW
2	EPL Annual Return (R1.1)	Report on compliance with each EPL condition including: • Statement of Compliance • Monitoring and Complaints summary, • Statement of compliance for: licence conditions; load based fee; requirement to prepare PIRMP; publish monitoring data; and Environmental Management Systems and practices	Within 60 days of the anniversary of the EPL	ESR	EPA
3	EPA or any other agency inspection report (other than for arranged inspections	The report will detail the purpose, outcome and actions pertaining to the visit and will be submitted to the TfNSW Project Manager.	Within one working day of the EPA or any other Authority visit, other than for arranged inspections	ESR	TfNSW
4	TfNSW Environmental Inspection Reports	Response to matters raised in TfNSW site inspections	As required. Typically, every two weeks for TfNSW inspection reports and	ESR	TfNSW EPA

Item No.	Report	Requirement	Timing	Responsibility	Recipient
	(s7.1.3 OCEMP)		monthly for EPA inspection reports		
5	Complaints Register	The Complaints Register will be provided to the Planning Secretary on request in accordance with NSW CoA A35(a) and B9	On request during construction	ESR	Planning Secretary (for information) TfNSW ER
6	Construction Monitoring Report	Report on monitoring data recorded and potential exceedances against criteria	Quarterly until operation is fully commenced	ESR	TfNSW Planning Secretary and other relevant government agencies (for information)
7	Pre-construction Condition Survey Report	NSW CoA E76 - Pre-construction surveys for owners of surface and sub-surface structures and other relevant assets identified at risk from vibration, including all listed heritage items and buildings/structures of heritage significance as identified in the documents listed in NSW CoA A1	Prior to the commencement of any work	ESR	TfNSW Property owner Local Council(s)
8	Post-construction Condition Survey Report	Post construction condition survey	no later than four months following the completion of construction activities that have the potential to impact on the structure / asset	ESR	TfNSW Property owner Local Council(s)
9	Detailed Site Investigation Report (s) (CoA E85)	Documents outcomes of contamination assessments of land on which the Project is located	Prior to the commencement of any work that would result in the disturbance of potential or contaminated land and/or soil	Suitably qualified and experienced person under the CLM Act	Detailed Site Investigation Report (s) (NSW CoA E85)
10	Remedial Action Plan (CoA E87)	Documents approach to remediation of specified contaminated land	Prior to commencing with remediation	Suitably qualified and experienced person under the CLM Act and approved by	Planning Secretary (for information)
11	Section A Site Audit Statement and Site Audit Report (CoA E88)	Verifies land is suitable for intended land use	After remediation and no later than one month before the commencement of operation	EPA Accredited Site Auditor	Planning Secretary
12	Road Dilapidation Report (CoA E95)	Road dilapidation report for local roads proposed to be used by construction vehicles	Within three weeks of completing the surveys and at least two weeks before the road is used by heavy vehicles	CPBGG JV Report to be prepared by a suitably qualified person	Relevant local Council(s)
13	Waste Avoidance and Resource Recovery Report	Information relating to wastes generated or recycled in accordance with Annexure G36/F	Annual within one month form 1 July and at actual completion date	ESR	TfNSW

Item No.	Report	Requirement	Timing	Responsibility	Recipient
14	Air Emissions Performance Report	Report on conformity, or otherwise, of mobile non-road diesel plan and equipment with relevant standards or approved equivalent emission standards.	Annual before 31 July and at actual completion date	ESR	TfNSW
15	Environmental risk assessment	Conducted for each construction stage, project changes and significant issues.	Prior to construction during development of CEMP and as required thereafter.	ESR Construction Manager	TfNSW
16	Heritage Report (NSW CoA E30)	Details of any cultural heritage investigations either undertaken or to be carried out including analysis of artefacts from excavations and identification of a final repository for finds carried out for the Project. Refer to Appendix B6	Within 12 months after the completion of all work	TfNSW	Planning Secretary (for information)
17	Pre-construction Land Condition Assessment	Pre-construction Land Condition Assessment to be conducted prior to taking possession of any area of land nominated by the Principal as available for use for the projects site facilities including areas for construction materials storage and stockpiling. Hold Point in accordance with clause 4.15.2 of G36.	Prior to site establishment of ancillary facilities.	CPBGG JV	TfNSW
18	Post construction Land Condition Assessment	In accordance with clause 4.15.3 of G36, undertake a post-construction Land Condition Assessment of land used as the projects site facilities including areas for construction materials storage and stockpiling. Hold Point in accordance with clause 4.15.3 of G36.	When site facilities are no longer required and restoration of the area has been undertaken in accordance with clause 4.16 of G36.	CPBGG JV	TfNSW
19	Occupational Hygienist's Reports (R44 cl 1.9)	In accordance with clause 1.9 of R44, occupational hygienist must undertake or arrange for tests, drawings, calculations, reports, assessments, direct and/or make recommendations	Advance contamination assessments During topsoil stripping operations During demolition and excavation of contaminated materials	CPBGG JV	TfNSW
20	Records of survey and as-built information (R44 cl 2.5)	In accordance with clause 2.5 of R44, survey and as-built documentation of all ACM encapsulation placement locations	Prior to placing ACM and after placement	CPBGG JV	TfNSW

3.10 Environmental non-conformities

Any member of the Project team may raise a non-conformance or improvement opportunity. The Quality Plan describes the process for managing non-conforming work practices and initiating corrective/preventative actions or system improvements.

The ER, TfNSW's Representative or relevant agency may also raise a non-conformance or improvement opportunity using the same process.

A non-compliance is the failure or refusal to comply with the requirements of the Infrastructure Approval or any REMM, applicable licence, permit or legal requirements relevant to the activity and/or area where the activity occurs. Under the Infrastructure Approval, a non-compliance with a condition of the Approval can also be classified as an incident. Incidents should be managed in accordance with Section 3.8, in the event that a non-compliance has been notified as an incident, it does not also need to be notified as a non-compliance in accordance with NSW CoA A48. Non-compliances may be identified through the review of compliance, environmental auditing or incident management and are to be notified in accordance with the following:

- **NSW CoA A46**, the Planning Secretary must be notified in writing via the Major Projects website within seven days after TfNSW becomes aware of any non-compliance.
- **NSW CoA A47**, a non-compliance notification must identify the Project and the application number for it, set out the condition of approval that the Project 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. The ER will also be informed of any non-compliance.
- **NSW CoA A48**, a non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.
- **Commonwealth CoA 11**, DAWE (now DCCEEW) must also be notified in writing of any non-compliance with the conditions or non-compliance with the commitments made in plans required in accordance with Commonwealth CoA 5a or 5b. The notification must be submitted as soon as practicable and no later than 2 business days after becoming aware of the non-compliance.

A non-conformance is the failure or refusal to comply with the requirements of project system documentation including this CEMP and supporting documentation that does not result in a non-compliance. For each non-conformance identified a corrective/preventative action (or actions) must be implemented. In addition, any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

Corrective/preventative actions and improvement opportunities will be entered into the CPBGG JV quality system database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed regularly to ensure actions are closed out as required.

Non-conforming activities may be stopped, if necessary, by the ESR, Environment Team or Project / Site Engineer following consultation with the Construction Director or delegate. The works will not commence until a corrective / preventative action has been closed out. The ER may also stop works in these circumstances. In such circumstances a non-conformance report must be prepared in accordance with the Quality Plan.

Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the Compliance Monitoring and Reporting Program.

3.11 Records of environmental activities

3.11.1 Environmental records

The ESR is responsible for maintaining all environmental management documents as current at the point of use. Types of records include:

- All monitoring, inspection and compliance reports/records
- Correspondence with public authorities
- Induction and training records
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action
- Community engagement information
- Minutes of CEMP and CMS review meetings and evidence of any action taken.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licensing requirements. Systems and documents would also be updated where relevant following incident investigations and implementation of non-conformance corrective actions.

Only the ESR, or delegate, has the authority to change any of the environmental management documentation; the ESR must endorse the change prior to resubmission. This may include updating this CEMP to reflect changes that are made to the OCEMP.

3.11.2 Document control

CPBGG JV or the TfNSW Environment and Sustainability Manager where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents listed above. During the Project, the environmental documents will be stored at the main site compound.

CPBGG JV will implement a document control procedure to control the flow of documents within and between the ER, TfNSW Environment and Sustainability Manager, stakeholders and subcontractors.

The procedure 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
- Archived.

A register and distribution list will identify the current revision of particular documents or data. The Document Register is maintained in Appendix A4.

3.12 Management review

Management reviews are undertaken as part of the continual improvement process. The management review can consist of group reviews, or executive reviews.

A group review is initiated by the ESR and includes relevant Project team members and stakeholders. The Environment team also meet as least quarterly, or at other pre-determined periods, to review environmental management issues for the Project. The environment team meeting can be run in conjunction with a wider group meeting if the ESR deems it appropriate.

The environment group meetings include:

- A review of the aspects and impacts register, legal register and environmental induction
- Consideration of monitoring, inspection and audit results
- Consideration of incidents and any lessons learnt
- Consideration of any new regulatory issues or any proposed CEMP updates
- A review of the effectiveness of erosion and sediment controls
- Consideration of ERG issues
- Consideration of changes in operational needs such as resourcing
- Feedback from management reviews.

An executive review will involve the management team. This review will be held every 12 months and will include a review of:

- Effectiveness of environmental management documentation implementation
- Management effectiveness
- 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 group and executive reviews could include amendments to this CEMP and related documentation, risk assessment review, re-evaluation of the project objectives and targets as well as feeding into other project documents.

3.13 CEMP/Sub Plan revision and changes to the Project

3.13.1 CEMP Revision

A document review process ensures that environmental documentation, including this CEMP, is updated as appropriate for the specific works that are occurring on-site.

This CEMP and Sub-Plans will be reviewed:

- At least annually during management reviews (refer to Section 3.12 for further details)
- Following reportable environmental incidents
- On identification of new risks, including risks identified during risk register updates
- When non-compliances are identified that are not considered minor in nature
- Following environmental audits that identify matters that require attention
- In response to Project changes (including consistency assessments and modifications)
- Within one month of any of the above occurrences, or as otherwise agreed with the ER and TFNSW, and/or
- As part of a continuous improvement process.

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 ESR, or delegate, to prepare the revised documents. This shall be carried out in consultation with key stakeholders as relevant. Consultation records shall be maintained by the ESR.

The ER can approve minor changes to the CEMP and Sub-Plans. Minor changes would typically include those that:

- Are editorial in nature eg staff and agency/authority name changes.
- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively.
- Do not compromise the ability of the Project to meet approval or legislative requirements.

Any revisions to the CEMP and Sub-Plans will be endorsed by the ER. The revised document will be issued to the TfNSW Project Manager (or delegate) for certification of the changes. In the event that these changes fall outside the scope and assumptions made in the OCEMP, then additional consultation may be required, including updates to the OCEMP.

Revised versions of the CEMP and Sub-Plans will be made available through the processes described in section 3.1.

3.13.2 Changes to the Project

Modifications or refinements to the Project may result from detailed design refinement or changed circumstances during construction. TfNSW is responsible for formally seeking approval from the Secretary for any Project modifications and for documenting refinements that are consistent with the approved Project.

The TfNSW Environment and Sustainability Manager (or delegate) is responsible for the assessment of Project refinements and management of the consistency assessment process. The CPBGG JV's ESR is responsible for incorporating any new environmental impacts and/or new statutory approval requirements or OCEMP updates into the appropriate environmental management documentation.

Any design changes or changes in scope of works will be communicated to the CPBGG JV ESR. The CPBGG JV ESR will undertake an environmental assessment and consistency review for the proposed

changes in consultation with the TfNSW Environment Manager (or delegate) to determine if a Project modification may be required.

Should the consistency review 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 Project approval, the ER will be informed immediately and a modification application under Section 115ZI of the EP&A Act will be prepared and submitted to the Secretary for determination.

The TfNSW Senior Project Manager and TfNSW Environment and Sustainability Manager (or delegate) and will approve all refinements that are deemed consistent with the Infrastructure Approval. A copy of any Consistency Assessment will be provided to the ER before the commencement of the subject work for information.

The use of land outside of the working area is not permitted without the prior written approval of TfNSW, relevant council (s), other relevant regulatory authorities and the land owners in accordance with G1 clause 4.

4 Construction control

A number of environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impacts or aspects of the activities described in Project EIS and environmental assessment documentation. They address requirements of the Commonwealth and NSW CoA, REMMS and other measures identified in the environment assessment documentation.

Environmental strategies may also be developed as required throughout the Project. These will also guide environmental management of potential impacts on-site.

A list of construction sub-plans and strategies for the Project, and their approval requirements, are provided in Table 4-1. The Project Staging Report documents the required Project-wide environmental documentation to be prepared for the Project and the timing required for submission where required.

Table 4-1 Environmental management sub plans and strategies

Document name	Document number	[Approval pathway/Consultation requirement]
Construction Soil and Water Management Sub-Plan	M12WCO-CPBGG-ALL-EVWA-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Flora and Fauna Management Sub-Plan	M12WCO-CPBGG-ALL-EVFF-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Traffic and Transport Management Sub-Plan	M12WCO-CPBGG-ALL-TR-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Contaminated Land Management Sub-Plan	M12WCO-CPBGG-ALL-EVCT-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Noise and Vibration Management Sub-Plan	M12WCO-CPBGG-ALL-EVNV-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Air Quality Management Sub-Plan	M12WCO-CPBGG-ALL-EVAH-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Waste and Resources Management Sub-Plan	M12WCO-CPBGG-ALL-EVWM-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Cultural Heritage Management Sub-Plan	M12WCO-CPBGG-ALL-EVHE-PLN-000001	ER Approval Provided to Relevant Agencies for their information
Construction Flood Management Plan	M12WCO-CPBGG-ALL-EVFLPLN-000001	ER Approval Provided to Relevant Agencies for their information
Site Establishment Management Plan	M12WEW-CPBGG-ALL-SE-PLN-000001	DPE Approval Required Consultation required with relevant council(s) and State government Agencies

Where a separate sub-plan is not required, information regarding environmental management and control of specific areas is outlined in the below sections.

4.1 Soil and water quality management

A Construction Soil and Water Management Sub-Plan (CSWMP) has been developed to manage the soil and water risks on this project. This document is developed in accordance with NSW CoA C4 and REMM SWH01 and located in Appendix B8.

4.2 Contaminated land

A Contaminated Land Management Plan has been developed to manage contaminated land on this project. This document is developed in accordance with NSW CoA C4 and REMM SC03 and is located in Appendix B3.

4.3 Spill prevention and response

Spill prevention and response will be managed in accordance with the measures outlined in the Emergency Spill Response Sub-Plan (Section 5 of the PIRMP). The PIRMP is located in Appendix A9.

4.4 Air quality

An Air Quality Management Sub-Plan has been developed to manage the air quality risks on this project. This document is developed in accordance with NSW CoA C4 and REMM AQ01 and is located in Appendix B6.

4.5 Fire safety and burning off

The following fire-fighting equipment is provided on site and in vehicles to ensure the safety of public and property:

- Firefighting trailer mounted 2000L tank
- Multiple road water carts 10,000L – 30,000L with pump and hose attachments.

Total fire ban declarations and resultant work restrictions will be communicated to staff through toolbox talks prior to each working day.

During total fire bans, plant with internal combustion engines that have the potential to discharge sparks, are fitted with spark arrestors:

All personnel involved in welding, grinding, thermal or oxygen cutting, heating or other fire or spark-producing operations will be trained in fire prevention, safety and basic fire-fighting skills.

Measures to mitigate and manage bushfire risks are in accordance with the procedures outlined in Appendix B2, Section 6.15, and in the Project's Emergency Response Plan.

4.6 Noise and vibration control

A Noise and Vibration Management Plan has been developed to manage the risks on this project. This document is developed in accordance NSW CoA C4 and REMM NV01 and is located in Appendix B4.

4.7 Biodiversity

A Fauna and Flora Management Plan has been developed to manage the risks on this project. This document is developed in accordance with NSW CoA C4 and REMM B01 and is located in Appendix B2.

4.8 Aboriginal and Non-aboriginal heritage

A Cultural Heritage Management Plan has been developed to manage the risks on this project. This document is developed in accordance with NSW CoA C4 and is located in Appendix B7.

4.9 Waste Management and Resource Recovery

A Waste and Resource Management Sub-Plan has been developed to manage the soil and water risks on this project. This document is developed in accordance with REMM W01 and is located in Appendix B5.

4.10 Use of pesticides

All herbicide use will be recorded on a herbicide application form, and copies provided to the client within 24 hours of application. All personnel managing, handling or applying pesticides must have completed appropriate training.

4.11 Work in environmentally sensitive areas

Clause 4.11 of G36 is addressed in section 3.2.5 of this CEMP.

4.12 Environmental incident notification and reporting

Clause 4.14 of G36 is addressed in section 3.8 of this CEMP. The response to environmental emergencies and incidents is to be consistent with the 'Environmental Incident Classification and Reporting Procedure' (RMS 2018) (Appendix A7).

4.13 Ancillary Site facilities

A Site Establishment Management Plan (SEMP) has been developed to manage the risks on this project. This document is developed in accordance with CoA A16 and located in Appendix B10.

Ancillary facilities are required to support construction of the Project. Two types of ancillary facilities are defined in the NSW Infrastructure Approval:

- Minor Ancillary Facility: Lunch sheds, office sheds, portable toilet facilities, and the like that meet the requirements of NSW CoA A20
- Construction Ancillary Facility: a "temporary facility for construction of the CSSI including an office and amenities compound, construction compound, material crushing and screening plant, concrete and asphalt batching plant, materials storage compound, maintenance workshop, testing laboratory, material stockpile area, access and car parking facilities and utility connections to the facility."

Before establishment of any new or amended construction ancillary facilities, CPBGG JV will assess the ancillary facility in accordance with NSW CoA A15 and the Environment Assessment Documentation.

4.13.1 Site Establishment Management Plan

Following this assessment, CPBGG JV will prepare a SEMP in accordance with NSW CoA A16. The SEMP will detail the environmental management practices and procedures to be implemented for the establishment of the construction ancillary facilities. The SEMPs are to be prepared in consultation with the relevant council(s) and government agencies and be approved by DPE before the establishment of major construction ancillary facilities. The SEMP will detail the management of the ancillary facilities and include:

- A description of activities to be undertaken during construction (including scheduling of construction)
- Proposed site layout and location of closest sensitive receiver(s)
- A program for ongoing analysis of the key environmental risks arising from the site establishment activities, including an initial risk assessment undertaken before the commencement of site establishment works
- Details of how the site establishment activities will be carried out to:
  - Meet the performance outcomes stated in the EIS and Amendment Reports
  - Manage the risks identified in the risk analysis
- A program for monitoring the performance outcomes, including a program for construction noise monitoring of site establishment activities.

4.13.2 Minor Ancillary Facilities

In accordance with NSW CoA A20, minor ancillary facilities that comply with the requirements of this condition do not require further approval from the DPE Secretary. NSW CoA A20 states:

Minor ancillary facilities comprising lunch sheds, office sheds, portable toilet facilities and the like, that are not identified in the documents listed in Condition A1 and which do not satisfy the criteria set out in Condition A15 of this approval must satisfy the following criteria:

a) are located within or adjacent to the construction boundary; and

b) have been assessed by the ER to have:

i) minor amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC 2009), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts; and

ii) minor environmental impact with respect to waste management, soil, water and flooding; and

iii) no impacts on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond those already approved under other terms of this approval.

Refer to Appendix B10 Site Establishment Management Plan for full details of proposed ancillary facilities.

4.13.3 Boundary Screening

NSW CoA A21 and A22 require boundary screening to be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of construction unless otherwise agreed with affected residents, business operators and landowners. This screening must minimise, as far as practicable, the visual impacts on adjacent sensitive receivers.

4.13.4 Light Spill

Ancillary facility lighting will be constructed in a manner that minimises light spill and glare impacts on nearby receivers in accordance with REMM LVIA07 and NSW CoA E62. Lights will be located as far away as possible and pointed away from neighbours and away from sensitive areas such as bedroom windows. If there is no alternative, shields and baffles will be used to help keep light spill to a minimum. Consultation with potentially affected landowners in relation to residual night lighting will be undertaken where required by CPBGG JV.

4.14 Restoration of site

On completion of the works, all areas disturbed by construction activities (including the site compounds, materials storage, stockpile areas, access and haul roads) must be reinstated and restored to conditions similar to that existing before disturbance or as outlined in the post-construction land assessment in accordance with REMM SLP07. Where property access has been physically affected, in accordance with NSW CoA E83, it must be reinstated to at least an equivalent standard or alternative access provided in consultation with the landowner. The restoration process will also include:

- Waste and material removal
- Soil remediation where contamination has occurred
- Reapplication of Topsoil to the area
- Weed control
- Revegetation in accordance with R178 or landscape drawings.

4.15 Agricultural Operations / Activities

Construction activities will be planned to minimise disruption to existing agricultural operations/ activities in surrounding properties where feasible and reasonable (e.g. stock access, access to farm dams, etc) unless otherwise agreed by the landowner.

4.16 Site Shutdown Periods

Site shutdowns occur when construction works on the Project stop for more than four days (i.e. long weekends, the Christmas period, etc.) or a significant weather event is forecast (e.g. storm event requiring shutdown of the site). Before and following a site shutdown, measures are taken to manage potential environmental risks during the shutdown period, including (but not limited to):

- Use of the CPB CMS Project shutdown and restart plan,
- Shutdown inspections prior to a shutdown period,
- Knowledge-sharing sessions (e.g., toolbox talks) about managing the environment during shutdown prior to shutdown,
- A skeleton work crew and equipment available and on-call during a shutdown,
- Additional environmental management resources (e.g., flocculant or dust suppressant) available during shutdown, and
- Start-up inspections immediately after a shutdown period.

Section 3.9.1.6 and Section 3.9.1.7 detail more about shutdown inspections and start-up inspections respectively.

Appendix A1 – Legal requirements and compliance tracking

Appendix A1 Legal and Other Requirements

M12 Motorway West

Project number:	N00160
Document number:	M12WCO-CPBGG-ALL-EVE-PLN-000001_App A1
Revision date:	19/01/2023
Revision:	01

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

Rev	Date	Reviewed By	Details
A	18/02/2022	A. Zvirzdinas	First Draft
B	30/06/2022	A. Zvirzdinas	Second Draft
C	18/07/2022	A. Zvirzdinas	Third Draft. New document number
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
01	19/01/2023	K. Purkiss	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	[redacted]		27/07/2022
Project Director	[redacted]		23/03/2023

Distribution of controlled copies

Copy no.	Issued to	Version

Legal requirements

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
General					
Environmental Planning and Assessment Act 1979	All	The Project is subject to an approval under Division 5.2 of the Environmental Planning and Assessment Act 1979 (EP&A Act) as Critical State Significant Infrastructure (CSSI) (SSI-9364). Comply with the terms Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	S5.14 S5.25	Yes	CEMP refer to Section 1.1 and 1.2
Airport					
Airports Act 1996	Airport access	*The Western Sydney Airport: Airport Plan* (Commonwealth of Australia, 2016) was prepared under Division 4A of Part 5 of the Airports Act during the Stage 1 development of the WSIA. The WSIA was approved as part of the determination of the Western Sydney Airport Plan on 12 December 2016. If tie-in work is required at the Airport Access Road on Commonwealth land, it would be carried out under the Airport Plan and in consultation with Western Sydney Airport (WSA Co).	All	Yes	CEMP refer to Section 1.3
Water					
Water Management Act 2000 With the exception of controlled activity approvals, the *Water Management Act 2000* (WM Act) only applies in relation to those water sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.	Water access and use	Do not take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters) without an access licence. Do not use of water on land (unless supplied by a water utility, irrigation corporation etc or in accordance with basic landholder rights) without a water use approval.	S56 S60A S89 S91A	No	Appendix B8 CSWMP refer to Section 7.5.1

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
Water Management Act 2000	Water management works	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	S90 S91B S91C S91D	No	Appendix B8 CSWMP refer to Section 7.5.1
Water Management Act 2000	Waterfront land	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	S91	No Public authorities are exempt from the need to obtain a controlled activity approval. Water Management (General) Regulation 2011 (cl.38)	Appendix B8 CSWMP refer to Section 7.5.1
Water Management Act 2000	Water access and use	An aquifer interference approval/licence may be required under Section 91(3) if construction requires intersection of a groundwater source	S91	Yes	CEMP refer to Section 3.2.2
Water Management (General) Regulation 2018	Water access and use	Exemptions for the requirement of a water access license for roads authority in relation to water required for road construction and road maintenance as listed in Clause 2 of Schedule 4. Exemptions for the requirement of a water access license for any public authority lawfully engaged in the use of water for dust suppression—in relation to water required for that purpose as listed in Clause 5 of Schedule 4	S21(1) Schedule 4 (2) Schedule 4 (5)	Yes	Appendix B8 CSWMP refer to Section 7.5.1
Water Act 1912 Note that this Act is being progressively repealed by the WM Act. With the exception of controlled activity approvals, the WM Act only applies in relation to those water sources covered by operational water sharing	Surface water	Obtain a licence or permit for construction or use of 'work' for purposes including the taking and using of water	S21B	Yes	CEMP refer to Section 3.2.2 Appendix B8 CSWMP refer to Section 7.5.1
	Groundwater	Obtain a licence where interference with groundwater is likely to occur.	S112 S121A	S112 does not apply to the Crown. TfNSW is therefore not required to	Appendix B8 CSWMP refer to Section 7.5.1

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
plans – these areas cover most of the State's major regulated river systems.				obtain a licence under this provision.	
	Floodplains	Obtain an approval for controlled works. These include works which occur on a designated floodplain, which can prevent land from being flooded or which can affect water flow to or from a river or lake.	91D	An exemption in relation to roads potentially applies – see clause 41E of the *Water Management (Regulation) 2011*.	Appendix B9 CFMP
Protection of the Environment Operations Act 1997	Water pollution	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of an Environment Protection Licence.	S120 S122	Yes	Appendix B8 CSWMP refer to Section 3.5 Appendix B3 CCLMP
Noise					
Protection of the Environment Operations Act 1997	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes	Appendix B4 CNVMP refer to Section 8
Protection of the Environment Operations Act 1997	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes	Appendix B4 CNVMP refer to Section 8
Contaminated material					
Protection of the Environment Operations Act 1997	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	S142A – S142E	Yes	Appendix B3 CCLMP refer to Section 6.5
Contaminated Land Management Act 1997	Reporting contamination	Notify the EPA if; Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land.	S60	Yes	Appendix B3 CCLMP refer to Section 6.5 Appendix B8 CSWMP refer to Section 7.6.1 and Appendix E

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
		Contamination meets other criteria that may be prescribed by the regulations.			
Biodiversity					
Biodiversity Conservation Act 2016	Fauna	Do not harm any animal that is; of a threatened species, that is part of a threatened ecological community or is a protected animal, unless authorised under other legislation (e.g. planning approval).	S2.1 S2.8	Yes	Appendix B2 CFFMP refer to Section 6.12
Biodiversity Conservation Act 2016	Habitat	Do not damage habitat of a threatened species or ecological community unless authorised under other legislation (e.g. planning approval).	S2.4 S2.8	Yes	Appendix B2 CFFMP refer to Section 6.12
Biodiversity Conservation Act 2016	Biodiversity	Do not damage declared areas of outstanding biodiversity value unless authorised under other legislation (e.g. planning approval).	S2.3 S2.8	Yes	Appendix B2 CFFMP refer to Section 6.12
Biodiversity Conservation Act 2016	Flora	Do not pick a plant that is; of a threatened species, that is part of a threatened ecological community or is a protected plant, unless authorised under other legislation (e.g. planning approval).	S2.2 S2.8	Yes	Appendix B2 CFFMP refer to Section 6.12
Biodiversity Conservation (Savings and transitional) Regulation 2017	Flora and fauna conservation	The regulation is in place to assist with repealing and replacing of the previous biodiversity legislation, including the *Threatened Species Conservation Act 1995, and the Native Vegetation Act 2003.* The biodiversity assessment for the Project was carried out under the Framework for Biodiversity Assessment which was the standard method for assessing impacts of major projects on biodiversity and determining offsetting requirements.		Yes	Appendix B2 CFFMP refer to Section 6.12
Biosecurity Act 2015	Weeds	Manage weeds on site in accordance with the relevant Regional Strategic Weed Management Plan.	S22	Yes	Appendix B2 CFFMP refer to Section 6.12 and Appendix E
Biosecurity Regulation 2017	Pests and Diseases	Notify the presence any pest or disease listed in Schedule 1 of the Biosecurity Regulation 2014, within one working day after suspecting or becoming aware of the pest or disease.	Regulation cl.7 Schedule 1	Yes	Appendix B2 CFFMP refer to Section 6.12 and Appendix E

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
Fisheries Management Act 1994	Dredging or reclamation	Provide the Minister for Primary Industries 28 days-notice of planned dredging or reclamation work. Temporary creek crossings would be required to build bridges at Cosgroves Creek, Badgerys Creek, South Creek and Kemps Creek. Bridge piers would be permanently placed within Badgerys Creek, South Creek, Kemps Creek to allow for the construction of the bridges. This may require dredging or reclamation work.	S199	Yes	Appendix B2 CFFMP refer to Section 6.12
Fisheries Management Act 1994	Fish passage	Do not block fish passage without a permit	S219	No	Appendix B2 CFFMP refer to Section 6.12
Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13	Yes	Appendix B2 CFFMP refer to Section 6.12
		Comply with the terms of any EPBC Act approval for the project.		NA	Appendix B2 CFFMP refer to Section 3.3
Waste					
Protection of the Environment Operations Act 1997	Littering	Do not litter in a public place or an open private place. Do not litter from a vehicle. Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises. Do not deposit advertising material on or in vehicles.	Part 5.6A	Yes	Appendix B5 CWRMP refer to Section 5.9
Protection of the Environment Operations Act 1997	Waste and transportation	Do not undertake a scheduled waste activity unless in accordance with an EPL. A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material: • Is VENM. • Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas.	Part 3.2 Schedule 1	Yes	Appendix B5 CWRMP refer to Section 5.1 Appendix B8 CSWMP refer to Section 7.6.1

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
		• Is covered by a "general exemption". Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land. • A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or more than 30,000 tonnes of waste is received per year from off site.			
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes	Appendix B5 CWRMP refer to Section 5.7.4 and Section 7
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes	Appendix B5 CWRMP refer to Section 5.7.4 and Section 7
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49	Yes	Appendix B5 CWRMP refer to Section 5.7.3 and Section 7
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes	Appendix B5 CWRMP refer to Section 5.7.4 and Appendix C
Protection of the Environment Operations (Waste) Regulation 2014 (POEO Regulation)		Any excavations on former landfill sites must be approved	Regulation 110a	Yes	Appendix B5 CWRMP refer to Section 5.1 and Section 5.9
Heritage					
Heritage Act 1977	Heritage	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	S56-57	No	Appendix B7 CCHMP refer to Section 6.5
		Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result	S139	No	Appendix B7 CCHMP refer to Section 6.5

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
		in a relic being discovered, exposed, moved, damaged or destroyed; or Do not disturb or excavate land on where a relic has been discovered or exposed.			
		Notify the heritage Council on discovery of a relic	S146	Yes	Appendix B7 CCHMP refer to Section 6.3 and Appendix D
National Parks and Wildlife Act 1974	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86 S90	No	Appendix B7 CCHMP refer to Section 6.3 and Appendix D
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes	Appendix B7 CCHMP refer to Section 6.3 and Appendix D
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes	Appendix B7 CCHMP refer to Section 6.3 and Appendix D
		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes	Appendix B7 CCHMP refer to Section 6.3 and Appendix D
General					
Protection of the Environment Operations Act 1997	Harming the environment	Do not risk harming the environment by wilfully or negligently: • Disposing of waste unlawfully. • Causing any substance to leak, spill or otherwise escape (whether or not from a container); or • Emitting an ozone depleting substance.	S115 S116 S117	Yes	Appendix B7 CCLMP refer to Section 6.5 Appendix B5 CWRMP refer to Section 5.9 and 7 Appendix B6 CAQMP refer to Section 7
Protection of the Environment Operations Act 1997	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	S167	Yes	Appendix B3 CCLMP refer to Section 6.5
Protection of the Environment Operations Act 1997	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148	Yes	Appendix B3 CCLMP refer to Section 6.5 Appendix A7 of the CEMP
Protection of the Environment Operations Act 1997	Site licensing	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an	S47 S48	Yes	CEMP refer to Section 3.2.2

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
		activity, unless the premises are licensed by the EPA. This applies to: • Road construction: meaning the construction, widening or re-routing of roads if it results in the existence of four or more traffic lanes (other than bicycle lanes or lanes used for entry or exit) for one kilometres of their length in the metropolitan area, or five kilometres in length in any other area, where the road is classified, or proposed to be classified, as a freeway or tollway under the *Roads Act 1993*.			Appendix B1 CTTMP refer to Section 6.1.1
Environmentally Hazardous Chemicals Act 1985	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	S28	Yes	CEMP refer to Section 3.2.2 Appendix B3 CCLMP refer to Section 7.1.1 and Appendix B
Dangerous Goods (Road and Rail Transport) Act 2008	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	S9	Yes	Appendix B3 CCLMP refer to Section 6.5
Rural Fires Act 1997	Bushfire risk	The Act provides for the prevention, mitigation and suppression of bush and other fires in local government area. Exemptions can be sought to allow hot works to be undertaken on Total Fire Ban days	Division 6 S99	Yes	CEMP refer to Section 3.2.2
National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes	Appendix B6 CAQMP refer to Section 7 and Appendix C
Land Acquisition (Just Terms and Compensation) Act 1991 (Land Acquisition Act)	Property acquisition	Applies to the acquisition of any land required for the project.	-	Yes	Individual agreements with landowners
Pesticides Act 1999	Hazards and risks	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label.	S12 S13 S14 S15 S17	Yes	Appendix B2 CFFMP refer to Section 6.12 and Appendix E

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section or supporting documentation
		Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. • Compliance with pesticide codes of practice is required.			
Western Sydney Parklands Act 2006	Land acquisition	The *Western Sydney Parklands Act* applies to the land located within the Western Sydney Parklands and establishes certain land to be Trust Land. Trust Land affected by the project would be subject to the Land Acquisition Act.	-	Yes	Not applicable to CEMP and Sub-plans

Secondary CoA and REMMs

The primary NSW CoA specifically relevant to the development of this Plan are listed in Table 1-1 of the CEMP. Secondary conditions that are related to the development of the CEMP (and Sub-plans were relevant) have been listed in the table. A cross reference is also included to indicate where the CoA is addressed in this Plan or other Project management documents. This table is a review mechanism by CPBGG JV to ensure the relevant CoA and REMMs are being addressed appropriately in the CEMP (and Sub-plans were relevant).

NSW CoA

CoA	Condition Requirements	CEMP Reference
A1	The Proponent must carry out the CSSI in accordance with the terms of approval and generally in accordance with:	Section 1.2
	• M12 Motorway Environmental Impact Statement (dated October 2019);	
	• M12 Motorway Submissions Report (dated October 2020);	
	• M12 Motorway Amendment Report (dated October 2020);	
	• M12 Motorway Amendment Report - Submissions Report (dated December 2020); and	
	• M12 Motorway Amendment Report - Submissions Report - Amendment (dated 8 March 2021).	
A2	The CSSI must only be carried out in accordance with all procedures, commitments, preventative actions, performance outcomes and mitigation measures set out in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	Section 1.2
A3	In the event of an inconsistency between:	CEMP
	• The terms of this approval and any document listed in Condition A1, the terms of this approval will prevail to the extent of the inconsistency; and	
	• Any document listed in Condition A1, the most recent document will prevail to the extent of the inconsistency.	

CoA	Condition Requirements	CEMP Reference
A4	The Proponent must comply with all written requirements or directions of the Planning Secretary, including in relation to:	Section 3.2.2
	• the environmental performance of the CSSI;	
	• any document or correspondence in relation to the CSSI (including the provision of such documentation or correspondence);	
	• any notification given to the Planning Secretary under the terms of this approval;	
	• any independent appointment or withdrawal of an appointment made in relation to the CSSI;	
	• any audit of the construction or operation of the CSSI;	
	• the terms of this approval and compliance with the terms of this approval (including anythingrequired to be done under this approval);	
	• the carrying out of any additional monitoring or mitigation measures; and	
	• in respect of ongoing monitoring and management obligations, and following consultation with the Proponent, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under this approval.	
A6	This approval lapses five (5) years after the date on which it is granted, unless Work has physicallycommenced on or before that date.	Section 3.2.2

CoA	Condition Requirements	CEMP Reference
A5	Where the terms of this approval require a document or monitoring program to be prepared or a review to be undertaken and submitted to the Planning Secretary, and the terms of this approval require the document, monitoring program or review to be prepared/undertaken in consultation with identified parties, evidence of the consultation must be submitted to the Planning Secretary with the relevant document, monitoring program or review. The evidence must include:	OCEMP Overarching Sub-Plans Appendix B4 CNVMP Appendix B8 CSWMP Appendix B10 Section 1.5
	• Documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval	
	• A log of the dates of engagement or attempted engagement with the identified party	
	• Documentation of the follow-up with the identified party where engagement has not occurred to confirm that they do not wish to engage or have not attempted to engage after repeated invitations	
	• Outline of the issues raised by the identified party and how they have been addressed	
	• A description of the outstanding issues raised by the identified party and the reasons why they have not been addressed.	
A7	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.	Appendix A1 OCS
A8	Any document that must be submitted or action taken within a timeframe specified in or under theterms 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 ofan incident under **Condition A44** and **Condition A45**.	Section 1.5.2
A15	Construction ancillary facilities (excluding minor construction ancillary facilities established under Condition A20) that are not identified by description and location in the documents referred to in Condition A1 can only be established and used in each case if:	Appendix B10
	• They are located within or immediately adjacent to the construction boundary; and	
	• They are not located next to a sensitive receiver(s) (including where an access road is between the facility and the receiver(s)), unless the sensitive receiver(s) (both the landowner(s) and occupier(s)2) have given written acceptance to the carrying out of the relevant facility in the proposed location; and	
	• 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	
	• 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.	
A16	Before the establishment of a major construction ancillary facility (i.e. excluding minor construction ancillary facility(s) established under Condition A20), the Proponent must prepare a Site Establishment Management Plan which outlines the environmental management	Section 4.13

CoA	Condition Requirements	CEMP Reference
	practices and procedures to be implemented for the establishment of the construction ancillary facility(s). The Site Establishment Management Plan must be prepared in consultation with the relevant council(s) and government agencies. The Plan must be endorsed by the ER and then submitted to the Planning Secretary for approval one (1) month before the establishment of the construction ancillary facility(ies). The Site Establishment Management Plan must detail the management of the construction ancillary facility(ies) and include:	Appendix B10
	• A description of activities to be undertaken during establishment of the construction ancillary facility(ies) (including scheduling and duration of works to be undertaken at the site)	
	• Figures illustrating the proposed site layout and the closest sensitive receiver(s);	
	• 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;	
	• Details of how the site establishment activities described in subsection (a) of this condition will be carried out to:	
	○ meet the performance outcomes stated in the documents listed in Condition A1, and	
	○ manage the risks identified in the risk analysis undertaken in subsection of this condition; and	
	• A program for monitoring the performance outcomes, including a program for construction noise monitoring consistent with the requirements of Condition C14.	
	The Site Establishment Management Plan must be approved before the establishment of a construction ancillary facility(ies) (excluding minor construction ancillary facilities established under Condition A20). Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each construction ancillary facility. Note: Condition A16 does not apply to minor construction ancillary facilities established under Condition A20.	
A17	Where a construction ancillary facility(ies) has been established for any early works listed in Appendix B and is to be used for construction, a new or revised Site Establishment Management Plan must be prepared where additional activities are required to establish the site for the purposes of construction or there is a change to the site layout. The new or revised Site Establishment Management Plan must be prepared in accordance with Condition A16 and approved by the Planning Secretary before commencement of the additional activities or change to site layout.	Appendix B10
A18	The use of a construction ancillary facility for construction (excluding minor construction ancillary facilities established under Condition A20 and construction ancillary facilities established for the purposes of early works in accordance with Condition A24) must not commence until the CEMP required by Condition C1, relevant CEMP Sub-plans required by Condition C4 and relevant Construction Monitoring Programs required by Condition C11 have been approved by the Planning Secretary. This condition does not apply to the use of construction ancillary facilities where the ER has determined that the use of the facility will have a minimal impact on the environment and community.	OCEMP approved by DPIE on 21/12/2021.
A19	Construction ancillary facilities established for the purposes of early works in accordance with Condition A24 cannot be used for construction until the CEMP required by Condition C1, relevant CEMP Sub-plans required by Condition C4 and relevant Construction Monitoring Programs required by Condition C11 have been approved by the Planning Secretary. This condition does not apply to the use of construction ancillary facilities where the ER has determined that the use of the facility will have a minimal impact on the environment and community.	OCEMP approved by DPIE on 21/12/2021.

CoA	Condition Requirements	CEMP Reference
A20	Lunch sheds, office sheds, portable toilet facilities, and the like, can be established and operated where they satisfy the following criteria:	Section 4.13.2 Appendix B10
	• Are located within or adjacent to the construction boundary	
	• Have been assessed by the ER to have:	
	○ Minor amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC, 2009), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, and	
	○ Minor environmental impact with respect to waste management, soil, water and flooding, and	
	○ 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.	
A21	Boundary screening must be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of construction of the CSSI unless otherwise agreed with affected residents, business operators and landowners.	Section 4.13.3 CEMP Appendix B10
A22	Boundary screening required under Condition A21 of this approval must minimise, as far as practicable, visual impacts on adjacent sensitive receivers.	Section 4.13.4 CEMP Appendix B10
A23	The CSSI name; application number; telephone number, postal address and email address required under Condition B7 of this approval must be made available on site boundary fencing / hoarding at the entrance of each ancillary facility before the commencement of construction.	Appendix B10
A34	For the duration of Work until the commencement of operation, or as agreed with the Planning Secretary, the approved **ER** must: • receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI; • consider and inform the Planning Secretary on matters specified in the terms of this approval; • 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; • review the documents identified in **Conditions A9, A13, A16, A24, C1, C4** and **C11** and anyother documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so: • make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or • make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary / Department for information or are not required to be submitted to the Planning Secretary / Department); • regularly monitor the implementation of the documents listed in **Conditions A9, A13, A16, A24, C1, C4** and **C11** to ensure implementation is being carried out in accordance with the documents and the terms of this approval; • as may be requested by the Planning Secretary, help plan, attend or undertake audits of theCSSI commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under **ConditionsA38** and **A41** of this approval; • as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints;	Section 3.3.1

CoA	Condition Requirements	CEMP Reference
	• assess the impacts of minor construction ancillary facilities, as required by **Condition A20** ofthis approval; • consider any minor amendments to be made to the **CEMP**, **CEMP Sub-plans**, **ConstructionMonitoring Programs**, **Site Establishment Management Plans** and **Early Works Environmental Management Plan** that involve updating or are of an administrative nature and do not increase impacts to nearby sensitive receivers, and ensure they are consistent with the terms of this approval and the documents 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; • prepare and submit to the Planning Secretary and relevant regulatory agencies (where requested by those 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 endof each month for the duration of the ER's engagement for the CSSI.	
A35	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 A34** (including preparation of the **ER** monthlyreport), as well as: • the complaints register for any complaints received (on the day they are received); and • 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).	Section 3.3.1
A38	The Proponent must engage an independent auditor and conduct auditing and audit reporting of the CSSI in accordance with the document Independent Audit Post Approval Requirements (DPIE, 2020). Note: The independent auditor must be approved by the Planning Secretary no later than two weeks following the commencement of construction as required by Independent Audit Post Approval Requirements (DPIE, 2020).	Section 3.9.3
A40	The Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to that set out in Independent Audit, Post Approval Requirements (DPIE, 2020), upon giving at least one (1) month's notice to the Proponent of the date upon which the audit must be commenced	Section 3.9.3
A41	The Planning Secretary may direct the Proponent to undertake Independent Audits in addition to those provided for in Condition A38 when considered necessary to address a particular issue.	Section 3.9.3
A42	In accordance with the specific requirements in the Independent *Audit Post Approval Requirements*, the Proponent must: • Review and respond to each Independent Audit Report prepared under Condition A38 or Condition A41; • Submit the response to the Planning Secretary; and • Make each Independent Audit Report and response to it publicly available 60 days after submission to the Planning Secretary, unless otherwise agreed by the Planning Secretary.	Section 3.9.3
A43	Independent Audit Reports and the Proponent's response to audit findings must be submitted to the Planning Secretary for information within two (2) months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approval Requirements (DPIE, 2020).	Section 3.9.3
A44	The Planning Secretary must be notified 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. The notification must identify the CSSI (including the application number and the name of the CSSI) and the date, time, location and nature of the incident.	Section 3.8.3 Appendix A7

CoA	Condition Requirements	CEMP Reference
A45	Subsequent notification must be given and reports submitted to the Planning Secretary in accordance with the requirements set out in Appendix A.	Section 3.8.3 Appendix A7
A46	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.	Section 3.10 Appendix A7
A47	A non-compliance notification must identify the CSSI and the application number for it, set out the condition of approval that the CSSI 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.	Section 3.10 Appendix A7
A48	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.	Section 3.10 Appendix A7
A49	All heavy vehicles used for construction spoil haulage must be clearly marked on the sides and rear with the CSSI name (or where the CSSI is staged, the name of that stage) to enable immediate identification by a person viewing the heavy vehicle. Details of the CSSI identification markings must be submitted to the Planning Secretary for approval and approved prior to the heavy vehicles being used for construction spoil haulage. There must only be one CSSI form of signage on a heavy vehicle at any one time.	Appendix B1 CTTMP
B1	A Communication Strategy must be prepared to provide mechanisms to facilitate communication about Work, construction and operation of the CSSI with:	Section 3.7.3 OCS (TfNSW)
	• The community (including adjoining affected landowners and businesses, and others directly impacted by the CSSI); and	
	• The relevant councils and relevant government agencies.	
	The Communication Strategy must address who (the Proponent, Independent Appointments and/or construction contractor) will engage with the community, relevant councils and agencies, how they will engage and the timing of engagements.	
B6	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 Complaints Management System must require complainants to be advised that:	Section 3.7.5 OCS (TfNSW)
	• The Complaints Register may be forwarded to Government agencies, including the Department, to allow them to undertake their regulatory duties;	
	• By providing personal information, the complainant authorises the Proponent to provide that information to government agencies;	
	• The supply of personal information by the complainant is voluntary; and	
	• 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's or project website to make prospective complainants aware of their rights under the Privacy and Personal Information Protection Act 1998. For any complaints made in person, the complainant must be made aware of the Collection Statement.	
B7	The following information must be available to facilitate community enquiries and manage complaints one (1) month before the commencement of Work and for 12 months following the completion of construction:	Section 3.7.5 OCS (TfNSW)
	• 24-hour telephone number for the registration of complaints and enquiries about the CSSI	

CoA	Condition Requirements	CEMP Reference
	• A postal address to which written complaints and enquires may be sent	
	• An email address to which electronic complaints and enquiries may be transmitted; and	
	• A mediation system for complaints unable to be resolved.	
	This information must be accessible to all in the community regardless of age, ethnicity, disability or literacy level and must be provided on the website required under Condition B10.	
B8	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:	Section 3.7.5 OCS (TfNSW)
	• Number of complaints received;	
	• The date and time of the complaint;	
	• The method by which the complaint was made;	
	• Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;	
	• Nature of the complaint;	
	• Means by which the complaint was addressed and whether resolution was reached, with or without mediation; and	
	• If no action was taken, the reason(s) why no action was taken.	
B9	The Complaints Register must be provided to the Planning Secretary upon request, within the timeframe stated in the request.	Section 3.7.5 OCS (TfNSW)
B10	A website or webpage providing information in relation to the CSSI must be established before commencement of Work and be maintained for the duration of construction, and for a minimum of 24 months following the completion of construction. The following up-to-date information (excluding confidential, private, commercial information or any other information that the Planning Secretary has approved to be excluded) must be published before the relevant Work commencing and maintained on the website or dedicated pages including:	Section 3.7.4
	• Information on the current implementation status of the CSSI;	
	• A copy of the documents listed in Condition A1 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval;	
	• 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 modification of the terms of this approval (ordered in a logical sequence and easy to navigate);	
	• A copy of each statutory approval, licence or permit required and obtained in relation to the CSSI;	
	• A current copy of the final version of each document required under the terms of this approval; and	
	• A copy of the audit reports required under Conditions A38 and A41 of this approval.	

CoA	Condition Requirements	CEMP Reference
	Where the information / document relates to a particular Work or is required to be implemented, it must be published on the Proponent's website before the commencement of the relevant Work to which it relates or before its implementation.	
C11	The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies 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: (a) Noise and vibration - relevant councils (b) Surface water quality - DPIE Water, Sydney Water (if there are any discharges to their assets) and relevant council(s)	Appendix B4 Appendix B8
C12	Details of all information requested by an agency during consultation must be provided to the Planning Secretary as part of any submission of the relevant Construction Monitoring Programs, including copies of all correspondence from those agencies as required by Condition A5.	OCEMP
C13	Each **Construction** Monitoring **Program** must provide: (a) details of baseline data available; (b) details of baseline data to be obtained and when; (c) details of all monitoring of the CSSI to be undertaken; (d) the parameters of the CSSI to be monitored; (e) the frequency of monitoring to be undertaken; (f) the location of monitoring; (g) the reporting of monitoring results and analysis of results against the relevant criteria; (h) details of methods that will be used to analyse monitoring data; (i) procedures to identify and implement additional mitigation measures where results of monitoring indicate unsatisfactory CSSI 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 Condition C14.	Appendix B4 Appendix B8
C15	The Construction Monitoring Programs 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.	Appendix B4 Appendix B8
C16	Unless otherwise agreed with the Planning Secretary, construction must not commence until all of the relevant Construction Monitoring Programs have been approved by the Planning Secretary, and all relevant baseline data for the specific construction activity has been collected.	Appendix B4 Appendix B8
C17	The Construction Monitoring Programs, as approved by the Planning Secretary, 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, whichever is the greater.	Appendix B4 Appendix B8
C18	The results of the **Construction Monitoring Programs** must be submitted to the Planning Secretary, and relevant government agencies, for information in the form of a **Construction Monitoring Report** at the frequency identified in the relevant **Construction Monitoring Program**.	Appendix B4 Appendix B8

CoA	Condition Requirements	CEMP Reference
	*Note: Where a relevant **CEMP Sub-plan** exists, the relevant **Construction Monitoring Program** may beincorporated into that **CEMP Sub-plan.***	
E34	Work must only be undertaken during the following hours: • 7:00 am to 6:00 pm Mondays to Fridays, inclusive; • 8:00 am to 6:00 pm Saturdays; and • At no time on Sundays or public holidays.	Section 3.6 Appendix B4
E35	Except as permitted by an EPL, highly noise intensive works that result in an exceedance of theapplicable noise management level (NML) at the same receiver must only be undertaken: • between the hours of 8:00 am to 6:00 pm Monday to Friday; • between the hours of 8:00 am to 1:00 pm Saturday; and • if continuously, then not exceeding three hours, with a minimum cessation of work of not lessthan one hour. For the purposes of this condition, 'continuously' includes any period during which there is lessthan one hour between ceasing and recommencing any of the Work.	Section 3.6.1 Appendix B4
E36	Notwithstanding Condition E34 and E35, Work may be undertaken outside the hours specified in any of 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. On becoming aware of the need for emergency work in accordance with Condition E36(a), the Proponent must notify the ER, the Planning Secretary and the EPA of the reasons for such emergency work. The Proponent must use best endeavours to notify all noise and/or vibration affected sensitive land user(s) of the likely impact and duration of the emergency work. (b) **Work that causes:** (i) 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) LAFmax(15 minute) noise levels no more than 15 dB(A) above the rating background level at any residence during the night time period; and (iii) continuous or impulsive vibration values, measured at the most affected residence, that 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); and (iv) intermittent vibration values measured at the most affected residence that 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).	Section 3.6.2 Appendix B4

CoA	Condition Requirements	CEMP Reference
	(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 E37; or (iii) negotiated agreements with directly affected residents and sensitive land user(s).	
E61	The CSSI must be constructed in a manner that minimises visual impacts of construction ancillary facilities, including but not limited to, providing temporary landscaping and vegetative screening of the construction sites, 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.	Section 4.13 Appendix B10
E62	The CSSI must be constructed and operated with the objective of minimising light spillage to surrounding properties. All lighting associated with the construction and operation of the CSSI must be consistent with the requirements of Australian Standard 4282-2019 *Control of the obtrusive effects of outdoor lighting*, relevant Australian Standards in the series AS/NZ 1158 – *Lighting for Roads and Public Spaces, and the National Airports Safeguarding Framework (NASF)* Guideline E: *Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports.*	Section 4.13 Appendix B10
	Additionally, 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.	
E75	The Proponent must identify the utilities and services (hereafter “services”) potentially affected by Work to determine requirements for diversion, protection and/or support. Alterations to services must be determined by negotiation between the Proponent and the service providers. The Proponent in consultation with service providers must ensure that disruption to services resulting from the CSSI are avoided where possible and where unavoidable, customers are advised in accordance with the Communication Strategy required under Condition B1.	Utilities Management Plan OCS (TfNSW) CSEP
E83	Any property access that is physically affected by the CSSI must be reinstated to at least an equivalent standard, in consultation with the landowner or alternative access provided in consultation with the landowner.	Section 4.14 Appendix B10 OCS (TfNSW) CSEP
E91	A Sustainability Strategy must be prepared to achieve a minimum excellent ‘Design’ and ‘As built’ rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Sustainability Management Plan

REMMs

The primary REMMs relevant to the development of this Plan are listed in Table 3-3 of the CEMP. Secondary REMMs related, but not specific to the development of this Plan are listed in the table below. A cross reference is also included to indicate where the REMM is addressed in this Plan or other Project management documents.

ID	Measure/Requirement	Timing	OCEMP Reference
B19	Emergency response protocols and procedures will be included in the Project CEMP and implemented in the event of a contaminant spill or leak.	During construction	Section 3.5.1 Section 3.8 Appendix A6 Appendix A9
B20	Spill kits will be located to allow for timely response to uncontained spills. Site inductions will include a briefing on the use of spill kits.	During construction	Section 3.5.1 Appendix A6 Appendix A7
LVIA05	Project elements such as ancillary facility hoardings will be designed and maintained to minimise impacts on landscape character and visual amenity. This will include selecting colours and materials that are visually recessive and blend into the surrounding landscape where practicable, and the prompt removal of graffiti.	Detailed design, prior to construction and during construction	Appendix B10
LVIA07	Temporary and permanent lighting will be designed and implemented with consideration of:	Detailed design, prior to construction and during construction	Appendix B10
	• The need to orientate lighting to minimise light spill and glare impacts on nearby receivers		
	• The need to minimise vandalism and maintenance requirements		
	• Requirements of the National Airports Safeguarding Framework (NASF) (National Airports Safeguarding Advisory Group, n.d.) for operational lighting		
	• Opportunities to implement sustainability initiatives in design such as energy efficient or solar lighting		
SLP01	Areas of land leased for the purposes of construction will be reinstated at the end of the lease to at least equivalent standard in consultation with the landowner.	During construction	Section 4.14 Appendix B10 OCS
SLP07	Construction activities will be planned to minimise disruption to existing agricultural operations/activities in surrounding properties where feasible and reasonable (e.g. stock access, access to farm dams, etc) unless otherwise agreed by the landowner.	Prior to construction	Section 4.15 CEMP Appendix B1 OCS (TfNSW) CSEP
AH01	Procedures for consideration of heritage aspects within site inductions and toolbox talks for construction workers and supervisors	Prior to construction	Section 3.5.1 Section 3.5.2 Appendix B7

ID	Measure/Requirement	Timing	OCEMP Reference
AH03	A work method statement will be prepared for the works within identified Aboriginal sites in consultation with a suitably qualified and experienced archaeologist. The method statement will be prepared to minimise impacts on Aboriginal sites where feasible, including input into detailed design. Measures will include (but not be limited to):	Detailed design, prior to construction and during construction	Section 3.2.5 Appendix B7
	• Designing and locating bridges (including bridge pylons), haulage routes and other access roads to minimise potential disturbance of soils where feasible		
	• Focusing protection measures on the zone within 100 metres of creeks including consideration of opportunities to cover the original cultural deposits in temporary protective barriers such as geotextile fabric and a layer of clean fill.		

Appendix A2 – Environmental aspects and impacts

Appendix A2
Aspect and Impacts Register

M12 Motorway West

Project number:	N00160
Document number:	M12WCO-CPBGG-ALL-EVE-PLN-000001_App A2
Revision date:	19/01/2023
Revision:	01

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

Rev	Date	Reviewed By	Details
A	18/02/2022	A. Zvirzdinas	First Draft
B	24/06/2022	A. Zvirzdinas	Second Draft following preliminary risk workshop held with ER/TfNSW
C	19/07/2022	A. Zvirzdinas	Third Draft following environmental risk workshop incorporating comments from TfNSW and the ER. New document added.
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
D	19/01/2023	K. Purkiss	6-monthly Review & Design Changes
01	19/01/2023	K. Purkiss	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	[redacted]		27/07/2022
Project Director	[redacted]		23/03/2023

Distribution of controlled copies

Copy no.	Issued to	Version

Risk Assessment and Management Approach

The risk assessment process and matrices used to assess the risk are outlined in section 3.2.1 of the CEMP.

This Environmental Aspects and Impacts Register has been prepared by CPBGG JV to supplement the Environmental Risk Analysis conducted as part of the EIS and the OCEMP by TfNSW.

The identification of significant construction activities and associated impacts that could eventuate during construction is central to the selection of appropriate environmental safeguards.

The risk management process involved an assessment of all specific project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking. Environmental risks were categorised, based on the following:

- The environmental aspect
- Relative scale of the potential impact
- Type of potential impact
- Likelihood of occurrence.

The identification of risks included a review of the proposed works, the NSW CoA, REMM, EPBC Act Approval, the OCEMP and review of the environmental risks identified by the EIS and subsequent environmental assessment documentation.

An environmental risk workshop is to be undertaken to further develop the risk mitigation and management strategies in accordance with G36. The risk workshop will include CPBGG JV site management staff, the ESR, representatives from regulatory agencies (determined in consultation with TfNSW), the ER, TfNSW representatives and any other personnel including sub-contractors.

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Air quality	General earthworks. Vegetation clearing. Open excavation works. Spoil handling. Stockpiling. Vehicular movements on unsealed roads. Material haulage. Vehicle emissions. Handling of chemicals, waste and hazardous goods.	Complaints from neighbours, including loss of amenity, dust in living areas.	L-4 C-2 9 (Moderate	Use water carts on unsealed surfaces and stockpiles. Utilise safe dust suppressants to reduce dust generation. Progressive stabilisation of exposed surfaces. Use street sweepers to reduce dust in areas of dust build up. Modify or cease operations during high winds. All trucks on public roads to cover loads. All disturbed areas stabilised, revegetated and/or landscaped as soon as practicable. Dust monitoring. SiteHive monitoring. DDG. Complaints management system developed under the Community and Stakeholder Engagement Plan to be implemented. Use of Virtual Superintendent. Communication between projects to ensure consistent messaging on complaints.	L-4 C-1 4 (Low)	CAQMP. EWMS. CSWMP. Health and Safety Management Plan. Complaints Procedure Project induction.
		Potential adverse health effects.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	
		Degradation of water quality and other aspects of the natural environment.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	
		Health risks to neighbours and members of the public from release of gases and/or smoke.	L-4 C-2 9 (Moderate)		L-1 C-2 6 (Low)	
Flora and Fauna	Clearing of native vegetation. Stockpile/haul road construction near vegetation. General earthworks near vegetation. Vehicular movements. Open excavation works. Bushfires.	Loss of habitat for threatened species beyond minimum clearing footprint.	L-3 C-3 13 (High)	EWMS for Low Impact Works. Verify vegetation clearing boundaries prior to clearing. Ensure vegetation clearing boundaries clearly marked and visible as per CFFMP. Prior to construction – identify and fence all flora and fauna habitat areas required to be protected as identified in the CFFMP. Informal monitoring of the white-bellied sea eagle nest near the Airport Interchange.	L-2 C-2 7 (Low)	CFFMP. EWMS. Vegetation Clearing procedure. Fauna handling procedure. Weed and Pathogen Management Plan. Project induction.
		Potential longer-term impacts associated with increased habitat fragmentation.	L-4 C-2 9 (Moderate)		L-1 C-2 6 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Habitat relocation (nest-boxes/hollows).	Direct impact to flora or fauna during construction.	L-4 C-4 20 (Very High)	Pre-clearing inspections by Project Ecologist to review weeds, other threatened species and other fauna presence (eg. black swans). Minimise clearing of all vegetation and undertake progressive revegetation. Implement ongoing weed monitoring and management programs. Implement a staged clearing process and undertake fauna rescue during clearing as required. Undertake threatened species management as required under the CFFMP and approval. Implement unexpected finds procedure. Weeds will be managed in accordance with the Weed and Pest Management Plan. Training of personnel in the identification and treatment of weeds and pathogens, threatened species. Revegetation will use non-invasive, non-weed species. Access to be provided to Toolijooa Pty Ltd to collect seeds from site and propagate plants for use before and during clearing activities. Permit to Clear Land or Vegetation to be obtained prior to clearing. Permit to Enter Protected or No Go Areas are to be obtained if required from the ESR. Farm Dam Dewatering EWMS required to be developed. Riparian and aquatic habitat to be protected during construction works. Large woody debris within watercourses would be retained wherever possible, or where possible relocated in the waterway nearby.	L-2 C-2 7 (Low)	
		Introduction of pathogens and noxious weeds.	L-3 C-3 13 (High)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Where farm dams are decommissioned, any endemic native fish species will be relocated by a suitably qualified aquatic ecologist with a permit from NSW DPI Fisheries. Stockpiling some trees for chipping as mulch for later incorporation into final landscaping works where appropriate. Firefighting equipment available on site. Spark arrestors fit to plant that could discharge sparks during use in high fire danger periods. Spark-generating activities (including cutting, welding, and grinding) banned in the open on total fire ban days. Fire mats will be placed under areas used for welding in areas of high risk. Fire prevention, safety and basic firefighting skill training will be provided to personnel involved in hot works with a fire risk (including welding and burning off operations). Personnel and vehicles involved in high fire risk activities must be equipped with firefighting and safety gear.		
Soil and Water Quality	Clearing and grubbing. Earthworks and stockpile management. Storage of fuels and chemicals. Maintenance of plant and equipment, including servicing and refuelling. Sediment basin management.	Erosion and movement of soils leading to impacts on water quality, flora and fauna impacts, impacts to downstream users.	L-5 C-3 18 (Very High)	Appropriately designed erosion control structures will be installed, maintained and cleaned regularly. Locate spoil stockpiles, plant and equipment away from drainage lines, watercourses or stormwater drains in accordance with established criteria. Install clean water diversions to ensure clean and dirty water are not mixed on site.	L-4 C-2 9 (Moderate)	SWMP. EWMS. Basin management procedure. Project induction. Targeted ERSED training.
		Captured dirty water discharge from basins.	L-4 C-3 17 (Very High)		L-4 C-2 9 (Moderate)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Drainage works. Concrete works. Temp access road construction. Bridge construction. Waterway works.	Dirty water not captured and leaves site without controls.	L-4 C-3 17 (Very High)	Storage, compound access and parking areas sealed, as early during works as practicable. Chemical storage meets bunding requirements. Provide and maintain spill kits. Wheel mud reduction/ cleaning measures at exit of all sites where required. Buffer zones of vegetation will be maintained adjacent to waterways for as long as practical. Rehabilitation and landscaping works of disturbed areas undertaken as soon as the works are completed and/or progressively where possible. Implement concrete washout process within bunded areas. Planning of concrete pours to minimise waste. Sealing of all joints/gaps with 'Bitac' tape or equivalent prior to the undertaking stitch / infill pours on bridges. Design drainage to maximise dirty water to sediment basins. Install signage at discharge points to assist workers to understand implications of dirty water release in sensitive areas. Meet TfNSW Dewatering guidelines. Inspections of the site by the Projects Soil Conservationist to be undertaken. Dewatering immediately during dry spells. Continual monitoring and introduction of better controls and updating of sedimentation plans accordingly. Review tannin requirements. Providing bunds around tannin/mulch stockpiles. Use for dust suppression.	L-4 C-2 9 (Moderate)	
		Haul road washout from flood event.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	
		Contamination as a result of having a batch plant for concreting.	L-3 C-3 13 (High)		L-3 C-1 3 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				EWMS will be completed before all relevant works.		
Contamination	Discovery of contaminated soils/asbestos. Management of known contamination.	Contamination of land and /or waterways from spills/ asbestos/ land contamination.	L-4 C-3 17 (Very High)	Detailed site investigations (DSI) to identify any contaminated areas. Implement unexpected finds contamination management measures. Hygienist present during topsoil stripping operations (R44).	L-2 C-2 7 (Low)	CCLMP. Unexpected Finds Procedure. EPA guidelines.
Spoil and waste	Cuts. Fill areas. Haulage of spoil and fill. Stockpiling. Spoil areas. Site establishment. Earthworks. Drainage works. Offsite disposal.	Demand on local resources – local quarries / suppliers.	L-4 C-2 9 (Moderate)	Offsite spoil movements to be monitored and tracked. Specific signage is required for haulage vehicles. Checks of this signage to be undertaken by gatekeepers. Spoil to be beneficially reused, on or off site, where applicable and meeting environmental requirements. Includes reuse of excavated material onsite (ie.as fill). All loads accessing public roads to be covered to prevent any loss of material, which may cause driver safety issues. Only locate stockpiles in accordance with criteria in CEMP/CSWMP.	L-2 C-2 7 (Low)	CSWMP EWMS and Work Packs CAQMP CEMP CCLMP
		ERSED issues from cuts / batters / stockpiles.	L-5 C-2 10 (Moderate)		L-3 C-2 8 (Moderate)	
		Sensitive area damage from stockpiling.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Contaminated Land.	L-3 C-3 13 (High)	Appropriate planning/approvals obtained for stockpile site locations including the need for any additional stockpiles. Classify and dispose of any contaminated land in accordance with EPA guidelines. Material tracking requirements for imported materials (s143, resource recovery exemptions etc).	L-2 C-2 7 (Low)	
Waste Management	Generation of waste during construction activities including building materials, excess unsuitable spoil material, vegetation material.	Excessive waste being directed to landfill.	L-3 C-1 3 (Low)	Apply waste hierarchy principles – avoid-reduce-reuse-recycle. Waste materials should be contained in waste bins or other suitable containers, and collected for recycling, reuse or disposal by the licensed waste contractor. Separate, contain, manage and dispose contaminated waste to prevent migration and further contamination whilst maintaining compliance with EPA requirements. Label and store all liquid waste containers in a bunded area prior to removal off-site. Undertake inspections of the worksite and waste storage areas to ensure litter / debris is regularly cleaned up and contained on site. Establish recycling system early on in Project. Establish good segregation areas for concrete and waste concrete is not to be transported off site for land disposal. Section 143 Notices Under the POEO Act and provision of a letter to landholder highlighting the need for a “s.143 Notice”, the Contractor’s role and the respective roles of the TfNSW and the landholder in ensuring that the waste is appropriately managed. Consider types of waste, how each waste type will be used as a beneficial use and	L-2 C-1 2 (Low)	CWRMP. EWMS. Waste register.
		Incorrect disposal of contaminated waste.	L-3 C-4 19 (Very High)		L-2 C-2 7 (Low)	
		Meeting POEO Act requirements for VENM, ENM, Recovered Aggregate, Reclaimed Asphalt pavement and mulch.	L-3 C-3 13 (High)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				address in the approvals that no other type of waste will be used.		
		Illegal dumping of waste.	L-3 C-3 13 (High)	All staff and sub-contractors to undergo a site induction Secure compounds and access points to demonstrate a secure presence on site Regular inspections of site access points, site boundaries, fencing and other security measures. Report any illegally dumped waste immediately to TfNSW and the EPA	L-2 C-2 7 (Low)	Site Induction CWRMP
Aboriginal Heritage	Clearing and/or grubbing of vegetation. Initial removal of topsoil. Construction of site compounds and spoil/mulch and/or equipment stockpile areas. Works in riparian zones Temporary access roads during construction.	Impact to undiscovered or undocumented heritage sites.	L-2 C-4 15 (High)	Induct personnel on heritage issues and mitigation measures. For ancillary sites, identify and assess Aboriginal heritage items and predict potential impacts. Implement unexpected find procedures as required.	L-1 C-2 6 (Low)	CCHMP. Unexpected Heritage Items Procedure. Project induction.
		Finding / disturbing burials or human remains.	L-2 C-2 7 (Low)		L-1 C-2 6 (Low)	
Non-Aboriginal heritage	Initial clearing and/or grubbing of vegetation. Initial removal of topsoil. Construction of site compounds and spoil / mulch and / or equipment stockpile areas. Temporary access roads during construction. Excavations and earthworks.	Impact to identified heritage items.	L-4 C-3 17 (Very High)	Induct personnel on heritage issues and safeguards. Protect identified heritage items with protective fencing or flagging from being disturbed during construction. Undertake archival recording as required Implement unexpected find procedures Landholder consultation.	L-2 C-2 7 (Low)	CCHMP CNVMP Unexpected Heritage Items Procedure Project induction
		Vibration damage during the construction period to identified sites.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Pile driving causing vibration. Use of other vibratory equipment such as rollers.	Impact to undiscovered or undocumented heritage sites.	L-4 C-3 17 (Very High)	Salvage works to be undertaken under heritage consultant's guidance and instructions.	L-2 C-2 7 (Low)	
		Change in visual integrity of heritage sites.	L-2 C-2 7 (Low)		L-1 C-2 6 (Low)	
Flooding	Works in waterways. Bridgeworks. Stockpiling. Haul roads. High rainfall events. Leading of overtopping sediment controls.	Changes to flood levels – increased impact to receivers.	L-4 C-4 20 (Very High)	Locate compounds / plant / storage above 1 in 20 years flood level events. Design and build temporary crossings to be stable and minimise scour / erosion during flood events. Install scour protection as early as possible. Look at predicting flood events from gauges or rainfall predictions. Construct project in accordance with CoA Temporary works flood modelling to be undertaken as required.	L-2 C-2 7 (Low)	CFMP. CSWMP. EWMS. Emergency Response Plan.
		Stormwater inflow to site – clean stormwater getting mixed with dirty site water.	L-5 C-3 18 (Very High)		L-4 C-2 9 (Moderate)	
		Flood damage to plant / equipment / satellite compounds.	L-4 C-3 17 (Very High)		L-2 C-2 7 (Low)	
		Erosion of haul/ access road during large flood events.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Noise and Vibration	Site establishment. Earthworks. Piling/Bridgeworks. Paving. Saw Cutting.	Noise impacts on sensitive receivers during construction.	L-5 C-2 10 (Moderate)	Consult with local communities and affected residents. Adherence to working hours in NVMP and respite periods for noisy activities. OOHW approval process to be implemented. Construction equipment selected, operated and maintained to minimise noise impacts and where necessary fitted with non-tonal reversing alarms. Noise walls / hoarding to be installed Regular noise monitoring. Modelling vibration impacts and monitoring where impacts are predicted. Complaints management system. Building condition reports as required by Project approval. Review monitoring results and implement corrective actions as appropriate, such as revising mitigation measures, revising predictions. Implement any additional feasible and reasonable mitigation measures, identified from the review of monitoring results, for minimising noise and vibration impacts. Project is to undertake consultation with proponents of other nearby developments to review potential cumulative impacts, increase the overall awareness of Project timeframes and impacts, plan, co-ordinate and integrate methodologies and activities to minimise cumulative impacts as far as reasonably practicable.	L-3 C-2 8 (Moderate)	CNVMP. EWMS. Noise and vibration monitoring. OOHW protocol. Negotiated agreements. Complaints procedure. Project induction.
		Vibration impacts on nearby receptors, including heritage.	L-4 C-2 9 (Moderate)		L-2 C-2 7 (Low)	

Issue	Construction activity / aspect	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and transport	Haulage of material. Import of material / plant / equipment. Travel to / from site.	Accidents - Safety of commuters, pedestrians, cyclists, contractors and subcontractors. Noise, vibrations and dust nuisance to residents on haul routes.	L-4 C-4 20 (Very High)	Traffic Control Plans for all work stages. Identify and assess roads likely to be affected by Project construction and develop methods to minimise traffic increases. Undertake before and after dilapidation surveys on local roads. Traffic controllers and / or signage for both egress and ingress off the work sites. Project is to undertake consultation with proponents of other nearby developments to review potential cumulative impacts, increase the overall awareness of Project timeframes and impacts, plan, co-ordinate and integrate methodologies and activities to minimise cumulative impacts as far as reasonably practicable. Approval for use of local roads not identified in EIS/Project Approval is required in accordance with NSW CoA E94.	L-4 C-2 9 (Moderate)	CTTMP. EWMS. CAQMP. Project induction.
Visual impact and landscaping	Cuttings and cut finishes. Bridge design and landscaping. Light spill during evening / night works.	General public aesthetic impacts.	L-4 C-1 4 (Low)	Embankments and cuttings will be stabilised using appropriate landscape treatments. The use of night-lighting will be minimised where possible and directed away from residential areas. Site compounds and areas surrounding them will be kept tidy and be regularly cleaned and maintained. Contact details for key project personnel (ie. supervisor and 1800 number) to be provided on project signage.	L-2 C-1 2 (Low)	Place, Urban Design and Corridor Landscape Plan. CFFMP.

Appendix A3 – Environment Policy and ISO14001 Certification

Environment Policy

Purpose

This Policy sets out the minimum mandatory requirements for the management of environmental risks and impacts from our construction activities.

Application

This Policy applies to all business entities controlled by the business, including alliances, joint ventures and consortia where the business exerts management control. It applies at all levels of the organisation including Corporate, Business Unit and Project.

Minimum Requirements

- Senior leaders must demonstrate a personal visible commitment to our SH&E Cultural Framework and ensure all workers understand the requirements of the Management System as it applies to the work they are undertaking, so that work is undertaken to minimise our environmental impact.
- Environment Management Plans (EMP) must be developed and implemented for each Project to outline how the project environmental risk will be managed and controlled.
- Environmental objectives, targets and key performance indicators must be established at all levels of the organisation, with performance against these monitored and analysed to provide a baseline for continual improvement.
- The Environment Procedures must be used to eliminate or minimise environmental risk from construction activities.
- Construction Area Plans and Work Packs must be developed and include an assessment of environmental risk and associated controls.
- Site Environment Plans must be developed for Work Packs where environmental risk dictates; these must be used to inform as content of Daily Pre Starts.
- As part of the risk management process, personnel and teams at the Project, Business Unit and Corporate level should seek to identify opportunities for improving efficiency in the use of natural resources, enhancing positive environmental impacts and driving innovation.
- All environmental incidents must be reported in accordance with the incident notification requirements. They must be thoroughly investigated and appropriate corrective action undertaken with the aim of preventing recurrence of the incident.
- Reporting of energy consumption, water use and waste generation, as well as reporting on initiatives and environmental achievements must be completed by projects and business units as requested.

- All levels of the organisation must be prepared to respond to an emergency and in the event of an emergency, plans and capabilities are in place to eliminate or minimise damage to the environment, preserve ongoing operations and our reputation.
- Effective communication, cooperation and consultation channels must be in place to consult with workers who may impact upon the environment.
- All project personnel responsible for environmental risk shall be appropriately trained and competent and understand their legal obligations with regard to environment management.

Certificate AU14/4487

The management system of

CPB Contractors Pty Limited

Level 18, 177 Pacific Highway North Sydney, NSW 2060, Australia

has been assessed and certified as meeting the requirements of

ISO 14001:2015

For the following activities

The provision of project management and related services including design, procurement, construction, traffic management at roadworks, completion, commissioning and maintenance of civil Infrastructure (including site preparation, road and bridge construction, non-building construction, plant hire and leasing), building, rail, water, utilities, tunnelling, energy, marine, mine infrastructure, structural, mechanical, piping and electrical engineering and related industries delivered under varying forms of contract including joint ventures and alliances. The scope of registration also includes the maintenance and repair of fixed and mobile plant and the manufacture of precast concrete units for major infrastructure works.

This certificate is valid from 26 December 2022 until 30 November 2025 and remains valid subject to satisfactory surveillance audits.

Issue 13. Certified since 06 December 1995
Certified activities performed by additional sites are listed on subsequent pages.

Last certificate expiry date 30 November 2022
Recertification audit date 21 October 2022

Authorised by
Sharn McAulley
Authorised Officer

SGS Australia Pty. Ltd.
10/585 Blackburn Road Notting Hill VIC 3168
t (61-3) 9574 3200 - www.au.sgs.com

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CPB Contractors Pty Limited

ISO 14001:2015

Issue 13
Sites
Business Unit Operation CPB Contractors Pty Limited Level 18, 177 Pacific Highway North Sydney, NSW 2060, Australia
CPB Contractors Pty Limited Level 2, 177 Pacific Highway, North Sydney, NSW 2060, Australia
CPB Contractors Pty Limited Level 6, 567 Collins Street, Melbourne, VIC 3000, Australia
CPB Contractors Pty Limited Level 6, HQ South Tower, 520 Wickham Street, Fortitude Valley, QLD 4006, Australia
CPB Contractors Pty Limited 202 Pier Street, Perth, WA 6000, Australia
CPB Contractors Pty Limited Level 1, 167 Denham Street, Townsville, QLD 4810, Australia
CPB Contractors Pty Limited 136 Frome Street, Adelaide, SA 5000, Australia
CPB Contractors Pty Limited Level 2, 19 Hargreaves Street, Auckland, 1011, New Zealand
CPB Contractors Pty Limited 14-64 Industrial Avenue, Bohle, QLD 4818, Australia
Plant Facilities CPB Contractors Pty Limited 8a Hereford Street, Berkeley Vale, NSW 2261, Australia
CPB Contractors Pty Limited 67 Bernoulli Street, Darra, QLD 4076, Australia
CPB Contractors Pty Limited 158 Cherry Lane, Laverton North, VIC 3026, Australia

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Certificate AU14/4487, continued

CPB Contractors Pty Limited

ISO 14001:2015

CPB Contractors Pty Limited 19-21 Casino Street, Welshpool, WA 6106, Australia
Pre-cast facility CPB Contractors Pty Limited Corner Engineering & Industrial Drive, North Boambee, NSW 2450, Australia

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Appendix A4 – Document Register

Appendix A4
Document Register Template

M12 Motorway West

Project number:	N00160
Document number:	M12WCO-CPBGG-ALL-EVE-PLN-000001_App A4
Revision date:	16/03/2023
Revision:	01

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

Rev	Date	Reviewed By	Details
A	18/02/2022	A. Zvirzdinas	First Draft
B	13/05/2022	A. Zvirzdinas	Second draft following TfNSW/Arcadis review and comment
C	19/07/2022	A. Zvirzdinas	Third Draft. New document numbers added.
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
D	19/01/2023	K. Purkiss	6-monthly Review & Design Changes
01	16/03/2023	A.Brajlih	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	[redacted]		27/07/2022
Project Director	[redacted]		16/03/2023

Distribution of controlled copies

Copy no.	Issued to	Version

Environmental Management Document	Document No.	Approval Requirement	Agency Correspondence
M12 West Construction Environmental Management Plan	M12WCO-CPBGG-ALL-EVE-PLN-000001	ER Approval	Not required. Provided for information to Agencies
M12 West Site Establishment Management Plan	M12WEW-CPBGG-ALL-SE-PLN-000001	Submitted to Secretary at DPE for approval	To be obtained.
M12 West Construction Flora and Fauna Management Sub-plan	M12WCO-CPBGG-ALL-EVFF-PLN-000001	ER Approval	Not required
M12 West Construction Soil and Water Management Sub-Plan	M12WCO-CPBGG-ALL-EVWA-PLN-000001	ER Approval	Not required
M12 West Construction Traffic and Transport Management Sub-Plan	M12WCO-CPBGG-ALL-TR-PLN-000001	ER Approval	Not required
M12 West Construction Contaminated Land Management Sub-Plan	M12WCO-CPBGG-ALL-EVCT-PLN-000001	ER Approval	Not required
M12 West Construction Noise and Vibration Management Sub-Plan	M12WCO-CPBGG-ALL-EVNV-PLN-000001	ER Approval	Not required
M12 West Construction Air Quality Management Sub-Plan	M12WCO-CPBGG-ALL-EVAH-PLN-000001	ER Approval	Not required
M12 West Construction Waste and Resources Management Sub-Plan	M12WCO-CPBGG-ALL-EVWM-PLN-000001	ER Approval	Not required
M12 West Construction Cultural Heritage Management Sub-Plan	M12WCO-CPBGG-ALL-EVHE-PLN-000001	ER Approval	Not required
M12 West Flood Management Plan	M12WCO-CPBGG-ALL-EVFLPLN-000001	ER Approval	Not required
EWMS – Low Impact Work	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Activities with high environmental risk	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Activities that impact on or are in proximity to environmentally sensitive areas such as ecological communities and threatened species	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Works in waterways – temporary crossings	M12WCO-CPBGG-ALL-EN-WMS-00008 rev 00	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Activities that impact on or are in proximity to non-Aboriginal heritage sites (including: McGarvie Smith Farm, Luddenham Road alignment and McMasters Field Station)	To be provided	Internal Approval by CPBGG JV ESR	To be determined

Environmental Management Document	Document No.	Approval Requirement	Agency Correspondence
EWMS - Activities that impact on or are in proximity to Aboriginal heritage sites (including: CCW, Isolated artefact and The Northern Road AFT-14)	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Pre-construction activities (including delineation of sensitive areas, installation of ESC, treatment of contaminated sites)	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Topsoil stripping and earthworks	M12WCO-CPBGG-ML1-ENWMS-00009 rev C	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Utilities relocation	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Site Establishment and Enabling Works	M12WCO-CPBGG-ML1-ENWMS-00003 REV2	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Piling	M12WCO-CPBGG-ML1-ENWMS-00011 Rev 0	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Geotechnical Land Contamination and Ecological Investigation works	M12WCO-CPBGG-ALL-ENWMS-00004 Rev 0	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Sediment Control Installation and Maintenance	M12WCO-CPBGG-ALL-ENWMS-00006 REV B	Internal Approval by CPBGG JV ESR	To be determined
EWMS - Culvert Construction	M12WCO-CPBGG-ML1-EN-WMS-00012 Rev A	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Clearing and Grubbing	M12WCO-CPBGG-ALL-ENWMS-00007 Rev 0	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Site Access and Fencing	M12WCO-CPBGG-ALL-ENWMS-00005 REV 0	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Dewatering Activities	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Concreting Works Including Construction and Operation of Concrete Wash Out Areas	M12WCO-CPBGG-ML1-EN-WMS-00010 Rev 0	Internal Approval by CPBGG JV ESR	To be determined
EWMS – High noise and vibration level generating activities	To be provided	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Farm Dam Dewatering	M12WCO-CPBGG-ML1-ENWMS-00002 REV1	Internal Approval by CPBGG JV ESR	To be determined
EWMS – Survey and Service Location	M12WCO-CPBGG-ML1-ENWMS-	Internal Approval by CPBGG JV ESR	To be determined

Environmental Management Document	Document No.	Approval Requirement	Agency Correspondence
	00001 REV0		
M12 West – Noise Vibration Impact Statement	Not applicable	Internal Approval by CPBGG JV ESR	To be determined
Western Sydney Airport – Site Environmental Management Framework	WSA00-WSA-00400-EN-PLN-000011	Interface contractor – Approvals not related to M12 West Site	To be determined
Soil Characterisation Assessment – Portion of 777 Luddenham Road, Luddenham NSW	1850-SCA-01-041022.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Portion of 777 Luddenham Road, Luddenham NSW	1850-SCA-02-191022.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – 752 Luddenham Road, Luddenham NSW	1850-SCA-03-191022.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – 752 Luddenham Road, Luddenham NSW	1850-SCA-04-191022.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – 752 Luddenham Road, Luddenham NSW	1850-SCA-05-091122.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-06-051222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-07-161122.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-08-011222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-09-011222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-10-181122.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-11-231222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-12-231122.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-13-021222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-14-021222.v1f	Internal Approval by CPBGG JV ESR	To be determined

Environmental Management Document	Document No.	Approval Requirement	Agency Correspondence
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-15-021222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-16-151222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-17-021222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-18-021222.v1	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-19-221222.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-20-280223.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Portion of Elizabeth Drive, Badgerys Creek NSW	1850-SCA-21-200123.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-22-150223.v1f	Internal Approval by CPBGG JV ESR	To be determined
Soil Characterisation Assessment – Elizabeth Drive, Badgerys Creek NSW	1850-SCA-23-210223.v1f	Internal Approval by CPBGG JV ESR	To be determined
Stage 2 – Detailed Site Investigation – M12 West Motorway Alignment, Badgerys Creek NSW	1850-DSI-01-100323.v1d	Internal Approval by CPBGG JV ESR	To be determined

Appendix A5 – CPBGG JV Organisational Chart

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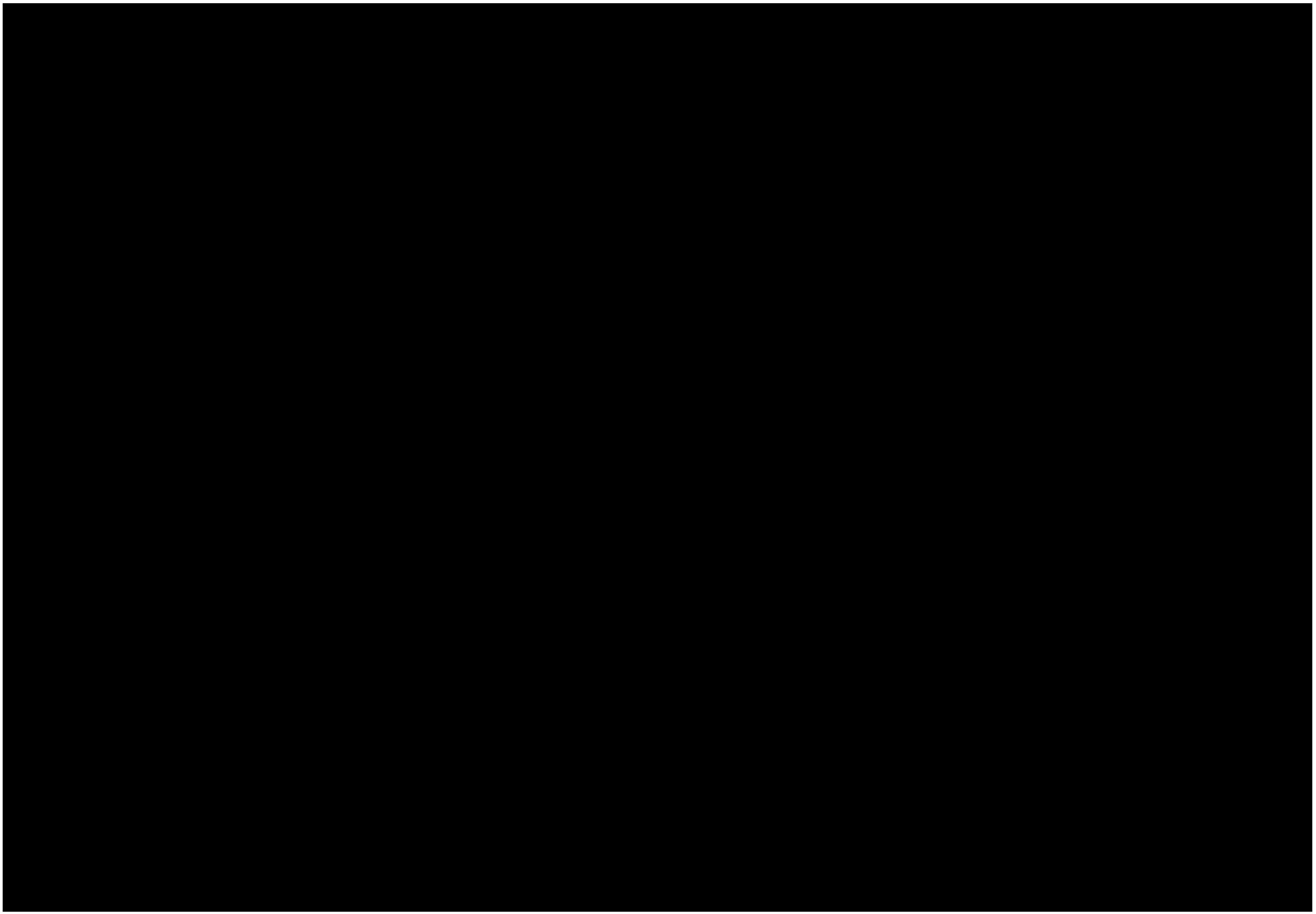
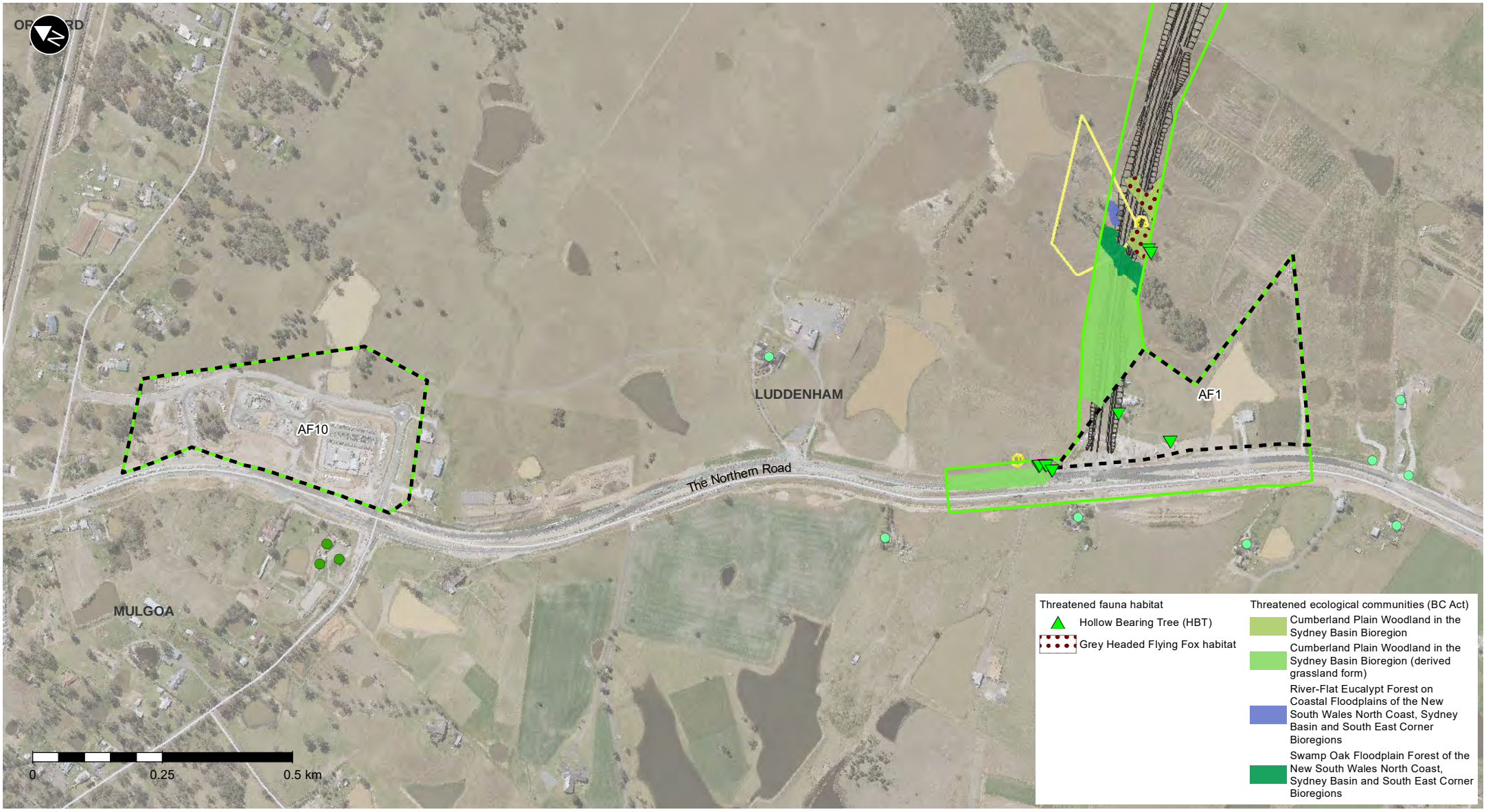


Appendix A6 – Sensitive Area Plans



M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

M12 Motorway (The Project)

Receivers

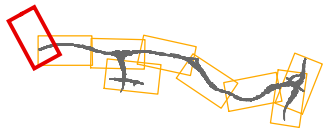
Residential

Commercial

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

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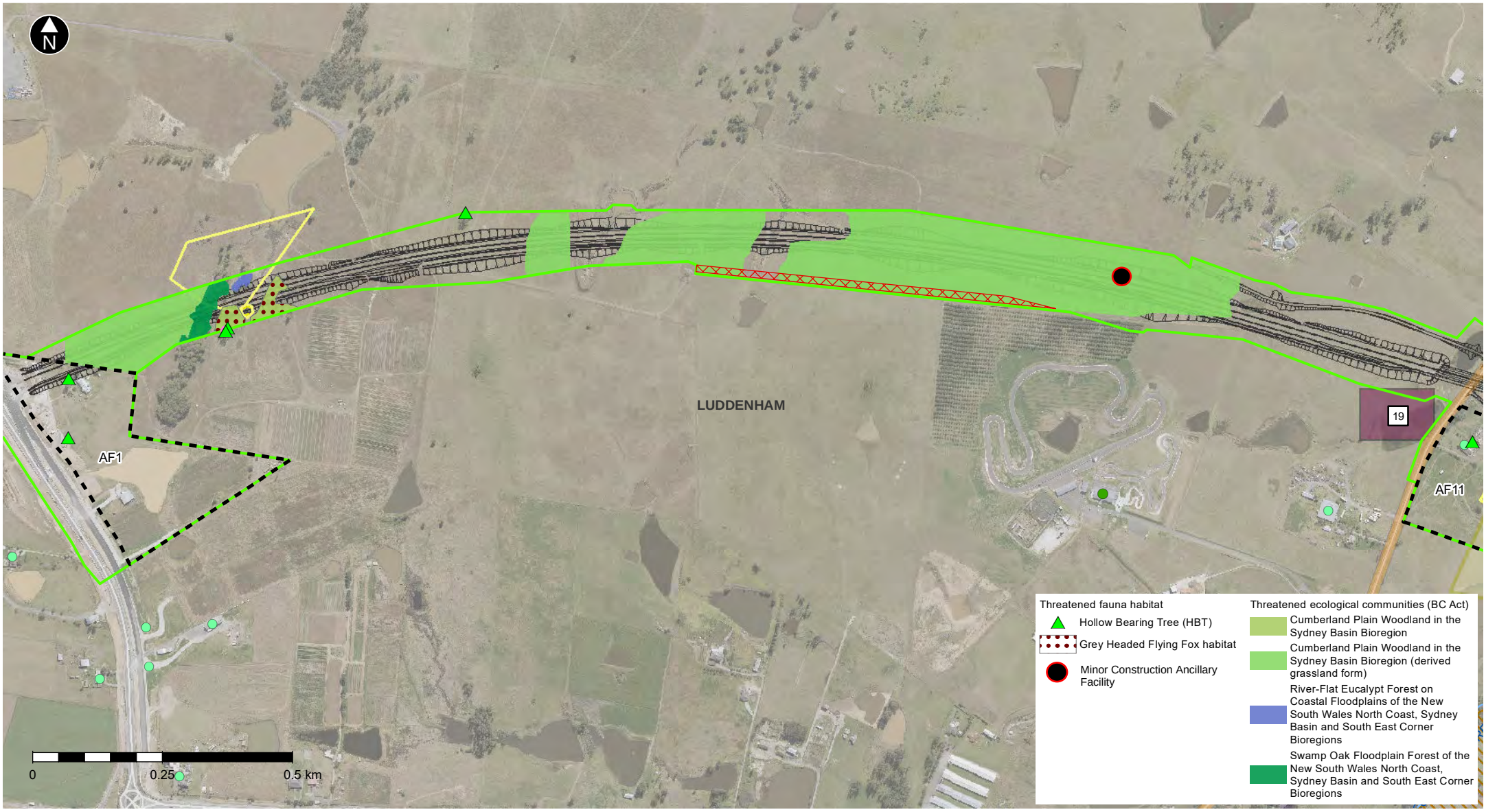


M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

The amended project exclusion zones

M12 Motorway (The Project)

Receivers

Residential

Commercial

Potential areas of existing fill

Areas of environmental interest

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

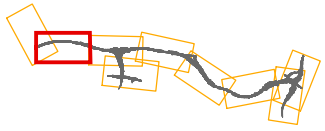
Aboriginal heritage site complex (potential area of sensitivity)

Assessed heritage significance

Local

State

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

Date: 13/08/2021 Path: \\hc-aus-ns-fs-01\jobs\30058484\L-GIS\A_Current\B_Maps\ManagementPlans\G30058484_OCEMP_005_SAP_DDP_A4L_v4.mxd
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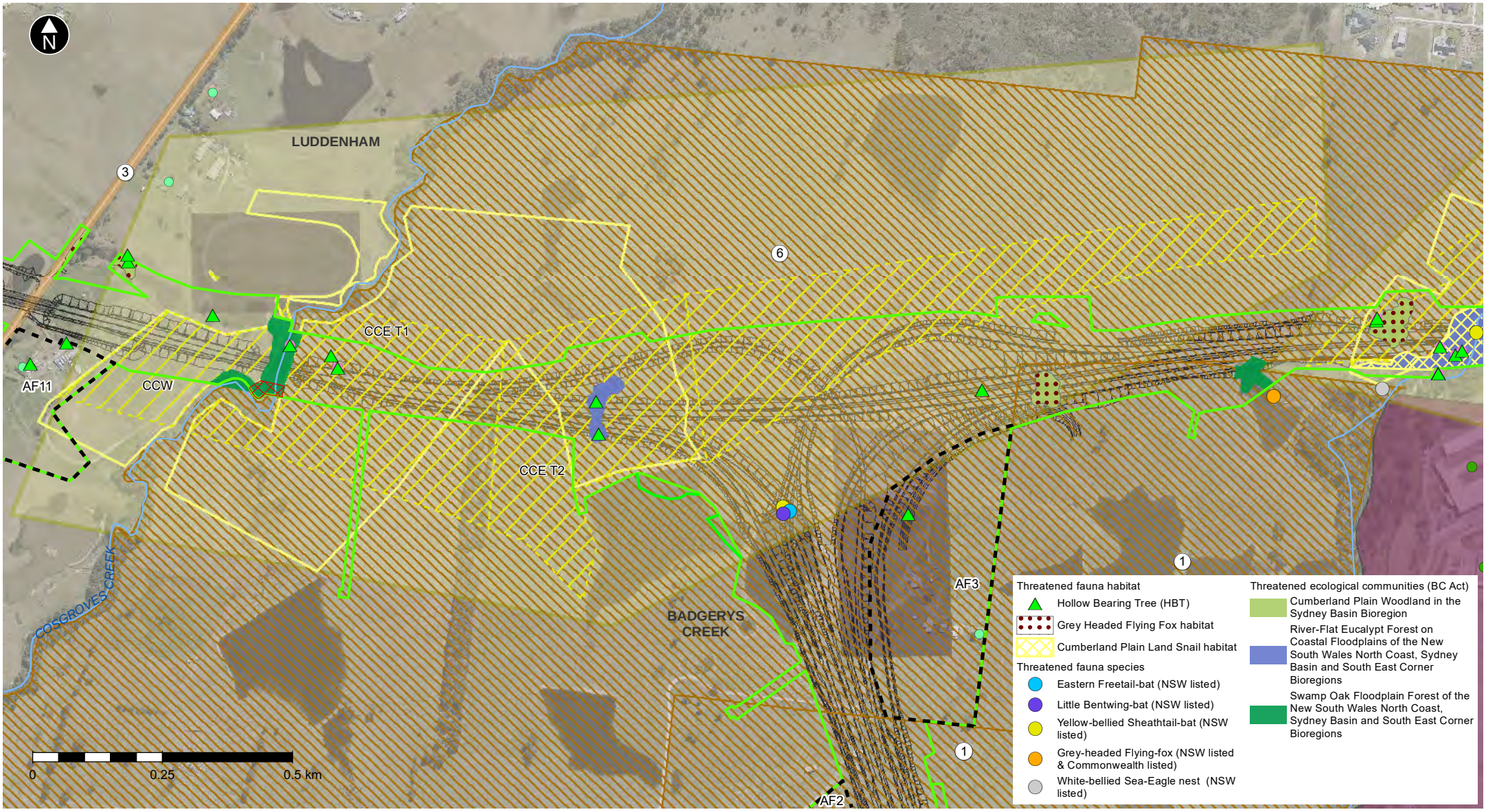


M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

The amended project exclusion zones

M12 Motorway (The Project)

Receivers

Residential

Commercial

Potential areas of existing fill

Areas of environmental interest

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

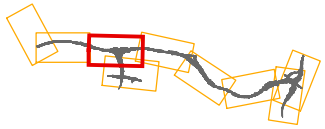
Aboriginal heritage site complex (potential area of sensitivity)

Assessed heritage significance

Local

State

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

Date: 13/08/2021 Path: \\hc-aus-ns-fs-01\jobs\30058484\L-GIS\A_Current\B_Maps\ManagementPlans\G30058484_OCEMP_005_SAP_DDP_A4L_v4.mxd
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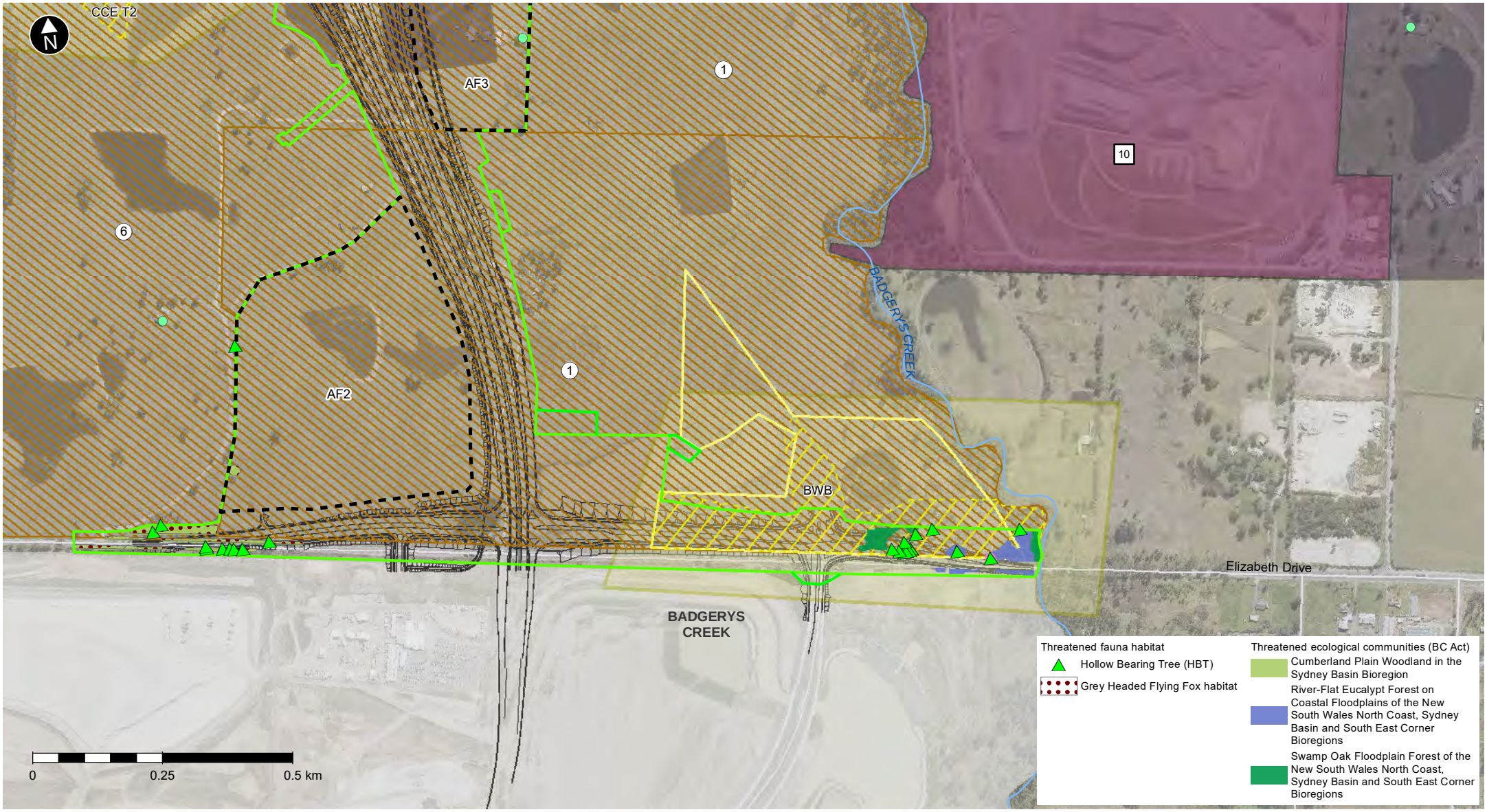


M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

M12 Motorway (The Project)

Western Sydney International Airport

Receivers

Residential

Potential areas of existing fill

Areas of environmental interest

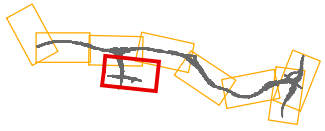
Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

Aboriginal heritage site complex (potential area of sensitivity)

State

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

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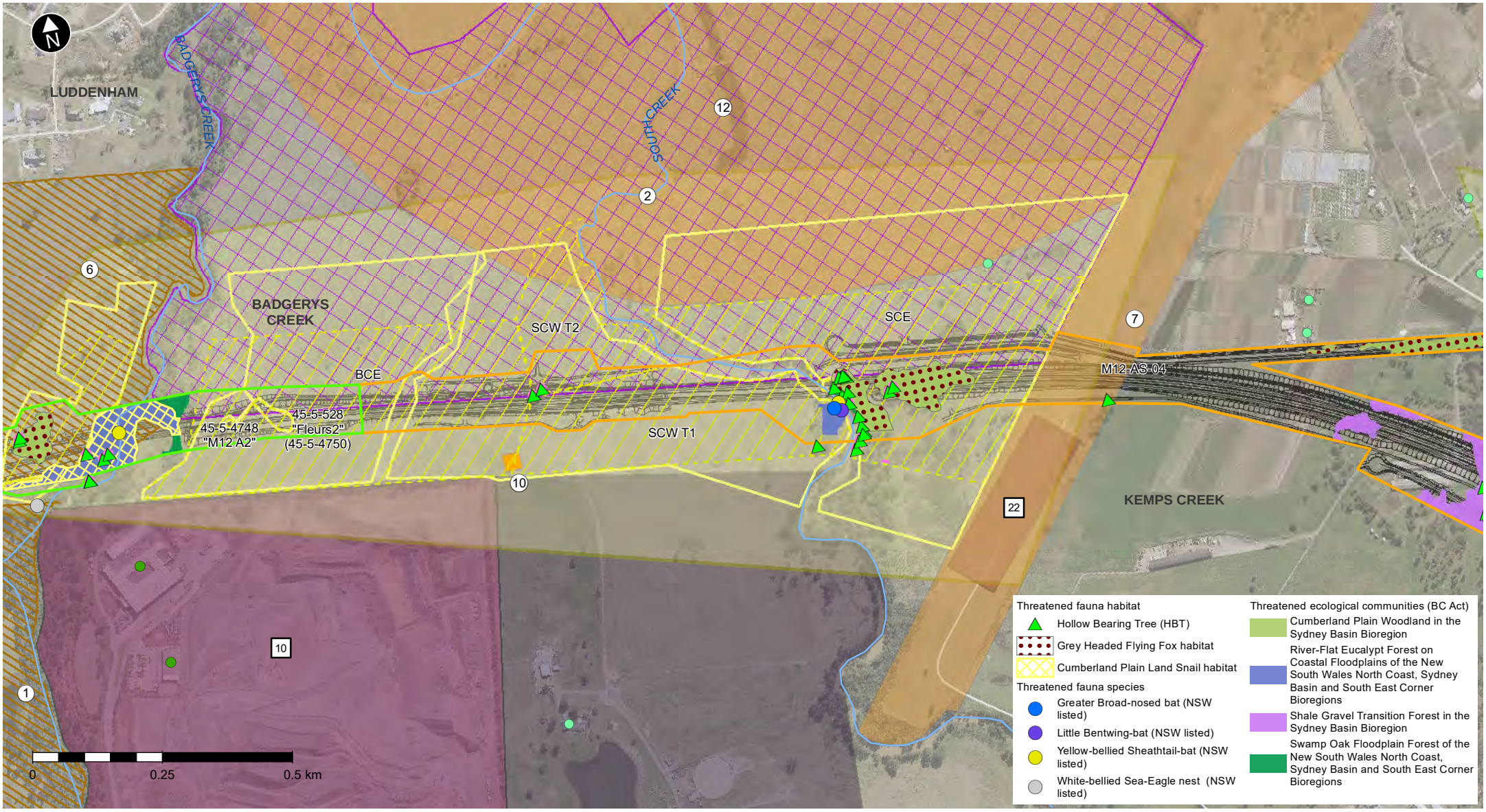


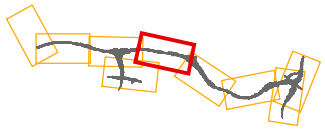
M12 West
M12 Central
M12 Motorway (The Project)

Receivers
Residential
Commercial
Potential areas of existing fill
Areas of environmental interest

Aborigional sites impacted from the main construction works
Aboriginal heritage sensitve area
Aboriginal heritage site complex (potential area of sensitivity)

Assessed heritage significance
Local
State
State and potentially national

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

Date: 13/08/2021 Path: \\hc-aus-ns-fs-01\jobs\30058484\L-GIS\A_Current\B_Maps\ManagementPlans\G30058484_OCEMP_005_SAP_DDP_A4L_v4.mxd
Created by : GC | QA by : RB

Appendix A7 – TfNSW Environmental incident classification and reporting

Environmental Incident Procedure

Procedure Number: EMF-EM-PR-0001 Environmental Incident Procedure
Effective Date: 19/07/2021
Review Date: 19/07/2023

1 Who is this document for?

All Ongoing / Temporary/ Seconded/Casual staff of TfNSW	**YES**
Transport Service Senior Managers and Executives	**YES**
Labour Hire, Consultants and Professional Service Contractors	**YES**
Delivery Partners / Contractors	**YES**

2 Purpose and Scope

2.1 Purpose

The purpose of this document (Procedure) is to set out the procedure to be followed if, during an activity being carried out by or on behalf of TfNSW, there is:

- a report-only event
- a non-compliance
- regulatory action received
- an environmental incident.

The Procedure sets out the steps for the:

- identification,
- classification and
- reporting

of report-only events, non-compliances, regulatory action and environmental incidents.

2.2 Scope

The Procedure sets out internal only reporting processes for environmental events and the additional process for 'notifiable events', which are environmental incidents that must be reported externally (see section 3.3).

The Procedure is applicable to all TfNSW activities where report-only events, non-compliances, regulatory action and environmental incidents may occur. The requirements of the Procedure must be communicated to all TfNSW employees and contractors (e.g. during inductions) who undertake those activities.

This includes (but is not limited to):

- Activities undertaken by contractors on behalf of TfNSW
- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys)
- Construction and maintenance of TfNSW assets
- Activities at TfNSW properties and facilities (including TAHE)
- Maritime vessels operated by TfNSW.

The procedure does NOT cover report-only events, non-compliances, regulatory action and environmental incidents relating to:

- Operating agencies embedded within TfNSW, such as Sydney Metro. At the time of release of the Procedure, there was a Corporate Functions Review underway, which sought to incorporate Sydney Trains and NSW TrainLink into TfNSW. The single operating model may involve the future amalgamation of environmental incident procedures. Regardless, it is noted that all agencies provide their incident data to Environment and Sustainability (E&S) Branch for the purposes of cluster reporting;
- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts);
- Boating accidents (except those involving TfNSW Maritime vessels);
- Dumping of materials by members of the public on TfNSW managed land (except where hazardous materials are unexpectedly found during construction or maintenance activities);
- Marine oil and chemical spills covered by the National Plan for Maritime Environmental Emergencies (Australian Maritime Safety Authority, 2014).

The Procedure does not provide guidance on management responses or corrective actions required following environmental incidents and non-compliances, which are site specific and should be addressed by those with responsibility for the activity that caused the incident or non-compliance.

However, TfNSW E&S Branch is available to provide advice on appropriate responses and corrective actions in relation to individual incidents or non-compliances.

3 Requirements

3.1 Environmental incidents, report-only events, non-compliances and regulatory action

This Procedure is applicable to a range of environmental incidents, report-only events, non-compliances and regulatory action that may occur during activities undertaken by, or on behalf of, TfNSW. Each of these events and their reporting requirements are described in the following sections.

Personnel using this Procedure should consider the definitions of each of these events when reporting. Definitions are provided in Section 6.

Note that a set of circumstances may be both a non-compliance and an environmental incident. An environmental incident could also result in regulatory action.

3.1.1 Environmental incidents

Environmental incidents are defined in section 6. Reporting requirements are detailed in section 3.2.

The person responsible for operational management of the site/activity that caused the incident should assume responsibility for reporting in accordance with this Procedure, together with coordinating the response to the incident, including directing actions as necessary.

The TfNSW Environment Manager will classify reported incidents for the purposes of internal environmental performance reporting and analysis of environmental incident trends (as outlined in Figure 3.2.1).

Environmental incident classifications are described in Table 3.1.1, below. The classification system is aligned to the consequence levels (C6 – C1) from the TfNSW Enterprise Risk Management Standard and considers the key risk areas of:

- Environment

- Reputation and Integrity
- Regulations and Compliance.

The appropriate consequence level for each of the three key risk areas will be recorded for each incident, but only the highest recorded consequence level will be used as the incident classification for reporting purposes.

Note that not all criteria described for each consequence level in Table 3.1.1 need to be met in order to assign an incident classification – the most appropriate criteria should be considered when determining the consequence level for each key risk area for each incident.

Table 3.1.1: Environmental Incident Classification

	Incident Category					
Key risk area	**C6 Insignificant**	**C5 Minor**	**C4 Moderate**	**C3 Major**	**C2 Severe**	**C1 Catastrophic**
Environment	No appreciable changes to environment.	Change from existing conditions that can be rectified immediately (< 1 day) with available resources.	Short-term (< 1 year) and/or well-contained environmental impact. Minor remedial actions probably required.	Short to medium term (between 1 and <5 years) environmental impact. Considerable remedial actions probably required.	Medium-term (>5 years) environmental impact. Extensive remedial actions probably required.	Long-term (>10 years) large-scale environmental impact. Extensive and ongoing remedial actions probably required.
Reputation and integrity	Single negative article in local media. Limited social media commentary. Goodwill, confidence and trust retained. Confined to the Branch. Local council may want to discuss.	Series of negative articles in local media (District / electorate based adverse media). Some social media commentary. Confidence remains - minor loss of goodwill. Confined to Branch but requiring notification to Division. Council requires written explanation. Recoverable with little effort or cost. Some continuing scrutiny/attention.	Extended local media coverage with some broader Regional media coverage. Extended negative social media coverage. Confidence and trust of stakeholders dented (recoverable at modest cost within existing budget and resources). Division formal response needed to State Government/Regulator.	State media coverage, short term negative national media coverage. Widespread social media coverage Confidence/trust impaired. Project/activity credibility under question. TfNSW and/or Ministers Department requires update.	Sustained negative State media coverage. Regular 'talk-back' programs questioning credibility and capability. Confidence and trust are severely damaged. Widespread negative social media coverage. Regular updates demanded by Minister. Stakeholders withdraw their support recoverable at considerable cost, time and staff effort.	Sustained, high profile media attention at National level. Material change in the public perception of the Agency. Extensive negative social media coverage Confidence and trust non-existing. Government forced to reverse decision. Stakeholders are actively campaigning against the organisation.

Table 3.1.1: Environmental Incident Classification

	Incident Category					
Key risk area	**C6 Insignificant**	**C5 Minor**	**C4 Moderate**	**C3 Major**	**C2 Severe**	**C1 Catastrophic**
Regulations and compliance	Low-level/Technical non-compliance with legal and/or regulatory requirement or duty by individuals or TfNSW- not reportable. Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify.	Non-compliance with whole or significant aspects of Government policy not reportable but requiring internal activity to put in place. Formal investigation and/or formal notification to regulator. Minor breach of contract by either party rectified through local management discussion.	Non-compliance with key Government policy - reportable and/or explanation required – need to put in place as soon as possible. Non-compliance – key obligation. Formal notification to regulator. Agency on notice. Breach of contract by either party rectified at Branch level management discussion. Small fine and no disruption to services.	Technical non-compliance with a minor Government Policy - not reportable. Low level non-compliance. Technical non-conformance. Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify. Substantial fine and no disruption to services.	Non-compliance with high profile, outward facing Government policy or Ministerial decree - immediately reportable to Government body (e.g. Treasury) and action to put in place required immediately (high priority). Continuous breach resulting in prohibition notices. Breach of significant, key aspects of contract by either party leading to lodgement (threat) to sue and recompense at severe financial levels Cessation of contract may occur. Large fines as a result of non-compliance. Licence or accreditation restricted or conditional affecting ability to operate.	Non-compliance with high profile Government policy or Ministerial decree - immediately reportable to Ministerial level requiring actions to put in place immediately (high priority) and progress to be reported to the Minister on an agreed and appropriate schedule. Litigation and potentially imprisonment. Loss of Operating licenses. Continued breach cannot be tolerated. Major contract breach by either party leading to significant litigation and financial costs . Total breakdown and cessation of contract. Criminal prosecution as a result of non-compliance.

3.1.2 Significant environmental incidents

Significant Incidents are environmental incidents that are serious in nature and have significant consequences warranting escalation to TfNSW senior management.

An environmental incident is to be defined and treated by the TfNSW Environment Manager as a potential Significant Incident if it meets one or both of the following:

- the severity of the incident is likely to be classified as C3, C2, or C1 in accordance with Section 3.1.1
- the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to be the subject of a penalty notice or prosecution

Potential Significant Incidents are escalated by TfNSW to the Executive Director Environment and Sustainability, who will determine whether the incident is deemed to be a Significant Incident and require further escalation to the Secretary and other senior management, to ensure they are aware of the incident and can implement or authorise any required responses.

The Significant Incident escalation process is detailed in Appendix A and Figure 3.2.1.

3.1.3 Report-only events

Report-only events are defined in section 6. Reporting requirements are detailed in section 3.2. Examples of report-only events include:

- Environmental incidents caused by weather events that are beyond the design capacity of environmental controls and/or mitigation measures in accordance with project specific requirements;
- Environmental incidents caused by persons or entities not associated with an activity being undertaken by TfNSW;
- Pre-existing conditions not associated with an activity being undertaken by TfNSW;
- Unexpected finds that are managed in accordance with relevant procedures / guidelines.

Despite these events being outside the scope of control of an activity, it is likely that a management response will be required to address them. As such, it is important that they are still reported (see section 3.2) to understand any resulting environmental impacts, inform trend analysis and any future activities in that location and allow any required management responses to be developed.

Report-only events can be considered to be unavoidable and so not reflecting the performance of a site, and will not be included in performance reporting. However, the response to a report-only event should be taken into account when considering site performance, as a deficient or inappropriate management response could result in a non-compliance and/or an environmental incident.

Where a report-only event relates to an unexpected find and the same issue can then reasonably expected to be found at the same location in future, additional finds from that location need not be reported.

3.1.4 Non-compliances

Non-compliance is defined in section 6. Reporting requirements are detailed in section 3.2.

A non-compliance could also be an environmental incident.

3.1.5 Regulatory action

Regulatory action is defined in section 6. Reporting requirements are detailed in section 3.2.

Regulatory action includes, but is not limited to:

- Prosecutions
- Penalty notices
- Clean up notices
- Prevention notices
- Official cautions
- Formal warnings
- EPA show cause notifications.

Copies of any regulatory action issued by an environmental regulator must be provided as part of the reporting that is undertaken in accordance with section 3.2.

3.2 Reporting process

3.2.1 Standard reporting process

The standard reporting process for all environmental incidents, significant environmental incidents, report-only events, non-compliances and regulatory action is detailed in Figure 3.2.1.

Where the reporting process requires submission of a written report to TfNSW, the person making the report must use the following formats and meet the information requirements detailed within each:

- Road based and maritime projects: Environmental Event Reporting Form (624/400)
- Rail based projects: INX reporting system

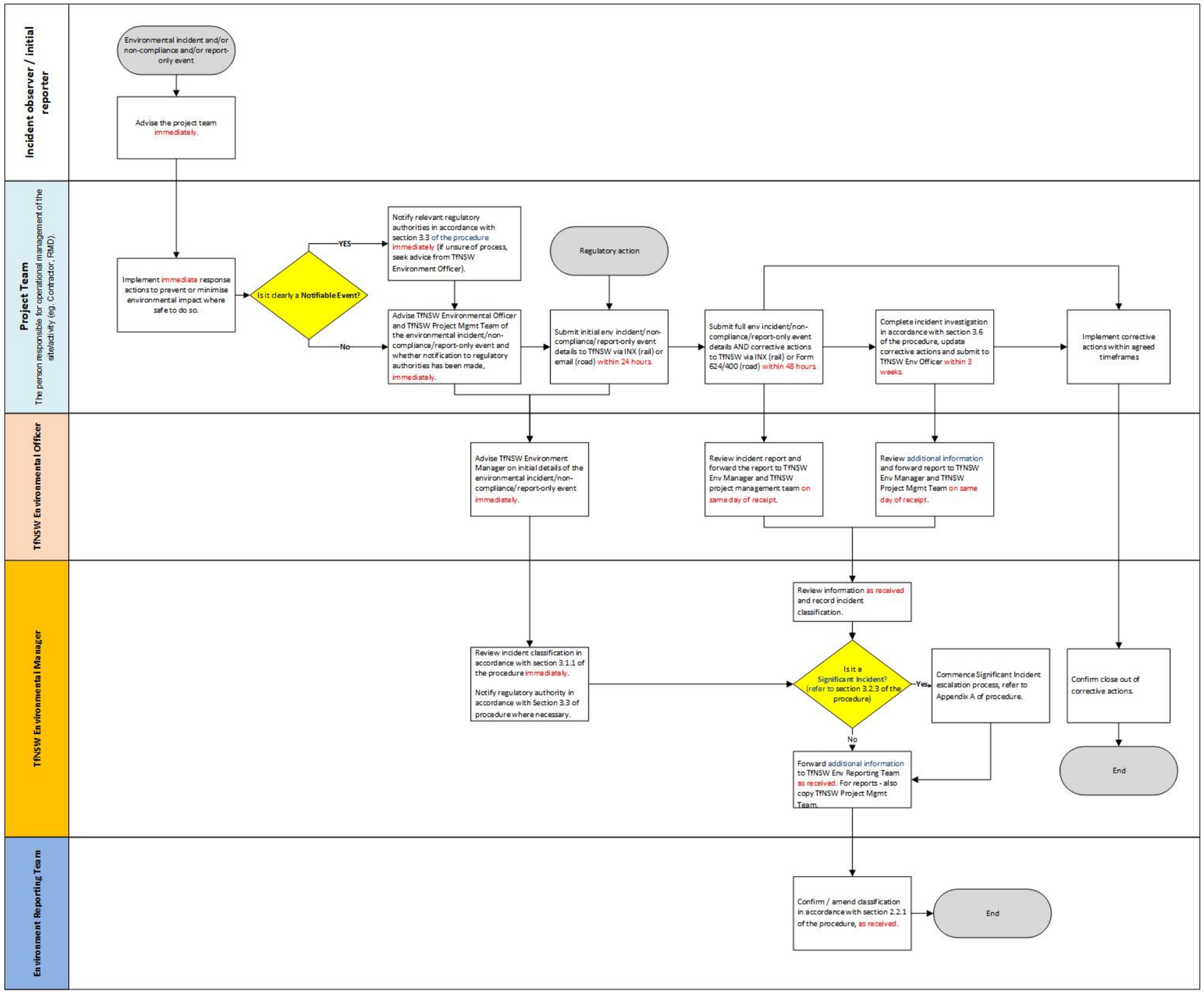
Information included in reporting must be factual and accurate.

For the initial 24-hour email notification for road projects, the following information must be provided:

- Date of event
- Project / site name
- Type of event that has occurred (ie- environmental incident, incident and non-compliance, non-compliance, report-only or regulatory action)
- Description of the event
- Quantity / volume
- Immediate response actions that were implemented
- Notification/s undertaken.

In the case that regulatory action is received relating to a previously reported environmental incident, non-compliance or report-only event, reference to the relevant event must be made in the report for the regulatory action.

Figure 3.2.1: Reporting process



3.2.2 Other internal notifications

When reporting in accordance with Figure 3.2.1, TfNSW project management teams should also undertake the following internal notifications as appropriate:

- Corporate Communications / Media for any environmental incidents, report-only events, non-compliances and regulatory action that have potential for negative community or media attention;
- Legal Branch, for any environmental incidents, report-only events, non-compliances and regulatory action that could result in a (further, in the case of the latter) regulatory response against TfNSW. In these instances, limit written commentary on the incident by all staff, including emails;
- Safety Branch for any incidents that involve actual or potential risks to the health and safety of workers or the general public.

3.3 Notifiable events

A notifiable event is any environmental incident, report-only event or non-compliance (see section 3.1, above) that triggers a specific statutory requirement to notify an authority.

The key notification requirements are described below. Note each statutory requirement to notify may specify a particular person who is responsible to make the notification as well as the timing of when this must occur. The details of any notification conducted must be included in the reporting that is undertaken in accordance with section 3.2.

3.3.1 Material Harm pollution incidents

Under Part 5.7 of the POEO Act, there is a duty to immediately notify (i.e. promptly and without delay) each relevant authority (see section 3.3.2) of a pollution incident where material harm to the environment is caused or threatened.

The POEO Act states that a pollution incident should be considered Material Harm 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"*

Material Harm only relates to pollution incidents. Other environmental incidents, such as conservation, heritage and planning breaches, are not included in the definition of a pollution incident.

3.3.2 Notification of Material Harm pollution incidents

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables 3.3.2a and 3.3.2b below. It is important to note the order of notification and phone numbers to use can vary depending on the nature of the pollution incident, as detailed in the two tables.

All of the authorities listed (whether considered relevant or not) must be contacted for each Material Harm pollution incident to satisfy POEO Act requirements. Serious penalties apply to both individuals and corporations for failing to notify Material Harm pollution incidents:

- Maximum penalty for individuals - $500,000
- Maximum penalty for corporations - $2,000,000.

Table 3.3.2a: Authorities to notify for Material Harm pollution incidents that present an immediate threat to human health or property		
Order	**Authority**	**Contact number**
1	Fire and Rescue NSW	000
2	NSW EPA environment line	131 555
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website
4	SafeWork NSW	131 050
5	The Appropriate Regulatory Authority*, being either: • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400

Table 3.3.2b: Authorities to notify for Material Harm pollution incidents that do **NOT** present an immediate threat to human health or property		
Order	**Authority**	**Contact number**
1	NSW EPA environment line	131 555
2	The Appropriate Regulatory Authority*, being either: • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website
4	SafeWork NSW	131 050
5	Fire and Rescue NSW	1300 729 579

** The appropriate contact for the Appropriate Regulatory Authority and Public Health Unit will vary according to the geographic location of the activity. These contact numbers should be found in advance and stored for immediate access (e.g. in a project's Construction Environmental Management Plan and/or on site notice boards) should a pollution incident need to be notified.*

When notifying authorities, do not speculate on the origin, causes or outcomes of a pollution incident. Rather, state very simply and concisely the following only:

a) The time, date, nature, duration and location of the incident

b) The location of the place where pollution is occurring or is likely to occur, the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known
c) The circumstances in which the incident occurred (including the cause of the incident, if known)
d) The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known.

If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 of the POEO Act. The verbal notification must be followed by written notification to each relevant authority within seven days of the date on which the incident occurred, setting out the above information.

3.3.3 Summary of other regulatory agency notification requirements

A summary of the other key statutory notification requirements that could arise from TfNSW environmental incidents, report-only events and non-compliances is provided in Table 3.3.3.

Table 3.3.3: Regulatory agency notification requirements

Event type	Legislation	Part / section	Agency	Notification requirement
Discover Aboriginal object	*National Parks and Wildlife Act 1974*	Section 89A	Heritage NSW	Notify the Secretary of the Department of Planning, Industry and Environment in writing using the form approved by the Secretary (if any) within a reasonable time after becoming aware
Discover Aboriginal remains	*Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984*	Section 20	Commonwealth Department of Agriculture, Water and the Environment	Notify the Commonwealth Minister in writing as soon as practicable after becoming aware, giving particulars of the remains and their location
Discover non-Aboriginal relic	*Heritage Act 1977*	Section 146	Heritage NSW	Notify the Heritage Council in writing within a reasonable time after becoming aware
Fires	*Rural Fires Act 1997*	Section 64	NSW Rural Fire Services	Notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Land contamination	*Contaminated Land Management Act, 1997*	Section 60(1)	EPA	Notify EPA in writing as soon as practicable after becoming aware of the contamination, where required as prescribed in the EPA 'Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997'
Non-compliance	Various	N/A	Various	Requirements to notify the relevant regulatory authority when a non-compliance has occurred (eg- with a Condition of Approval issued under Division 5.2 of the EP&A Act)
Pollution incident (material harm)	*Protection of the Environment Operations Act, 1997*	Part 5.7	EPA	See section 3.3.2
Pollution incident in water supply catchment area	Various	N/A	N/A	Notify the relevant water supply authority if an environmental incident has the potential for unapproved impacts on a drinking water supply

3.4 Requests for written reports from regulatory authorities

If TfNSW receives a request from an environment regulatory authority for a written report regarding an environmental incident, report-only event or non-compliance, the relevant Environment Manager must be immediately contacted for advice. No further correspondence (including email) about the event should be distributed either internally or externally until advice is received. E&S will then coordinate with Legal Branch to:

- assist in the investigation of the environmental incident, report-only event or non-compliance
- provide legal advice to the project
- co-ordinate the preparation of the written response to the regulatory authority.

3.5 Corrective actions

A key aspect of the TfNSW Environment and Sustainability Policy that is addressed through this procedure is being accountable for addressing and minimising the environmental impacts of TfNSW activities. This can be achieved by developing appropriate corrective actions and implementing them within a timely manner following an environmental incident, with the aim of avoiding a repeat of that incident.

There are a variety of scenarios in which an environmental event may occur on a TfNSW project. It is important that corrective actions are:

- specific to the incident that has occurred
- meaningfully address the root cause(s) of the incident
- designed to prevent incident reoccurrence.

Corrective actions could include (but are not limited to) the following:

- physical works to install, augment or rectify controls or a site issue
- testing and/or monitoring
- review and improvement of construction methods or work practices
- review and update of management plans, procedures or other tools
- communication, training and awareness initiatives for workers.

In most cases it will not be sufficient to simply notify workers of correct systems / procedures (e.g. via toolbox talk). A review should be undertaken by the project team following an incident or non-compliance to determine why the systems / procedures failed (or alternatively a formal investigation, when required by section 3.6), and necessary changes made to ensure they do not fail in future. Site staff should then be made aware of the changes and trained as necessary.

Immediate/short-term corrective actions including timeframes for completion must be clearly described in incident/non-compliance reporting. Updates about longer-term corrective actions including timeframes for completion can be provided to the TfNSW Environment Officer and TfNSW Project Management Team post submission of the incident/non-compliance report.

3.6 Investigations

Serious environmental incidents and non-compliances must be investigated to identify the causes, with the purpose of preventing a recurrence. A root cause analysis investigation must be completed by the project team for all environmental incidents with a classification of C1, C2 or C3, or any other environmental incidents or non-compliances as determined by TfNSW.

The scope of the investigation will be determined by the TfNSW Environment Officer or Environment Manager. The project team must provide TfNSW with a final investigation report

within three weeks of the environmental incident or non-compliance being identified. The report must include the minimum information described in Table 3.6 (below).

Table 3.6: Investigations

Element	Description
Sequence of events	The sequence of events that led to the incident or non-compliance
Findings	Given the sequence of events, what are the key findings of the investigation (i.e. what are the main causes of the incident or non-compliance).
Management methods	A record of the management methods to be changed and/or implemented to avoid the incident or non-compliance reoccurring.
Key learnings	Describe the key learnings from the investigation into the incident or non-compliance. Detail which learnings may be relevant to other transport projects.

4 Accountabilities

Table 4 details the key accountabilities for implementing this Procedure.

Table 4: Key accountabilities

Requirement	Detail
Environment Director	Oversee compliance with the procedure and make the final determination on the classification of all environmental incidents, report-only events and non-compliances
Environment reporting team	Recording of all environmental incidents, report-only events, non-compliances and regulatory action, confirm / amend the classification of environmental incidents, report-only events and non-compliances in accordance with section 3.1 and monitor compliance with the Procedure
Executive Director Environment and Sustainability	Make determinations on whether an environmental incident will be considered a Significant Incident (see section 3.1.2). Assume the role of Information Distributor when a Significant Incident has occurred (see Appendix A).
Observer of environmental incident, report-only event, non-compliance or regulatory action	Immediately report in accordance with Figure 3.2.1
Person/s responsible for environmental incident, report-only event, non-compliance or regulatory action	Report and respond in accordance with Figure 3.2.1
Project Managers	Provide appropriate resources to respond to an environmental incident, report-only event, non-compliance or regulatory action in accordance with this Procedure

Table 4: Key accountabilities	
Requirement	**Detail**
TfNSW Environment Manager	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, assign initial classification in accordance with section 3.1.1, monitor corrective actions, and actively promote compliance with this procedure at a program level. Assume the role of Information Controller when a Significant Incident has occurred (see Appendix A).
TfNSW Environment Officer	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, monitor corrective actions and actively promote compliance with this procedure at a project level

5 Related policy, systems and documents

The following documents and systems are available on agency intranets and the internet:

- Environmental Event Report Form (for use by road and maritime sites and projects)
- INX system (for use by rail and light rail sites and projects)
- Environment and Sustainability Policy
- Unexpected finds procedures – refer to relevant guideline/procedure

6 Definitions and acronyms

All terminology in this Procedure is taken to mean the generally accepted or dictionary definition with the exception of the following terms which have a specifically defined meaning:

- **Significant incident** – an environmental incident that is likely to receive a classification of C3, C2 or C1, OR the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to receive a penalty notice or be subject to prosecution, and therefore requires escalation to the Secretary and other TfNSW senior management
- **DPIE** – Department of Planning, Industry and Environment
- **Environment Director –** consists of Associate Director Environmental Management; Director Environment Motorways; Director Environment Regions; Director Environment Sydney
- **Environment Manager** – consists of Environment Manager or Senior Manager Environment from Environment and Sustainability Branch
- **Environment Officer** – consists of Environment Officer and Environment and Planning Manager from Environment and Sustainability Branch
- **Environment Reporting team** – consists of those in Environment and Sustainability Branch responsible for administering and maintaining the EnvOps mailbox and INX reporting system (for environment entries)
- **Environmental event** – a report-only event, non-compliance, regulatory action or environmental incident
- **Environmental incident** - An environmental incident is an event or set of circumstances, as a consequence of which pollution (air, water, noise, or land) or an adverse environmental impact has occurred, is occurring, or is likely to occur. Adverse environmental impact includes contamination, harm to flora and fauna (either individual

species or communities), damage to heritage items and adverse community impacts. An unexpected find that is not managed in accordance with relevant procedures / guidelines is also considered an environmental incident

- **EPA** - NSW Environment Protection Authority
- **EPL** – Environment Protection Licence (issued by EPA)
- **E&S** – (Safety, Environment and Regulation) Environment and Sustainability Branch
- **Investigation** – The process by which the cause(s) of an environmental incident is examined and identified.
- **INX reporting system** – the online system used to record and track environmental incidents, report-only events, non-compliances and regulatory action relating to rail projects and premises.
- **Non-compliance** - a failure to comply with any condition of approval, environmental assessment safeguard / mitigation measure, licence condition, permit or any other statutory approval relevant to the activity and/or area where the activity occurs;
- **Notifiable event** - Any environmental incident, report-only event or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.
- **POEO Act** - Protection of the Environment Operations Act 1997
- **Pollution** – Pollution (including air pollution, water pollution, noise pollution and land pollution) as defined in the dictionary to the POEO Act.
- **Pollution incident** – Has the same meaning as defined in the dictionary to the POEO Act.
- **Regulatory action** - any formal regulatory response from an environmental regulator including but not limited to penalty notices, clean-up notices, prevention notices, official cautions, show cause notices and formal warnings.
- **Report-only event** - An environmental incident or unexpected find resulting from circumstances outside the scope of controls and of an activity.
- **RMS** – Roads and Maritime Services
- **TfNSW** – Transport for NSW (excludes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- **Transport Cluster** – all TfNSW divisions and operating agencies (includes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- **Unexpected find** – An unexpected discovery such as a heritage item, threatened species, contamination, asbestos or hazardous substance.
- **WHS** – Work Health and Safety

7 Document control

7.1 Superseded documents

This Procedure replaces the following documents:

- Roads and Maritime Services Environmental Incident Classification and Reporting Procedure (RMS 17.374)
- Transport for NSW Environmental Incident Classification and Reporting (PR-105)

7.2 Document history

Date & Procedure No	Document owner	Approved by	Amendment notes
19/07/2021 EMF-13/PR-0001	Environment Manager Performance Improvement	Executive Director Environment and Sustainability	N/A

7.3 Feedback and help

For advice on using this Procedure please contact:

Environment Manager Performance Improvement

Email: [redacted]

Phone: [redacted]

Appendix A: Significant Incident escalation process

A1 Confirmation of a Significant Incident

Where an Environment Manager believes that a Significant Incident has occurred (see section 3.1.2 and Figure 3.2.1), they must immediately phone the relevant Environment Director. The Environment Director will consult with the Executive Director Environment and Sustainability, who will determine whether the incident will be considered a Significant Incident. Once a Significant Incident has been determined, the escalation process will commence in accordance with sections A2 and A3, below.

A2 Significant Incident information management

Following determination of a Significant Incident (see section A1, above), it is essential that there is fast, consistent and accurate reporting of information to the TfNSW senior management. As such, clear roles and responsibilities must be established in two key areas, as described in Table A2.

Table A2: Roles and responsibilities during a Significant Incident

Role	Who	Responsibilities
Information Controller	Environment Manager (or relevant Environment Officer in their absence)	• Liaise between the on-site TfNSW project management team and the Information Distributor (below) • Be the single point of contact to provide information and updates about the status of the Significant Incident to the Information Distributor
Information Distributor	Executive Director Environment and Sustainability (or relevant Environment Director in their absence)	• Identify the relevant members of the Executive and other senior management that will form the distribution group to be informed about the Significant Incident (see Table A3) • Consolidate information from the Information Controller, and distribute it to the distribution group • Provide key ongoing updates to the distribution group as it becomes available • Respond to enquiries from the distribution group, ensuring all members of the distribution group are copied into every response

A3 Parties to be notified

As described in Table A2, the Information Distributor must identify relevant TfNSW senior management from delivery and client divisions that will form the distribution group to be informed about the Significant Incident, including ongoing updates. Table A3 provides the key positions that must be included (at a minimum), depending on who is undertaking the activity. Depending on the type and location of the activity, there may be other areas of TfNSW that should be included in the distribution group – see section 3.2.2.

The distribution group should all be notified concurrently in a single email that a Significant Incident has occurred. The email should be sent by the Information Distributor within five minutes of making the determination of the Significant Incident.

Table A3: TfNSW distribution group to be notified during a Significant Incident

	Greater Sydney (Client)	**Regional & Outer Metropolitan (Client)**
Transport exec notification	• Secretary	• Secretary
SER exec notification	• Deputy Secretary, Safety Environment and Regulation	• Deputy Secretary, Safety Environment and Regulation
Client exec notification	• Deputy Secretary, Client Division • Executive Director, Community and Place • Relevant City Director (Harbour/River/Parkland)	• Deputy Secretary, Client Division • Executive Director, Community and Place • Relevant Regional Director
Delivery exec notification	• Deputy Secretary, relevant Delivery Area • Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Sydney Project Delivery, Head of Rail Delivery, Chief Operations Officer, Executive Director Planning and Programs) • Director of relevant Delivery Area (e.g. WSPO, GSPO, Parramatta Light Rail, Rail Infrastructure Delivery, Sydney Maintenance, Easing Sydney's Congestions etc.)	• Deputy Secretary, relevant Delivery Area • Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Regional Project Delivery, Executive Director Network and Assets) • Director of relevant Delivery Area (e.g. Regional Maintenance, NPO, SaWPO)
Project Team notification	• Project Director (or equivalent) of relevant Delivery Area • Senior Project Manager • Project Manager • Environment Manager	• Project Director (or equivalent) of relevant Delivery Area • Senior Project Manager • Project Manager • Environment Manager

Appendix A8 –Monitoring Inspection Reporting Review Audit (MIRRA) Schedule

Appendix A8 MIRRA (Monitoring Inspection Reporting Review Audit) Schedule

M12 Motorway West

Project number:	N00160
Document number:	M12WCO-CPBGG-ALL-EVE-PLN-000001_App A8
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The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

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Rev	Date	Reviewed By	Details
A	18/02/2022	A. Zvirzdinas	First Draft
B	13/05/2022	A. Zvirzdinas	Second Draft
C	29/06/2022	A. Zvirzdinas	Third Draft
D	19/07/2022	A. Zvirzdinas	Fourth Draft following ER review/comment on Rev C
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
E	19/01/2023	K. Purkiss	6-monthly Review & Design Changes
01	19/01/2023	K. Purkiss	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	[redacted]		22/03/2023

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Name	Details	Frequency	By Whom	Resources
Monitoring				
Waste and resources monitoring	As per CWRMP (Appendix B5) Types and volumes of waste Waste Management Practices and housekeeping	 Monthly Daily / Weekly	Environmental Coordinator Engineers Site supervisor	Specialist consultant
Groundwater monitoring of cuts	As per CSWMP (Appendix B8) Groundwater quality and level (Cut 1, Cut 1 – AAR) Groundwater inflows and quality (Cut 2, Cut 2-AAR, Cut 4, Cut 5, Cut 6, Cut 7)	As per the CSWMP Monthly during construction Noting that quality will only be tested if inflows are observed.	Site Supervisor ESR	Specialist consultant (TfNSW)
Traffic and access monitoring	As per CTTMP (Appendix B1) TCP Monitoring ROL Compliance Safety monitoring Real time monitoring of haulage vehicles	As per CTTMP Daily Weekly or as required Monthly At all times during off-site haulage	Traffic Manager	Specialist consultant
Noise and Vibration monitoring	As per CNVMP (Appendix B4) Attended monitoring Real Time	As per CNVMP Prior to construction As required during OOHW or works subject to NVIS As required during OOHW Within 50m of residential building Where working within safe working distances for cosmetic damage As required during construction or following complaint	Environmental Coordinator Specialist consultant	Noise and Vibration Specialist Monitoring Equipment

Name	Details	Frequency	By Whom	Resources
	Complaint based monitoring Validation Monitoring	Attended monitoring following receipt of complaint First two (2) nights of OOHW During OOHW		
Heritage monitoring	As per the CCHMP (Appendix B7) When working in close proximity to heritage areas	Daily Weekly	Environmental Coordinator Heritage specialist Site supervisor	Specialist consultant Inspection checkllist
Biodiversity monitoring	As per CFFMP (Appendix B2)	As per CFFMP	Environmental Coordinator Project ecologist	Specialist consultant
Soil and water monitoring	As per CSWMP (Appendix B8) Spoil Management ESC effectiveness Waterways	 Weekly Weekly/Prior to and following wet weather/Prior to and following shut-downs When working in or near waterways	Environmental Coordinator Soil conservationist Site supervisor	Specialist consultant Inspection checklists
Water discharge monitoring	As per CSWMP (Appendix B8), G38, EPL	When discharging	Environmental Coordinator Site supervisor	Water quality monitoring equipment
Air quality monitoring	As per CAQMP (Appendix B6) Real time monitoring Response to complaint about dust Visual monitoring	 Daily Real Time Following receipt of complaint Multiple times daily during dust generating activiites	Environmental Coordinator Site supervisor	Specialist consultant SiteHive Hexanode
Weather and climate monitoring	Prevailing wind conditions and weather forecast	Daily	Environmental Coordinator Site supervisor	On site AWS Weather Forecasts (eg. BOM, Windy, Elders, Weatherzone)
Climate Monitoring	Monitoring of rainfall other climatic conditions (eg. temperature, humidity,	Daily Hourly	Environmental Coordinator Site supervisor	BOM Weather Data On site AWS

Name	Details	Frequency	By Whom	Resources
	wind velocity and rainfall) from on site AWS or Badgery's Creek AWS (Station ID 067108)			
Odour Monitoring	No detectable odours beyond the site boundary or at the nearest sensitive land use downwind of the project	Daily or in response to a complaint	Environmental Coordinator Site supervisor	Monitoring equipment
Inspections				
Pre-start Inspections	An inspection will be carried out and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance. Works are not to commence unless inspections are found to be satisfactory	Prior to the commencement of works on each shift	Site supervisor	CPBGG JV Foreman
Pre-clearing inspections	As per CFFMP Inspection prior to commencement of clearing activities including weeds/pathogen presence	As per CFFMP Prior to commencement of clearing	Project Ecologist	CPBGG JV ESR
Shutdown / Start up inspections	Inspections prior to and post shut down periods exceeding 4 days or significant weather events	As required during construction	ESR Environment Team Supervision	CPBGG JV Foreman
Wet weather preparation inspections	Inspections prior to wet weather event (>10mm in 24 hours) Inspections prior to flooding occurring.	As required during construction	ESR Environment Team Supervision	CPBGG JV Foreman
Post rainfall and flooding inspections	Inspections of the work site to evaluate the effectiveness of environmental controls and identification of rectification works	Following rainfall exceeding 10mm within 24 hours Post flooding event	ESR Environment Team Supervisor	CPBGG JV Foreman
Environment and sustainability site inspections	Inspect all relevant environmental aspects and evaluate the effectiveness of associated environmental controls. Environment and Sustainability Managers will record inspection findings on an inspection checklist form. If any maintenance and/or deficiencies in environmental controls or in the standard of environmental	Weekly Prior to and following rainfall event	Environmental Coordinator	CPBGG JV ESR CPBGG JV Sustainability Manager

Name	Details	Frequency	By Whom	Resources
	performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.			
Soil Conservationist	Soil conservationist inspections in accordance with G36 and G38 specifications	Monthly	Soil Conservationist	CPBGG JV ESR
ER inspections	Monitor the implementation of Environmental Management Plans and monitoring programs required under the CSSI and advise the Proponent upon the achievement of these plans/ programs.	Typically on a weekly or fortnightly basis. Noting that frequency may vary based on an assessment of risk	ER	Alternate ER
ERG Inspections	Inspections of the project progress by the ERG	Monthly or as required	ERG	CPBGG JV ESR CPBGG JV staff
Other Agency inspections	Inspections by EPA and/or other relevant agencies.	As required during construction	ESR Supervision	CPBGG JV Superintendent
Inspection following monitoring exceedance	Inspection in response to recurring or major complaints or authorised agency request regarding exceedance of air emissions, noise and vibration results, water quality etc	As required	ESR Supervisor	CPBGG JV Superintendent
Daily visual inspection of construction works / work area	Daily visual inspection of construction activities and control measure in place to manage environmental risk (eg. dust, noise and vibration, ESC)	Daily	ESR Supervisor Superintendent	Daily Diary
Reporting				
Monthly Environmental Report	Environmental statistics (ie. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues	Monthly	Environment Team	CPBGG JV ESR
Monitoring Results	Report on monitoring data recorded and potential exceedances against criteria.	Quarterly until operation fully commenced	Environment Team ESR	Specialists

Name	Details	Frequency	By Whom	Resources
Compliance Monitoring	As per Table 3-9 and 3-11 (CEMP)	As per Table 3-9 and 3-11 (CEMP)		
Incident Reports	Environmental Incident reports will be provided to TfNSW and the ER within 24hours of the incident occurring	Within 24 hours of the incident occurring	Project Director	CPBGG JV ESR
Incident Reports	Environmental Incident reports will be provided to EPA	Within 7 days of becoming aware of an incident causing or threatening material harm to the environment	Project Director	CPBGG JV ESR
Waste Avoidance and Resource Recovery Report	Report containing information relating to wastes generated or recycled, and materials purchased for the project	Annually within 1 month from 1 July of the current calendar year for the 12 months previous (or part thereof) On completion of project	Environment Team	CPBGG JV ESR
EPL Annual Return	Report on compliance with each EPL including: • Statement of Compliance • Monitoring and Complaints summary, • Statement of compliance for: licence conditions, load based fee, requirement to prepare PIRMP, publish monitoring data, and Environmental Management Systems and practices	Within 60 days of the anniversary of the EPL	ESR	Website
Daily Complaints Report	A daily complaints report is to be provided to the EPA by 2pm as per EPL R4.1 condition	By 2pm each day	ESR	Community and Stakeholder Manager Consultation Manager
Daily Complaints	Daily complaints to be provided to the ER following receipt of a complaint.	Daily following receipt of a complaint	ESR	Community and Stakeholder Manager Consultation Manager
Complaints Register	The Complaints Register will be provided to the Planning Secretary on request in accordance with NSW CoA A35(a) and B9	Upon request	ESR	Community and Stakeholder Manager Consultation Manager
TfNSW Environmental Inspection Report	Response to matters raised in TfNSW site inspections	Typically, every two weeks for TfNSW inspection reports	ESR	

Name	Details	Frequency	By Whom	Resources
Building Condition Survey Report	Building Condition Surveys will be offered in writing to property owners before construction where there is a potential for construction activities to cause structural or cosmetic damage. A comprehensive report will be prepared by a suitably qualified professional before the relevant works begin and will comprise a written and photographic condition.	Prior to the commencement of any work	Engineer Specialist	ESR Community and Stakeholder Manager
Road Dilapidation Report	NSW CoA E95 – Before any local road is used by a heavy vehicle for the purposes of the CSSI, a Road Dilapidation Report must be prepared unless otherwise agreed by the relevant road authority. A copy of the dilapidation report must be provided to the relevant road authority within 3 weeks of completion of the survey and at least 2 weeks before the road is used by the heavy vehicle.	Prior to the use of local road	Engineer Specialist	ESR Community and Stakeholder Manager
Pre-construction Condition Survey Report	NSW CoA E76 - Pre-construction surveys for owners of surface and sub-surface structures and other relevant assets identified at risk from vibration, including all listed heritage items and buildings/structures of heritage significance as identified in the documents listed in NSW CoA A1	Prior to the commencement of any work	ESR Community and Stakeholder Manager	
Post-construction Condition Survey Report	Post construction condition survey	no later than four months following the completion of construction activities that have the potential to impact on the structure / asset / building conditions	ESR Community and Stakeholder Manager	
Pre-construction Land Condition Assessment	Pre-construction Land Condition Assessment to be conducted prior to taking possession of any area of land nominated by the Principal as available for use for the projects site facilities including areas for	Prior to site establishment of ancillary facilities.	ESR	Specialist consultant

Name	Details	Frequency	By Whom	Resources
	construction materials storage and stockpiling. Hold Point in accordance with clause 4.15.2 of G36.			
Post construction Land Condition Assessment	In accordance with clause 4.15.3 of G36, undertake a post-construction Land Condition Assessment of land used as the projects site facilities including areas for construction materials storage and stockpiling. Hold Point in accordance with clause 4.15.3 of G36.	When site facilities are no longer required and restoration of the area has been undertaken in accordance with clause 4.16 of G36.	ESR	Specialist consultant
Occupational Hygienist's Reports	In accordance with clause 1.9 of R44, occupational hygienist must undertake or arrange for tests, drawings, calculations, reports, assessments, direct and/or make recommendations	Advance contamination assessments During topsoil stripping operations During demolition and excavation of contaminated materials	ESR	Occupational Hygienist
Records of survey and as-built information	In accordance with clause 2.5 of R44, survey and as-built documentation of all ACM encapsulation placement locations	Prior to placing ACM and after placement	ESR	Survey information
Detailed Site Investigation Report (s) (NSW CoA E85)	Documents outcomes of contamination assessments of land on which the Project is located	Prior to the commencement of any work that would result in the disturbance of potential or contaminated land and/or soil	ESR	Contamination specialist
Section A Site Audit Statement and Site Audit Report (NSW CoA E88)	Verifies land is suitable for intended land use	After remediation and no later than one month before the commencement of operation	EPA Accredited Site Auditor	
Road Dilapidation Report (NSW CoA E95)	Road dilapidation report for local roads proposed to be used by construction vehicles	Within three weeks of completing the surveys and at least two weeks before the road is used by heavy vehicles	Traffic Manager	Suitably qualified person
Air Emissions Performance Report	Report on conformity, or otherwise, of mobile non-road diesel plan and equipment with relevant standards or	Annual before 31 July and at actual completion date	ESR	

Name	Details	Frequency	By Whom	Resources
	approved equivalent emission standards.			
Heritage Report (NSW CoA E30)	Details of any cultural heritage investigations either undertaken or to be carried out including analysis of artefacts from excavations and identification of a final repository for finds carried out for the Project.	Within 12 months after the completion of all work	TfNSW	Heritage consultant
Noise and Vibration Reports	In accordance with EPL condition R4.2, Noise and Vibration reports may be required to be prepared and submitted to EPA	Upon request by the EPA	ESR	Specialist consultant
Review				
Management Reviews	Identification of areas of opportunity for improved environmental performance Analysis of the causes of non-compliances and deficiencies Environment inspections and audits Verification of the effectiveness of corrective and preventative actions Highlighting any changes in procedures resulting from process improvement.	Quarterly	Management Team	The review is initiated by the CPBGG JV ESR and includes relevant project team members review environmental management issues.
CEMP Formal Review	Full review of CEMP and Sub-plans Update CEMP and Sub-Plans based on relevant changes, issues, incidents or non-compliances.	Annually	Management Team	ESR
Executive Review	Effectiveness of environmental management documentation implementation. Management effectiveness Potential improvements to the environmental management documentation Adequacy of resources Findings of audits Environmental objectives and targets Environmental performance	Annually	CPB Business Unit Georgiou	Management Team

Name	Details	Frequency	By Whom	Resources
	Compliance with legal and other requirements Critical non-compliance or repeated non-compliances Organisation changes Effectiveness of training and inductions			
Audit				
Internal Environment and Sustainability Audit	Review of CEMP and SMP compliance to CPB EMS / ISO14001. Verify compliance with approval and legal requirements, construction documentation and ISCA requirements, where required	The first audit within three months of the commencement of construction and then at six monthly intervals there-after. The final submitted within five working days of contract completion date.	Internal EMS Auditors	CPBGG JVESR
Waste Tracking Audit	To achieve ISCA credit Was-1 Waste Management, auditing to final destination must be undertaken at least six-monthly for construction. Final destination means at least to a waste facility where the waste is transformed into another product or material or into landfill	Six-monthly from the start of construction	Sustainability team Specialist consultant	Specialist consultant
CWRMP Compliance Checks	As per EPL condition O5.4, undertake monthly compliance checks of the CWRMP while it is in effect (being while the licensed activities are occurring and not after) to ensure that all waste is being managed, transported, reused, recycled or disposed in a lawful manner. The compliance checks must take the form of: a) desktop investigations (such as contacting reuse, recycling or disposal facilities directly, reviewing waste disposal dockets, reviewing exemption requirements against particular loads of waste, reviewing environment protection licences);	Monthly as per EPL condition O5.4	Project Environmental Team	Audit Checkllist

Name	Details	Frequency	By Whom	Resources
	b) site inspections to reuse, recycling or disposal locations; and/or c) any other method approved in writing by the EPA.			
External independent audit – State Requirements	Verify compliance with approval and legal requirements, construction documentation and any other commitments.	Initial Audit - 12 weeks following commencement of construction No greater than 26 weeks from the date of the initial audit	External auditor appointed by TfNSW	TBC
External independent audit – Commonwealth Requirements	Verify compliance with commonwealth approval and legal requirements, construction documentation and any other commitments.	As requested by DAWE	External auditor appointed by DAWE	TBC

Appendix A9 – Pollution Incident Response Management Plan

Appendix A9
Pollution Incident Response Management Plan
M12 Motorway West

Project number:	N00160
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A	18/02/2022	A. Zvirzdinas	First Draft
B	13/05/2022	A. Zvirzdinas	Second draft following TfNSW/Arcadis review and comments
C	24/06/2022	A. Zvirzdinas	Update to include contact details of personnel.
D	19/07/2022	A. Zvirzdinas	Fourth Draft following ER review and comments on Rev C. New document number
E	25/07/2022	A. Zvirzdinas	Fifth Draft following ER review and comments on Rev D.
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
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Document Review

Position	Name	Signature	Date
Project Director	[redacted]		27/03/2023

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Acronyms and Abbreviations

Abbreviation	Definition
ARSR	Amendment Report to the Submissions Report
CFMP	Contractor's Flood Management Plan
CCEMP	Contractor's Construction Environmental Management Plan
CoA	Condition of Approval
CPBGG JV	CPB Contractors and Georgiou Group Joint Venture
DPE	NSW Department of Planning and Environment (formerly DPIE)
DPIE	NSW Department of Planning, Industry and Environment
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPL	Environment Protection Licence
ERSED	Erosion and sedimentation
ESCP	Erosion and Sediment Control Plan
ESR	Environmental Site Representative (CPBGG JV)
EWMS	Environmental Work Method Statements
POEO Act	*Protection of the Environment Operations Act, 1997*
PIRMP	Pollution Incident Response Management Plan
Project	M12 West Motorway Project
RMS / Roads and Maritime	NSW Roads and Maritime Services (former)
Secretary	Secretary of the Department of Planning, Industry and Environment
TfNSW	Transport for New South Wales (formerly Roads and Maritime Services)
TEC	Threatened Ecological Community
Work Pack (CPBGG JV)	A Work Pack is a collective set of documents that provides an integrated and planned method of delivering elements of the work with consideration to all necessary factors including safety, environmental, quality, community, legislative, production and cost.
VOC	Verification of Competency

1 Introduction

This Pollution Incidence Response Management Plan (PIRMP or plan) has been prepared for construction of the M12 Motorway Central section (the project). The CPB Contractors and Georgiou Group Joint Venture (CPBGG JV) has been awarded the M12 West stage which is a construct only contract between The Northern Road, Luddenham and about 250 metres east of Badgerys Creek.

The PIRMP has been developed by CPBGG JV in response to amendments to the *Protection of the Environment Legislation Amendment Act 2011* as set out in Part 5.7A of the POEO Act. The plan provides a guide for the operations, actions and notifications to be carried out in the event of a pollution incident and/or emergency as application. Whilst deviation from the plan should be avoided, all events shall be managed according to the specific conditions of the incident.

As part of the development of the PIRMP a workshop shall be held to identify current and future environmental risks associated with the project. As part of the workshop pollution preventative measures currently in place and any further measures shall be discussed, along with the emergency response processes and notification requirements.

2 Scope and purpose

The PIRMP provides an easily interpreted reference document that ensues that pollution incidents can be managed and responded to in an appropriate manner.

The PIRMP is applicable to all project activities during the construction phase and describes how the construction project team proposes to manage and control potential hazards associated with the project.

The PIRMP documents the risk assessment process implemented at the project and the activities that create pollution risks. All risks and any subsequent pollution incidents would be managed through the implementation of this plan. The PIRMP also details the pre-emptive actions that shall be implemented on the project. These include:

- Specific measures implemented to minimise the risk of an incident occurring due to spillage, storage of hazardous materials or fire
- Inventory of potential pollutants on site
- Minimum safety equipment requirements
- Communication with the community
- Minimising harm to persons
- Training of personnel
- Testing of the PIRMP.

The PIRMP details the procedures to be used in the event of a pollution incident including notification requirements. The PIRMP links to the existing safety, environmental and emergency systems and documentation already prepared for the project. The existing approved Emergency Response Plan provides the framework of responsibility and implementation for the Project covering both the implementation of that plan and this plan for emergencies should they occur.

3 Description and likelihood of hazards

3.1 Project hazard and risk assessment

Overall hazards and risks for the project are determined through the Risk/Opportunities Management System and reflected in the Project Risk Management Plan. Work Health and Safety (WH&S) considerations are managed with via the project Safety & Health Management Plan.

3.1.1 Hazard and risk assessment procedure

On a work task level, individual risks are managed through Work Packs and associated work method statements. This procedure identifies hazards associated with a work task and develops solutions for each hazard that either eliminates or controls such hazards. The risk assessment process uses the following 3 steps

- Step 1. Consequence criteria is used to determine the most credible consequence rating of the risk identified
- Step 2. Likelihood criteria is used to determine the likelihood of that consequence occurring in the circumstances
- Step 3. From these above two steps, determine the risk level using the matrix.

3.1.2 Evaluation criteria

Qualitative measures are used to estimate the consequence or impact of an event, along with the estimate of likelihood, to produce consistent risk rankings across the identified risks. These values are shown in Figure 3-1 and Figure 3-2.

Step 1 - What is the Most Credible Consequence?

Consequence Rating	1 Negligible	2 Minor	3 Moderate	4 Major	5 Substantial
Safety and Health	First Aid Treatment (or No treatment)	Medical Treatment Injury	Lost Time Injury	Permanent Injury (Paraplegia, Amputation)	Fatality (Single or multiple)
Environment and Heritage	Small, contained localised impact / Low level repairable damage	Short lived, well contained environmental impact / Minor remedial action required	Medium term, contained impact / Significant remedial action required	Impacts extend off-site / external ecosystem. Considerable remediation required	Lonr Term irreversible damage / Long Term Remediation required
Plant Damage	Little or No Damage	Damage less than $15,000	Damage between $15,000 and $50,000	Damage between $50,000 and $100, 000	Damage greater than $100, 000
Reputation	Brief local negative media coverage.	Local negative media coverage. Site or project problem.	Regional/short negative media coverage. Loss of Client / project.	Sustained national negative media coverage. Loss of long term key client.	International negative media coverage. Loss of business from key sector.
Time	Delay / Business interruption <1% of program days	Delay / Business interruption between 1%-3% of program days	Delay / Business interruption between 4%-6% of program days	Delay / Business interruption between 7%-10% of program days	Delay / Business interruption >10% of program days
Cost	Additional cost to the business / project <1% revenue	Additional cost to the business / project between 1%-3% revenue	Additional cost to the business / project between 4%-6% of revenue	Additional cost to the business / project between 7%-10% of revenue	Additional cost to the business / project >10% of revenue

Figure 3-1 Consequence criteria

Step 2 - What is the likelihood of that Consequence occurring in the circumstances?

Likelihood Ranking				
Score	Description		Percentage	Expected Frequency
5	Almost Certain	Common / Frequent Occurrence	Can be expected to occur 75% - 99%	More than 1 event per month
4	Likely	Is known to occur or "It has happened regularly"	Can quite commonly occur 50% - 75%	More than 1 event per year
3	Possible	Could occur or "I've heard of it happening"	May occasionally occur 25% - 50%	1 event per 1 to 10 years
2	Unlikely	Not likely to occur very often	May infrequently occur 10% - 25%	1 event per 10 to 100 years
1	Rare	Conceivable but only in exceptional circumstances	May occur in exceptional circumstances 0% – 10%	Less than 1 event per 100 years

Figure 3-2: Likelihood criteria

3.1.3 Risk rating

A Risk Rating Table (Figure 3-3) is used to evaluate the severity of the risk for each environmental aspect. As shown, the matrix axes are those of likelihood and consequence using the measures given above. A scale of consequences from 1 to 5 is used to indicate increasing severity. The consequences are potential outcomes as a result of a hazard occurring. The severity of the risk determines the level of management action required as detailed in Figure 3-1 and Figure 3-2.

Step 3 – Determine the Risk Level

Determine the risk score by combining most credilble consequence with likelihood

Likelihood	Consequence	Negligible	Minor	Moderate	Major	Substantial
	Rating	1	2	3	4	5
Almost Certain	5	5 (Low)	10 (Moderate)	18 (Very High)	23 (Extreme)	25 (Extreme)
Likely	4	4 (Low)	9 (Moderate)	17 (Very High)	20 (Very High)	24 (Extreme)
Possible	3	3 (Low)	8 (Moderate)	13 (High)	19 (Very High)	22 (Very High)
Unlikely	2	2 (Low)	7 (Low)	12 (High)	15 (High)	21 (Very High)
Rare	1	1 (Low)	6 (Low)	11 (Moderate)	14 (High)	16 (High)

Figure 3-3: Risk level matrix

Table 3-1 Risk severity

Risk Severity	Management Required
Extreme	Approval to work cannot be given. A work method that has a lesser residual risk must be used.
Very High	Immediate management action required. EWMS approved by the BU Environmental Manager. Supervision must be present whilst the activity is being undertaken.
High	Priority management action warranted. An EWMS or SEP must be approved by ESR. Daily inspection by Supervisor completed.
Moderate	Management action warranted.
Low	Management action should be considered, particularly for low-level impacts that nevertheless occur on a continual basis.

The hazards and risk assessment uses Table 3-1 to consider the potential consequences, probability and risk of several hazards and allows management of specific risks to be prioritised. The risk rankings were developed further by taking control and mitigation measures into consideration and providing a subsequent risk ranking based on the implementation of these measures.

The results of the initial hazards and risk assessment and the proposed management controls to negate or minimise risks are presented in Appendix A and Appendix A2 of the CEMP, as well as being discussed in more detail in the relevant sub-plans.

4 Pre-emptive actions to be taken

4.1 Preparedness

The key to effective prevention of incidents is risk assessment, procedure development, monitoring and training. During construction activities, the project's inspections and preventive actions include:

- Activity specific and daily risk assessments
- Development of work procedures and construction method statements in consultation with relevant staff such as work teams, environment team members and senior management
- Daily inspections of active work sites
- Completion of routine environmental checklists
- Issue and quick close-out of non-compliance notices
- Ongoing environmental training
- Environmental management audits of work sites, subcontractors and compliance issues
- Community notification and construction updates
- Environmental Work Method Statements (EWMS)
- Work Packs provide the structure for documenting major areas of the work including risk and quality and align design and constructability early in the process. The Work Packs draw together and/or reference other related documentation (including JSEAs) to demonstrate to all stakeholders that all relevant issues have been considered in planning the works.

Activities associated with potential or major environmental incidents are identified within management plans, such as the Soil and Water Management Plan. Incident management procedures are included in Section 5.2.

In addition, the following specific measures (Table 4-1) are to be implemented to minimise the risk of an incident occurring.

Table 4-1: Controls measures

Category	Hazard	Controls
Spills and leaks (chemical, fuel, hazardous liquids)	• Refuelling • Transport of chemicals, fuel and hazardous liquids • Handling, storage and disposal of chemical, fuel and hazardous materials • Plant and equipment maintenance • Site establishment - site compounds, access points and access routes • Adjustments of existing public utilities • Vehicle wash down • Concreting activities • Watercart operations • Dismantling of existing structures • Concreting activities • Site revegetation • Operation of site compound.	• Plan and implement works to minimise the possibility of pollution • Use and store chemicals and dangerous goods strictly in accordance with relevant legislation, manufacturer instructions and the SDS • Establish transport, handling, storage and application methods (with the relevant method statement) to prevent chemical, fuel and lubricant spillage on or around the site • Keep adequate quantities of emergency response materials, such as oil spill kits, absorbent materials, sand bags, flocculating agents and pH buffer solutions, readily available and in designated compounds. Also keep oil-spill kits in emergency response, Superintendents' and the Environmental Site Representative's vehicles and vehicles that carry substantial quantities of chemicals • Provide temporary bunding for refuelling or maintenance of plant and equipment, mixing cutting oil with bitumen or any other activity that could result in spilling a chemical, fuel or lubricant (where the activity occurs in a location with direct drainage to a waterway or environmentally sensitive area). Refer to the Refuelling Protocol • Ensure chemical drums removed from bunded areas are not left unattended • The major response to spills and leaks will involve containing the offending material • Where safe to do so, install containment measures such as sandbags, booms, earth bunds or cut drains to capture and retain spilled material and prevent it from leaving site, entering any watercourse or impacting on vegetation stands.
Storage of liquids (chemicals, fuel, hazardous materials)	• Site establishment - site compounds, workshop, stores, access points and access routes • Transport of chemicals, fuel and hazardous materials • Dismantling of existing structures • Dewatering • Sediment basin management • Removal, stockpiling and respreading of soil • Operation of site compound • Removal, stockpiling and respreading of soil • Contaminated soils, Acid sulphate soils, contaminated materials.	• Bund and cover all liquid storage areas – ensure 120% of liquids stored can be captured within the bund • Ensure that storage areas are not within 20 m of a drainage line, flood-prone areas or on slopes steeper than 1:10 or near vegetated areas • Monitor and drain water captured in the bunded storage area (as required) after each rain event to ensure bund capacity is maintained at all times • Arrange appropriate treatment or removal if the water is not suitable for discharge. Any water discharged from site must be prior approved through the Permit to Dewater system. Contact Environment Staff for Permit • Ensure records are kept of water quality checks, discharges and any remedial actions taken.
Bushfire	• Vegetation clearing • Handling, storage and disposal of hazardous materials	• Firefighting equipment will be available on site to facilitate an immediate response to a fire incident and help ensure the safety of public and property

Category	Hazard	Controls
	• Dismantling of existing structures • Construction activities involving hot works (open flame equipment) • Adjustments of existing public utilities.	• Fit spark arrestors to plant that could discharge sparks while being used during proclaimed high fire danger periods • No cutting, welding, grinding and other activities with the potential to generate sparks will take place in the open on total fire ban days • In areas of high risk, fire mats will be placed under areas being used for welding • Provide personnel involved in work where there is a risk of fire being caused by hot work, such as welding or in burning-off operations, with adequate training about fire prevention, safety and basic firefighting skills • Equip personnel and vehicles involved in such activities with firefighting and safety gear.
Flood	• Working in or around flood prone areas.	• Ensure plant and equipment is stored above flood level • Monitor weather conditions • Plan and implement works to minimise the possibility of pollution • Flood mitigation equipment will be available on site to facilitate an immediate response to a flood incident and help ensure the safety of public and property • Equip personnel and vehicles involved in such activities with flood mitigation equipment and safety gear.
Construction Occupational Health & Safety	• Transport • Survey work • Plant and equipment • Noise impacts • Identified and unidentified utilities • Worker safety • Hazardous materials • Manual handling • Electrical hazards • Blasting • Confined spaces • Plant rollover.	• Ensure site safety procedures are implemented. • Note: WHS risks are only covered in a broad sense in this plan but are covered comprehensively through the Safety & Health Management Plan and JSEA processes.

4.2 Communicating with neighbours and local community

Information prepared for distribution to the community will be tailored to the needs of the target group and approved by Transport for New South Wales (TfNSW) before release. It may address progress, traffic disruptions and controls, temporary detours, work outside normal hours and will be provided as:

- A community notice
- Advertisements (e.g. progress updates, road closures, disruption to traffic)
- Newsletters
- Brochures
- Internet updates
- Noticeboard information
- Door-knocking
- In a display / information area.

Key community groups along the project include:

- Rural landholders and managers
- Interest groups (environmental and commercial)
- Adjacent residential communities.

In the event of a pollution incident, affected community members will be notified of any measures they can undertake to minimise the risk of harm. This will be carried out by emergency services or project personnel as relevant. Measures to minimise harm may include but is not limited to the following:

- Shutting windows and doors
- Remaining inside
- Avoiding the use of water in creeks
- Evacuate if instructed by emergency services.

4.3 Minimising harm to persons on the premises

In the event of an emergency that is likely to cause harm to persons, the Emergency Response Management Plan shall be followed. The PIRMP will support this plan in the event that the incident also results in Risks to the environment.

4.4 Safety equipment

The project WHS Manager and Environmental Site Representative (ESR) shall ensure that emergency equipment is available at each site, and appropriately located and maintained in good working order.

A summary of the safety equipment to be kept on site and the location of storage on the premises is provided in

Table 4-2: Safety Equipment and location to be stored on-site

Safety Equipment	Storage Location
General purpose fire extinguishers and fire extinguishers suitable for control of electrical/oil/fuel/chemical fires	Site compounds – e.g. AF2 Elizabeth Drive and other compounds as they are developed At active work locations and designated vehicles
Plant and clean–up equipment	Throughout the site

Safety Equipment	Storage Location
Spill kits	Site compounds and designated vehicles Plant refuelling areas Onsite when performing high risk activities Marine (hydrophobic) spill kits and floating booms at creek lines
Bunding, twin-skinned storage containers, spill pallets and related chemical storage equipment	Site compounds, designated vehicles and hardstand areas
Erosion and sediment control supplies and equipment such as, geotextile, gravel socks, silt fence, etc.	Site compounds
First aid kits	Site compounds In site vehicles and plant
Personal Protective Equipment (PPE)	All personnel will be responsible for storage of their PPE. Additional PPE will be stored at the site compounds for short term use (visitors etc.)

Specialised equipment available for an emergency response will be maintained in a 'fit for purpose' state. Other equipment available for incident response needs to be identified at each site, for example, specific construction vehicles and other equipment types available on site. On call equipment will be obtained through hire companies.

The WHS Manager, in consultation with the ESR, shall maintain a list of safety and environmental emergency response equipment held in the project store, ensure the ongoing availability of an adequate stock of consumable equipment and ensure all emergency equipment is being inspected, tested and maintained as necessary.

4.5 Inventory of pollutants

The primary dangerous goods and chemicals (including fuels) that may be used and stored onsite are shown in Table 4-3. Potential pollutants will be stored in a bunded area, double skinned containers or other suitable areas when not in use within the site compound areas. Safety equipment and Safety Data Sheets (SDS) will be located at suitable locations within the site compound areas.

Prior to arrival on site all dangerous goods are to be included on the dangerous goods register maintained by the Health and Safety Manager, and the required SDS obtained via 'ChemAlert.' Checks of dangerous goods storage areas will be undertaken and recorded as part of the regular site inspections to confirm that materials and associated quantities stored on site are consistent with the active register.

Table 4-3: Dangerous Goods stored on-site

Pollutant	Potential maximum quantity to be stored
Accent Ceiling White paint	100 litres
Accent Interior Low Sheen	100 litres
AD blue	20 litres
Bitac Primer	40 litres
Bostik Plumbtec PVC Priming Fluid	5 litres
Bostik PVC Pipe Cement N Blue	5 litres
Bostik PVC Pipe Cement N Clear	5 litres
Bostik PVC Pipe Cement P Clear	5 litres
Bostik PVC Pipe Cement P Green	5 litres
Bostik PVC Priming Fluid - Red & Clear	5 litres

Pollutant	Potential maximum quantity to be stored
BP Kerosene	60 litres
Concure A99	4000 litres
Cummins PGXL Coolant	10 litres
Diesel	600 litres
Dy- Mark Spray Blue	28 cans
Dy - Mark Spray Ink	100 spray cans
Dy- Mark Spray Orange	40 cans
Dy- Mark Spray Pink	48 cans
Dy- Mark Spray Yellow	10 cans
Expanding filler foam	10 litres
Garden 2T 2 Stroke oil	5 litres
Hilti R.E Hit 500 Epoxy	20 litres
Intercrete 4841 Part A & B	10 litres
Liquid Petroleum Gas (LPG) bottles	6 bottles
Megapoxy P1 Part B	100 litres
Multi-Purpose Grease	10 litres
Petrol	500 litres
Protex (R)	25 litres
Protex Bond Seal	1 litre
Protex PVC Cement	25 litres
PVC Cement N type	5 litres
Render Refresh Low Sheen	60 litres
Rendero C	100 litres
Road marking paint	50 litres
Roof silicone	300 grams
Sika Aqua Primer	20 litres
Solar guard low sheen	5 litres
Thinning cleaning solvent	20 litres
Truck wash	20 litres
Turpentine	5 litres
Turbiclear	33000 litres
Two stroke oil	5 litres
Vinidex Primer Red	20 litres
Vital Bon-Matt HR or Stonewall	7000 litres
Weather Shield	10 litres
Weston oil	500 grams
White road making paint	50 litres

The associated work tasks for each potential pollutant are outlined in Table 4-4 below

Table 4-4: Pollutants and associated work tasks

Pollutant	Location	Controls
Dangerous Goods	Dangerous Goods Register includes location and indication of quantities stored on the site	• The register is maintained by the WHS Manager and will be made available to emergency services as required • Safety data sheets are available in first aid rooms • Hazardous and dangerous substances (including all fuels, oils, lubricants and chemicals) brought onto the worksite are only to be

Pollutant	Location	Controls
		handled or stored within designated bunded areas to ensure retention of any spills or leaks • Storage and bunding for areas for hazardous liquids is to conform with AS1940 – Storage and Handling of Flammable Liquids and AS/NZS 4452 • Storage and Handling of Toxic Substances. Storage of hazardous solids is in accordance with the SDS and where practicable is to be undercover within bunded areas.
Waste handling and storage	Waste required to be handled and stored on site prior to on-site reuse or off-site reuse / disposal	• Spoil, topsoil and mulch are to be stockpiled on site in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented as per the Air Quality Management Sub-Plan and the Soil & Water Management Sub-Plan • Liquid wastes are to be stored in appropriate containers in bunded areas until transported off site. Bunded areas will have the capacity to hold 110% of the liquid waste volume for bulk storage or 120% 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 Environmentally *Hazardous Chemicals Act 1985* 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 on site and contractors commissioned to regularly remove / empty the bins to approved disposal or recycling.
Erosion and sediment	Approved sediment basins and discharge locations (see EPL)	• Erosion and sediment shall be managed in accordance with the Soil and Water Management Sub-Plan (SWMP). This includes the following: – Maximise the diversion of storm water runoff containing suspended solids to sediment basins – Maximise the reuse of captured storm water – Meet project water quality standards prior to release: ▪ pH between 6.5-8.5 ▪ Turbidity below 50NTU ▪ no visible grease or oil – Obtain an approved water discharge permit prior to release – Floats and other devices including hard (fail safe) controls used at the pump inlet – Basin must be discharged within five days of the cessation of rainfall • All basins are designed to meet the 85th percentile (five day) rainfall depth (mm) average value this equates to 35mm (Penrith 85th percentile) for five day rainfall event, after which over-topping may occur • All basins shall be treated to project water quality standards prior to active discharge from site by project personnel.
Air quality	Earthworks, temporary haul roads, batch plants	• All air quality shall be managed in accordance with the Air Quality Management Sub-Plan (AQMSP) • Precautions to minimise the generation of dust will include: – Spraying of earthworks, roads and other surfaces as necessary with water or other suitable liquids – Providing dust suppression equipment to any on-site materials batching plant – Sealing of temporary haul roads – Applying dust block or similar material to exposed surfaces to suppress possible generation of dust during periods of high winds – Compacting exposed surfaces in the event of high winds

Pollutant	Location	Controls
		– Modification of operations during high or unfavourable wind conditions.

4.6 Contact details

Table 4-5 Contact Details

Organisation	Name	Number/s	Other Details
CPBGG JV Project Director	[redacted]	[redacted]	
CPBGG JV Environmental Site Representative	[redacted]	[redacted]	
CPBGG JV Construction Manager	[redacted]	[redacted]	
CPBGG JV Safety Manager	[redacted]	[redacted]	
CPBGG JV General Superintendent	[redacted]	[redacted]	
Community Relations Manager	[redacted]	[redacted]	
24 hour Emergency Contact	[redacted]	[redacted]	Project Director
	[redacted]	[redacted]	Environmental Site Representative
TfNSW Project Manager	[redacted]	[redacted]	
TfNSW Senior Manager Environment and Sustainability	[redacted]	[redacted]	Notify for all incidents
TfNSW Environment and Sustainability Manager	[redacted]	[redacted]	Notify for all incidents
Independent Environmental Representative	[redacted]	[redacted]	Notify for all incidents
NSW Police		000	
NSW Fire Brigade		000	
NSW Ambulance Service		000	
NSW Fire and Rescue		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
Nepean Hospital		02 4734 2000	
Rural Fire Services		000	

Organisation	Name	Number/s	Other Details
SES		132 500	
Poisons Information		13 11 26	
EPA Pollution Line		13 15 55	Notify in the event of 'material harm'
Bushfire Information Line		1800 679 737	
NSW DPI (Fisheries)		1300 550 474	Notify in the event of 'material harm'
WIRES		1300 094 737	
Safe Work NSW		13 10 50	Notify in the event of 'material harm'
NSW Public Health Unit		02 4734 2000	Notify in the event of 'material harm'
Penrith City Council	[redacted]	[redacted]	Notify in the event of 'material harm'
Liverpool City Council	[redacted]	[redacted]	Notify in the event of 'material harm'
Sydney Water		13 20 92	Notify in the event of any incidents involving Sydney Water assets
Water NSW		1300 662 077	Notify in the event of 'material harm'

4.7 Training of emergency response personnel

The Project Director, in consultation with the WHS Manager and relevant Zone Manager, will determine the specific competencies required to respond to an emergency situation on each site and the training required to achieve the level of expertise required. An example of the kinds of environmental incident response competencies (training requirements) required of key personnel is provided at Table 4-6.

Training will be provided to:

- Provide (or refresh) specific skills such as emergency response drills, evacuations, fire wardens, first aid, etc.
- Enable the proficient use of specialised equipment
- Ensure detailed familiarity with the provisions of this plan and supporting procedures
- Ensure learnings from mock evacuation and other emergency management exercises are communicated
- Ensure knowledge of legislative and statutory requirements.

All project personnel and subcontractors will also receive some training to ensure that they are fully aware of their roles and responsibilities in the event of an emergency situation arising. This training will generally be provided through:

- Site Inductions:
  - Provided to all employees and subcontractors prior to commencement on site
  - Content includes basic emergency procedures and incident reporting.
- Toolbox Meetings:
  - Mainly covers safety issues but can be used as refresher training on response procedures, dealing with the public, locations and use of response equipment.

Specific training will also be provided to Emergency Response Teams to ensure their roles and responsibilities in relation to construction site significant incidents / emergencies are understood and they are fully trained in responding to construction site emergencies.

Table 4-6: Example of environmental incident response competencies

Position	Training Requirement				
	Incident Response	Storage and Handling of Chemicals	Oil Spill Clean Up	Concrete Washdown Management	Dealing with Media
Project Director	X				X
WHS Manager	X	X	X		
Construction Manager	X				
Environmental Site Representative	X	X	X	X	
Emergency Response Teams	X	X	X	X	
WHS Coordinator	X	X	X		
Environmental Coordinator	X	X	X	X	
Project Managers	X	X	X	X	

4.8 Testing plans

Environmental response procedures may be tested in areas where a pollution risk is present, such as in workshops. Personnel involved in emergency response activities will be provided with specific training.

An up-to-date list of emergency response personnel and organisations will be maintained at the main office and compounds. An example of the format that will be used is in Section 4.6. Testing of the plan every 12 months, with the first test to occur within 6 months of contract award, to ensure that information in the plan is accurate and capable of being implemented effectively. The plan will be tested within one month of any pollution incident. The project will maintain all PRIMP implementation and testing records.

Possible testing scenarios may include but are not limited to the following:

- Plant roll over near waterway
- Flood response
- Small spill response.

5 Emergency procedures

Clause 4.3 of TfNSW QA Specification G36 requires the development of an Emergency Spill Response Sub-Plan (ESRP). The information to be included in the ESRP has been embedded into this PIRMP for ease of implementation. This stage-specific ESRP has been prepared in accordance with the Code of Practice for Water Management (RTA, 1999) and relevant EPA guidelines. The Plan will:

- detail measures to avoid spillage of fuels, chemicals and liquids, particularly near and/or into waterways,
- detail prompt spill containment and clean-up procedures if any spills occur on land, in surface drains and/or waterways,
- detail onsite locations of emergency wet and dry spill equipment/kits,
- detail procedures for recording and notifying TfNSW of all spills,
- provide a clear outline of when the ESRP will be implemented and who will be responsible for its implementation.

CPBGG JV will ensure emergency spill kits and response material are available onsite at all times during Construction. Spill kits will be located at all ancillary facilities and main construction work areas. All site personnel (including sub-contractors) will be made aware of the location of spill kits and trained in its use. The Emergency Spill Response Plan will be implemented in conjunction with PIRMP and the TfNSW Environmental Incident Classification and Reporting Procedure (Appendix A7 of the CEMP).

The emergency spill response process flow chart (Refer to Figure 5-1) provides an overview of the process to be undertaken to minimise the risk of offsite discharge of pollution from chemicals, dangerous goods or other potential contaminants. Further details are also provided in the sections below.

The unplanned release of liquid chemicals, dangerous goods and other potential contaminants during storage and handling has the potential to pollute surface water, stormwater and groundwater and for contaminating soil. The following sub-sections identify environmental management practices to eliminate, prevent or minimise the risk of discharging pollutants to soil, surface water, stormwater and groundwater.

The procedure for spill management is detailed below in Figure 5-1.

5.1 Locating storage containers / bunds

Chemicals, fuel and lubricants will be stored in suitably located, clearly marked Class 3 dangerous goods storage containers to minimise the impact of any spillage or contamination on the work location or adjoining areas. Class 3 containers are equipped with an internal door release, ventilation, bunded floor and a lockable stainless-steel valve in the bund wall. Chemicals, fuel or lubricants will not be stored within 50 metres of any aquatic habitat, flood prone areas or on steep slopes.

The type and volume of chemicals, fuel and lubricants to be stored do not justify the construction of bunded areas for material storage, however, should a bunded area need to be constructed, it must comply with the requirements of:

- Australian Standard AS 1940B 1993: The Storage and Handling of Flammable and Combustible Liquids,
- Australian Standard AS 4452B 1997: The Storage and Handling of Toxic Substances; and the
- *Dangerous Goods Act 1975*,

The containment system to be adopted should be compatible with the material being stored and provide an impervious barrier to prevent spills from discharging outside the containment system.

The net capacity of a bunded area must be at least 120% of the net capacity of the largest container.

All surface water flows should be diverted around or away from storage areas.

5.2 Maintaining storage containers / bund areas

To minimise the potential for spills to occur, the following measures should be implemented by the Foreman responsible for the storage area:

- all storage areas should be secured against unauthorised entry,

- chemicals in storage should be properly labelled and have Safety Data Sheets (SDS) readily available in the work area,
- where possible, all storage areas should be roofed. If this is not possible, any stormwater entering such areas should be observed for contamination before appropriate discharge,
- the drain valve remains in the fully closed position at all times when not in use and can only be opened by the responsible person,
- all containers within a storage area should be sealed,
- the "open" or "closed" positions on the drain valve must be clearly visible and locked when not in use,
- the bund is under close supervision and local water quality will be visually monitored (turbidity, hydrocarbon spills/slicks) on a regular basis to identify potential spills or sediment-laden runoff,
- the drains valve is routinely maintained to ensure it operates as designed,
- the dangerous goods container / bund wall is routinely inspected to ensure it is always impervious to liquids,
- any pipework, valves and other equipment are routinely inspected,
- spillages of solid or liquid material within the dangerous goods container / bunded area is to be cleaned up immediately (Section 5.7); and
- after rainfall, all bunds (if present onsite) are emptied as soon as possible to maintain full capacity. Never allow rainwater to build up to a level where leaking dangerous goods can float over the top of the bund.

5.3 Handling materials

To minimise the potential for spills to occur while handling and transferring materials, the following measures should be implemented:

- personnel trained in preventing the risk of spills or leaks should be present during handling or transferring liquid chemicals, dangerous goods and other potential contaminants,
- handling areas and transfer points should be well separated from boundaries and protected places such as residences, public areas, hospitals and schools,
- all surface water flows should be diverted around or away from chemical handling areas,
- all vehicles should be inspected for leaks before and after loading and unloading liquid chemicals, dangerous goods and other potential contaminants,
- hoses, couplings and other equipment should be regularly inspected for failures or leaks,
- transfer points outside a handling area should be provided with suitable spill kits and containment,
- all connections used during the transfer of liquid chemicals, dangerous goods and other potential contaminants between vehicles and storage tanks should have tight fittings,
- all transfer hoses should be protected from vehicles driving over the hose or striking its connection,
- all nozzles and valves used during the transfer of liquid between tankers and storage tanks should be fitted with shut-off valves to prevent overflow,
- transfer pumps should be provided with emergency shut-down devices,
- hoses should be purged before uncoupling,
- overfill protection devices should be regularly inspected, and
- stormwater from handling areas should be tested before discharge to minimise discharge of pollutants.

5.4 Spill Kits

Spill kits are to be located at hazardous materials storage locations, in site compounds and in CPB light vehicles. Typical spill kit materials, their application and use are described in Table 5-1

Table 5-1: Typical spill kit materials and their application

Material	Application
Booms	Floating booms to be used for spills in waterways to prevent spreading. Deploy booms first to contain spill or divert spill away from waterway. Reduce the size of the spill by gently pushing the booms towards the centre of the spill.
Pillows	Lay down pads or pillows are best for thickly spread liquids.
Granules / Particulates	If the booms alone cannot absorb the spill/leak, then use absorbent granules to soak up spilled liquid.
Pads	If the booms alone cannot absorb the spill/leak, then use absorbent granules to soak up spilled liquid.
Sorbents	Sorbents are materials that soak up the spill and are used in waterway spills where spill material will float on the water. Once the absorbent material has been applied to the spill material, the mixture is recovered with the aid of nets, rakes, forks or pike poles.

5.5 Assessment of spill / situation

The assessment of potential spills will be completed via the following process:

- stop all work in the affected area,
- ensure the safety of all workers, visitors and the public in the vicinity of the spill / leak,
- conduct a short assessment of the affected area and notify the Environmental Site Representative (ESR) and / or Supervisor of the results of this assessment,
- the assessment should include:
  - quantity of the substance spilt,
  - type of substance (i.e. corrosive, poisonous, flammable etc),
  - location, and potential impact on the environment, and the health and safety of personnel
  - whether the spill is manageable by Project Staff of if emergency services needs to be contacted, and
  - the best method of clean up (only after referring to the substance's SDS),
- refer to the container label or SDS for detailed information on the substance spilled and to determine the appropriate Personnel Protective Equipment (PPE) and clean up / storage and disposal requirements,
- where the spill is not manageable and presents an immediate danger to people, property or the environment, the following needs to be determined:
  - whether sufficient spill control equipment and materials, and personal protective equipment exist onsite to deal with the spillage,
  - whether attempts to deal with the spill onsite would pose any risk to personnel safety,
  - whether the site's Waste Management Contractor should be contacted for clean-up, removal and safe disposal of the substance,
- where it is determined that the spill cannot be managed by the resources onsite, efforts shall be made (only where safe to do so) to protect stormwater drains and sensitive areas. The ESR or Project Manager will notify the NSW Fire Brigade (Phone 000) and other relevant organisations in accordance with Section 5 of this PIRMP.

5.6 Spill Management

5.6.1 Personal Protective Equipment

Prior to any clean-up, appropriate PPE is to be worn as per the SDS. No clean-up should occur without the correct PPE.

5.6.2 Control the Source

If there is a possibility that the spill / leak will either contaminate a greater area or move offsite, protect drains, channels or any other pathways that would lead to further spread or release offsite.

Geo-fabric, absorbent materials, booms and sandbags should be placed around drains and grates, as required, to prevent the material spreading or leaving the site.

Stop the spill/leak from spreading by:

- putting the lid on,
- turning container up right,
- turning off machinery,
- plugging the hole if possible,
- using absorbent materials from spill kit (i.e. booms, pads, pillows, granules, etc),
- digging a hole to collect the spill,
- using sand bagging or silt sausages,
- making use of any handy physical barrier; and
- Pacing booms around the outside edges of spilled liquid, overlapping them to prevent leakage, and ensuring there are no gaps between the boom and the affected surface.

5.6.3 Protect drains and other pathways for contaminant escape

In order to minimise risk of offsite spread and/or discharge the following steps will be undertaken:

- stop the spill / leak from spreading by using:
- absorbent materials from the spill kit (i.e. booms, pads, pillows, granules etc),
- sand bagging, spoil or impermeable material; and
- any handy physical barrier.
- place booms downslope and around outside edges of spilled / leaked substance. Ensure booms are overlapped to prevent leakage,
- ensure there are no gaps between the boom and the affected surface.

5.7 Spill clean up

Clean-up measures will be undertaken as required and may include any combination of the following, depending on spill type and location:

- if required, deploy booms to contain and soak up spill,
- utilise pads or pillows to soak up spill,
- utilise granular sweep (remedial if possible) and work into spill. Use sufficient sweep to adequately absorb all spilt liquid,
- the ESR is to consider if onsite remediation of the spill can be effectively completed (i.e. bio-remedial treatment),
- if, in the ESRs opinion, the spill cannot be dealt with using the onsite remediation, the contaminated soils and spill response products are to be collected up in bags or bins and disposed of at a waste facility appropriately licensed and approved to accept such waste

5.7.1 Replace spill kit components

The ESR is to arrange replacement of the used components as soon as possible considering the risk of future spills and their resultant impacts at that location.

5.8 Disposal of contaminated material

Spilled waste and materials used to control the spill must be stored temporarily in an impermeable and covered container while being classified in accordance with the Waste Classification Guidelines (EPA, 2014). The waste classification will determine how the waste must be disposed of.

It is important to note that it is an offense:

- under section 120 of the *Protection of the Environment Operations Act 1997* (POEO Act) to pollute waters,
- under Part 5.6 of the POEO Act to unlawfully transport waste or to permit land to be used unlawfully as a waste facility.

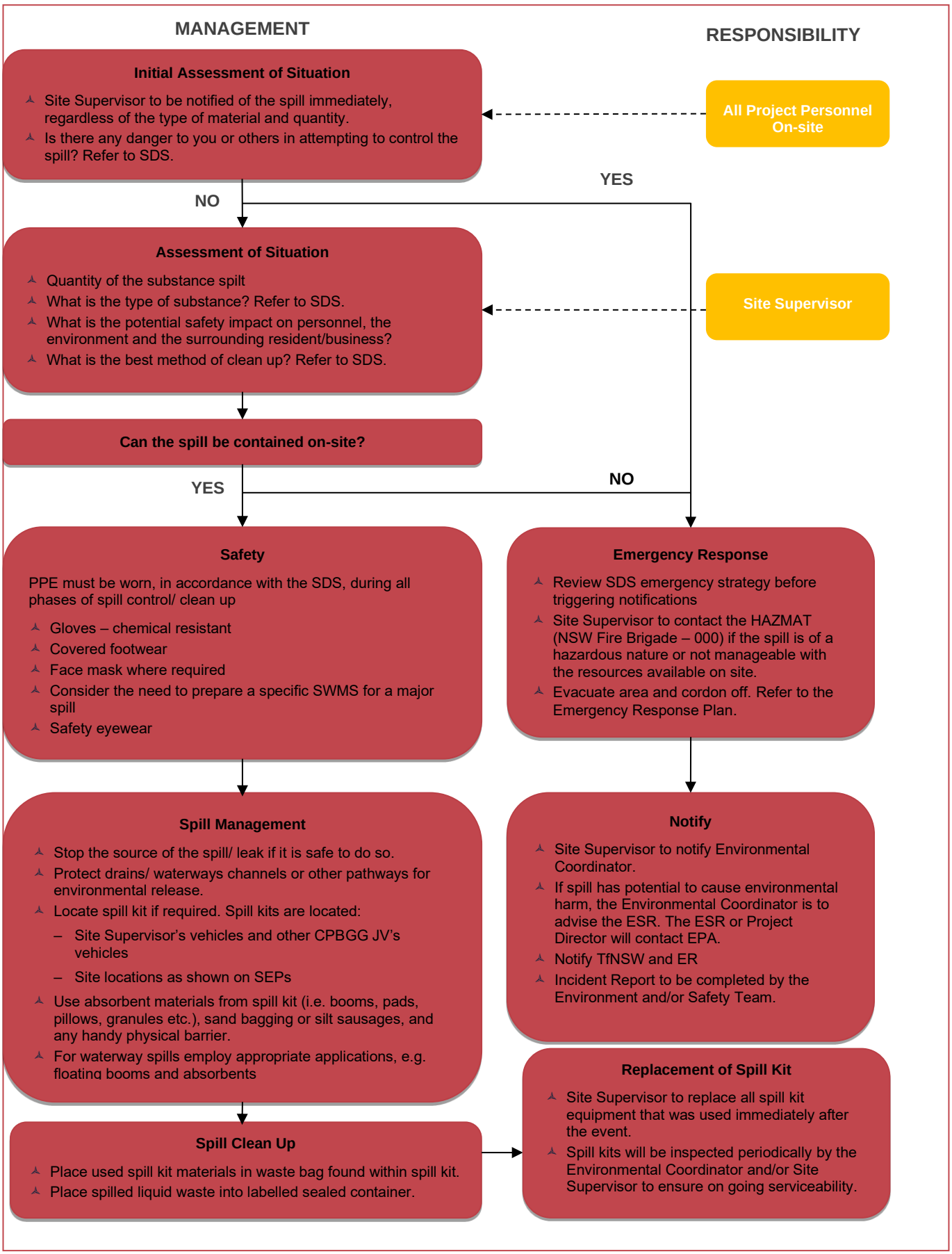


Figure 5-1: Emergency spill response procedure

5.9 Pollution Incident Notification

The definition of a pollution incident is:

A pollution incident is an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.

The ESR will notify the EPA Regional Manager (and/or EPA Pollution Line on 131 555) immediately (i.e. promptly and without delay) of pollution incidents which have occurred during the project's activities, in the following circumstances (i.e. incident which cause or threaten material harm):

- If the actual or potential harm to the health or safety of human beings or ecosystems is not minor
- If actual or potential loss or property damage (including clean-up costs) associated with a pollution incident exceeds $10,000.

Pollution incidents that could constitute material harm include:

- Sediment basin discharge that does not meet project water quality standards
- Sediment laden water going off-site
- Chemical spill into a waterway for example:
  - Curing compounds
  - Fuels and oils
  - Batch plant overflow
  - Bitumen
  - Concrete
- Dust plume from batching plant
- Sewerage leak
- Fire.

Furthermore, the following parties shall also be notified;

1. Ministry of Health (via the local Public Health Unit (PHU)) (P: 02 4734 2000)
2. WorkCover - 13 10 50
3. Local Councils
4. Fire and Rescue NSW - 1300 729 579

The TfNSW representative will be notified verbally within two hours and in writing within 24 hours of any pollution incidents involving the EPA.

All incidents shall be notified to the ESR and TfNSW (i.e. Environment and Sustainability Manager) via the Alliance incident reporting system (e.g. Synergy reporting system) in accordance with TfNSW Incident Management and Reporting Procedure and CPBGG JV HSE system (Synergy). All incidents shall be recorded within the project's Monthly Environment Report.

Notification to the community will be conducted using methods outlined in Section 4.5.

5.10 Pollution incident response procedures

In the event of a pollution incident follow emergency response and notification procedures show in Figure 5-2 and Figure 5-3 respectively. A pollution incident notification form will be included in Appendix G.

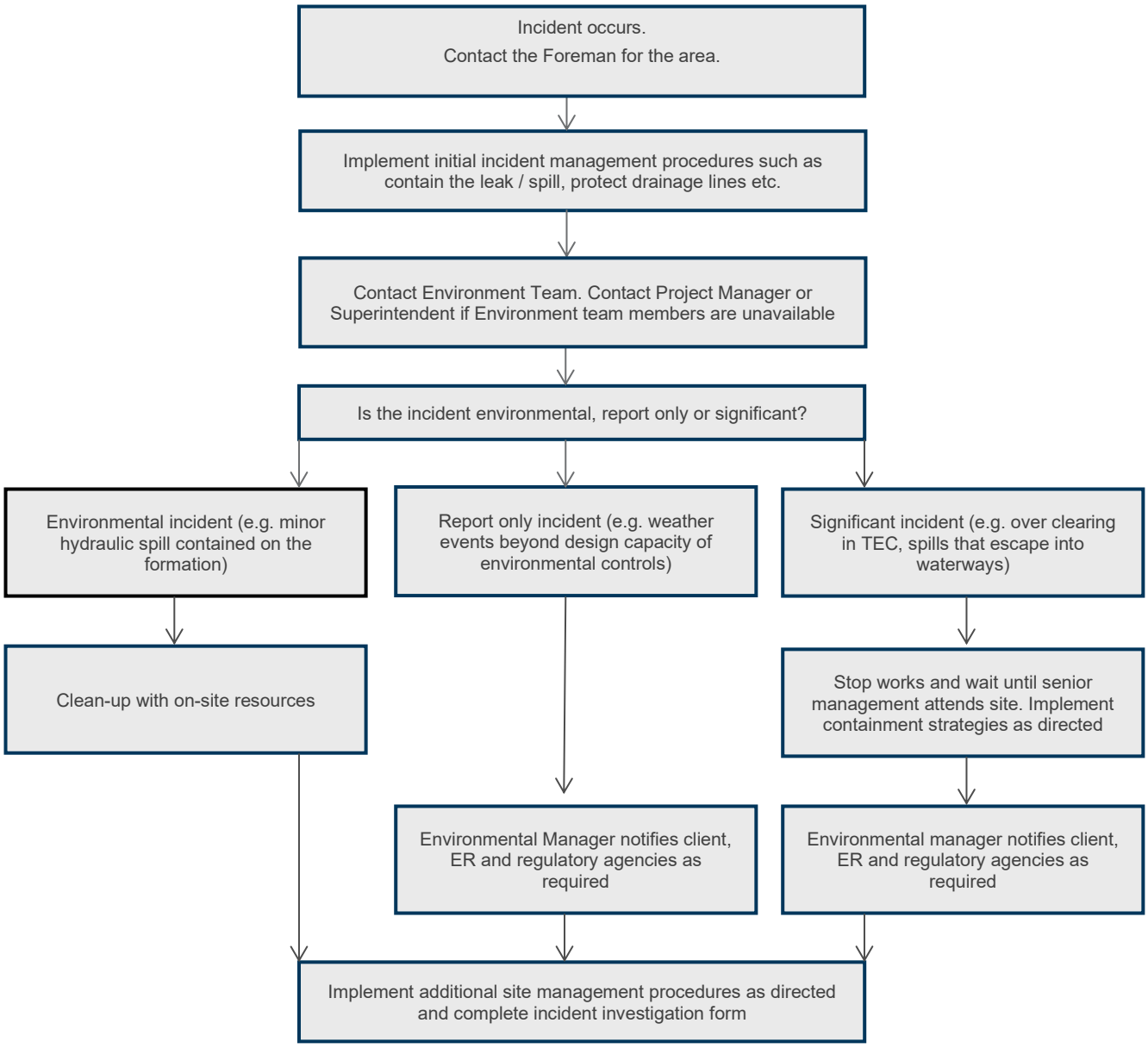


Figure 5-2: Emergency response procedure

Team members are responsible for contacting those persons in the boxes immediately below.

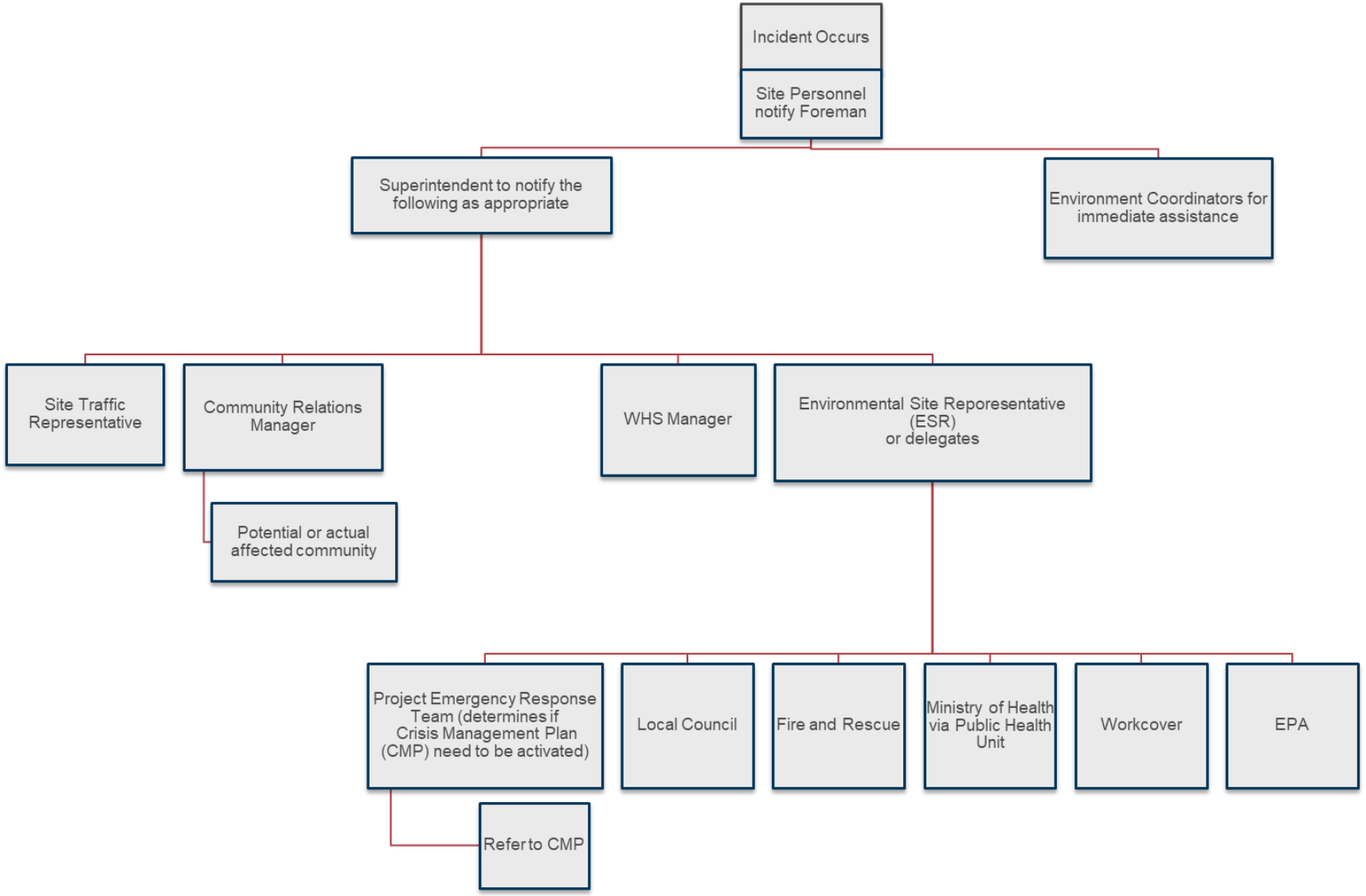


Figure 5-3: Notification Process

The following flow charts relate to management procedures for spills, remediation of sediment controls and major chemical spills in Table 5-2, Table 5-3, and Figure 5-4.

PRIOR TO ANY ACTION, IDENTIFY MATERIALS INVOLVED & OBTAIN PERSONAL PROTECTIVE EQUIPMENT

Table 5-2 Environmental management procedure for spills

Step	Action	Responsibilities	Comments
1	Stop further leak	Person causing / finding leak	If leak from oil drum, roll drum so that leak area is uppermost. If leak from pipe, close valve etc
2	Inform supervisor	Supervisor / Person	Stop human and vehicular traffic and isolate area
3	Determine the of the leak	Supervisor	For major leaks notify superintendent. If spill has escaped off site / into creek notify Environmental Site Representative immediately
4	Form barrier around leak / spill	Foreman / Superintendent	Use foam barrier material in kit. Use soil / sand if kit not available
5	Stop the spreading of leak	Foreman / Superintendent	Transfer fuel / oil from spilled drum into another drum etc
6	Put barrier around drains / outlets	Foreman / Superintendent	Seal drain grates by putting sand bags etc. around them
7	Obtain oil spill kit and apply oil absorbent on spill	Foreman / Superintendent	Use absorbent material or equivalent
8	Clean-up / remove absorbent material to bin	Foreman / Superintendent	Use Chem oil away or equivalent for clean-up of area. Use brush and pan provided in kit
9	Clean-up hard surface by excavating contaminated soil	Foreman / Superintendent	Stockpile contaminated material in designated area
10	Clean-up soft surface by excavating contaminated soil	Foreman / Superintendent	Stockpile contaminated material in designated area
11	Inform Environmental Site Representative and fill in incident form	Environmental Site Representative	Record incident and review procedures
12	Re-stock used spill response materials	ESR	All materials used in spill response to be re-stocked in preparation for any future spills.

Table 5-3 Procedure for the remediation of sediment control devices

Step	Action	Responsibilities	Comments
1	Inform area supervisor of problem / exact location and the magnitude	Person causing / discovering the problem	Assess whether the problem can be promptly rectified
2	If uncontrollable, notify sediment control crews	Foreman / Superintendent	State the magnitude of the problem and the materials required
3.	Divert flow away from existing waterways	Foreman / Superintendent and available machinery	Stop vehicular traffic and construct an earth bund or diversion drain
4	Form a barrier around the affected area. Establish emergency berm (earth or sandbags) to trap sediment or reduce flow	Emergency response unit	-
5	Work on the restoration of original control device	Foreman / Superintendent / Operator	Stem the flow and replace damaged control device
6	Assess impact and devise remedial action for affected waterway and embankment	Environmental Site Representative	Proceed with water quality monitoring
7	Apply buffering solutions / agents if required	Emergency response unit	Monitor effects of this application
8	Clean away sediment build-up deposits before leaving area	Foreman / Superintendent / Operator	Use available machinery
9	Record all stages of event on Environmental Incident Report form and investigate causes	Environmental Site Representative / Foreman / Superintendent	Witness accounts / photographs/ monitoring results
10	Review remedial actions and find out if response process can be improved	Environmental Site Representative / Foreman / Superintendent	Initiate change in the process if required
11	Review incident to determine if environmental system failure. Improve system if required	Environmental Site Representative / Foreman / Superintendent	Initiate change in system if required

In the event of a major chemical spill or exposure, the following procedure should be implemented:

- Safety first

  STOP WORK IN THE SPILL AREA; AND

  EVACUATE THE AREA IF NECESSARY

- Notify the Environmental Site Representative and Project Director
- Notify the relevant emergency services - Dial 000 and provide as much detail as possible including:
  - location of emergency
  - nature and size of spill
  - UN numbers and/or chemicals involved
- Control the spill

  ATTEMPT TO CONTROL THE SPILL OR EXPOSURE IF IT IS SAFE TO DO SO,

  e.g. SHUTTING OFF VALVES ETC

  DO NOT ATTEMPT TO CONTROL THE SPILL IF IT IS NOT SAFE TO DO SO
- Environmental Site Representative to ensure appropriate internal management are notified
- Environmental Site Representative to ensure appropriate external environment authorities are notified
- Environmental Site Representative to ensure that the appropriate investigation and reporting processes are put in place.
- Re-stock used spill response material

Figure 5-4: Responses to major chemical spill or exposure

5.11 Pollution Incident Clean up

In the event of pollution incident, clean up actions will be established. This may involve the removal of used spill kits and disposal in appropriate bins, and the removal of sediment. If a pollution incident occurs resulting in material harm the clean-up process will be managed by appropriately qualified and licensed contractors as necessary (e.g. liquid wastes / asbestos waste) and in accordance with the requirements of the EPA waste disposal guidelines.

The ESR is to arrange replacement of the used components as soon as possible considering the risk of future spills and their resultant impacts at that location.

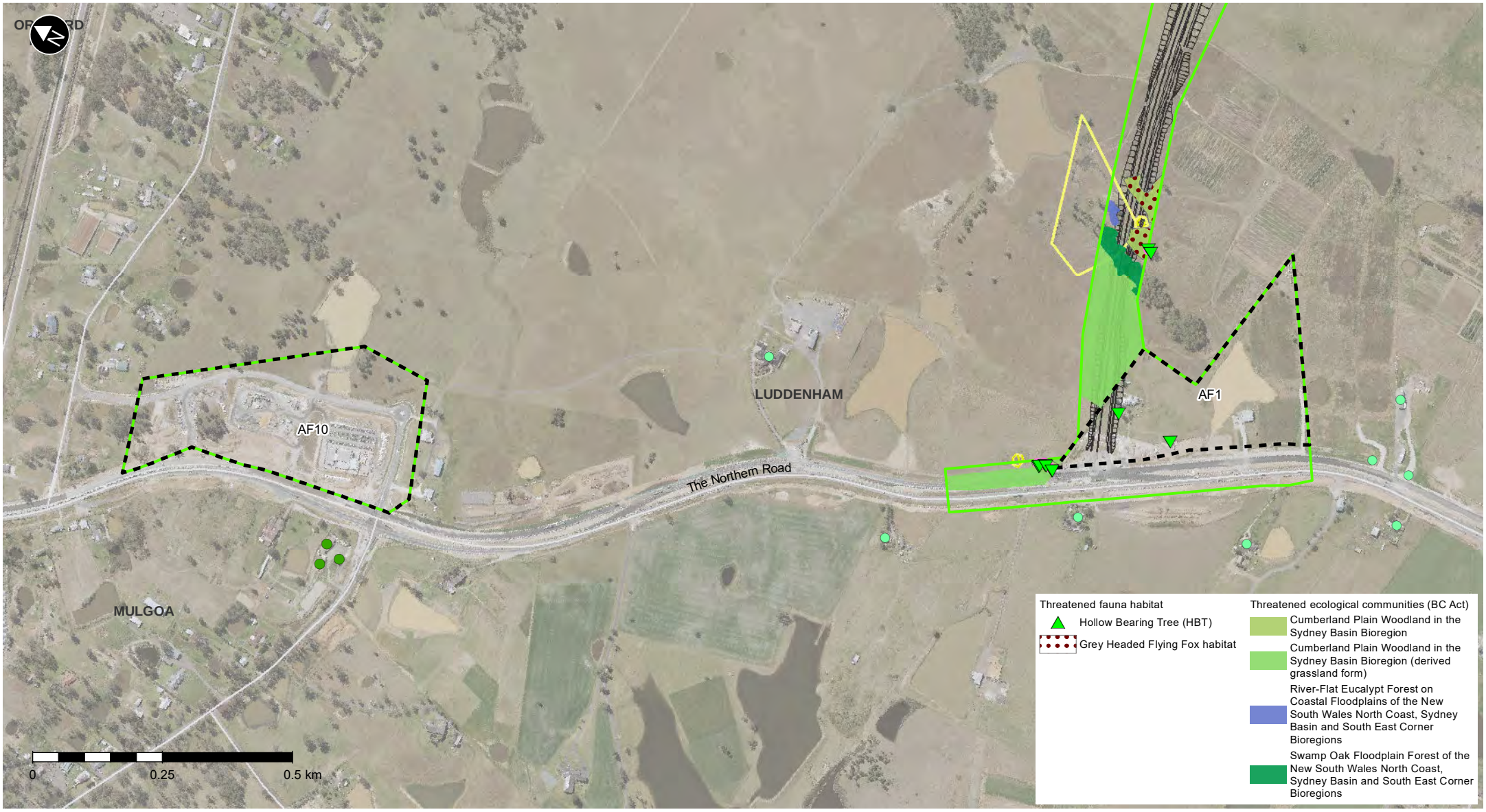
Appendix A: Site Risk Assessment

Hazards	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Fire, Explosion, Bushfire	Potential to start bushfire Injury to Personnel Damage to the Environment	L-3 C-4 19 (Very High)	Prepare and implement a WHSMP that incorporate measure to manage and mitigate bushfire risk All site personnel are inducted on bushfire hazards and how they are to be managed Flammable materials will be appropriately stored in accordance with AS1940 and the SDS. Hazardous materials will be appropriately bunded with a volume of 110 per cent of the largest receptacle All works involving a fire source will have a hot works permit in place with specific controls to prevent fire risk No smoking (including e-cigarettes) will be allowed on site except at designated areas. Dedicated butt disposals will be located in all designated smoking areas Cutting, welding or grinding will not be undertaken on total fire ban days, unless the works takes place in an area at least 50 metres away from an ignition source and appropriate fire controls are in place. Vehicles will not be driven or idled in areas of long grass on fire ban days or after prolonged periods of dry weather. Mulch stockpiles will be monitored and turned over as required to avoid spontaneous combustion. General purpose fire extinguishers and fire extinguishers suitable for oil/fuel fires will be available in all offices, plant and vehicles. Personnel on site will be familiar with the use of fire-fighting equipment. Fire-fighting equipment will be maintained regularly.	L-1 C-4 14 (High)	WHSMP ERP EWMS Project Induction

Hazards	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Truck, plant or vehicle collision / rollover	Release of hydrocarbon (Fuel/Oil)	L-3 C-3 13 (High)	Staff induction, Construction Traffic and Transportation Management Plan (CTTMP) has been produced for the Project and will include specific Traffic Control Plans (TCPs) for work stages and active work areas, First Aid kits will be kept in each vehicle and plant as well as at site compounds, Spill kits will be stored at site compounds and other active work areas. Experienced operators of plant and machinery (VOC as required) Weather condition monitoring Spill kits available	L-3 C-1 3 (Low)	CEMP and Sub-Plans Project Induction Spill Kit Training
Escape, Spillage or Leakage of Hazardous Substance	Contamination of soil, water, air	L-3 C-3 13 (High)	Staff induction. Spill kits will be kept at site compound areas and on site. All plant will be inspected before delivery to site and regularly during operation for leaks. All SDS for will be kept on site and will be readily accessible Disposal of waste material appropriately at authorised facilities licenced to accept the waste material Asbestos identification training for key staff Construction Contaminated Land Management Sub-Plan (CCLMP) Asbestos Management Sub-Plan (part of the CCLMP) Construction Soil and Water Management Sub-Plan (CSWMP) EWMS and checklist prepared for grouting of redundant pipes	L-3 C-2 8 (Moderate)	CEMP and Sub-Plans Project Induction Spill Kit Training SDS Register
Damage to existing utilities	Release of large quantities of water in a short period of time (eg. water mains)	L-3 C-3 13 (High	Staff induction, Utilities will be located and surveyed prior to adjacent work,	L-3 C-2 8 (Moderate)	Manage Work Permits Project Induction CEMP and Sub-Plans

Hazards	Potential Impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Damage to other overhead and underground services		Where required by the asset owner, an asset owner representative will be onsite, Spill kits will be stored at site compounds and other active work areas, CPBGG JV Construction Noise and Vibration Management (CNVMP) has been developed for the Project. Vibration monitoring as required, and re-assess vibration causing activities when working within safe distance of sensitive areas Permit to Excavate or Penetrate to be obtained		Manage Work Permits Project Induction Spill Kit Training
Uncontrolled release of stormwater	Breach of EPL conditions, and pollution of environment	L-4 C-3 17 (Very High)	Staff induction, Construction Soil and Water Management Sub-Plan (CSWMP), EWMS will be created for works near waterways and environmentally sensitive areas, Onsite sediment basins and other suitable and appropriate erosion and sediment controls will be implemented to manage stormwater prior to it leaving the site, as required, Ancillary facilities to have appropriate erosion and sediment controls in place. Implement the project CSWMP, Regularly review and update erosion and sediment control plans Monitor weather conditions and prepare the site for predicted wet weather events as far as practicable	L-4 C-2 9 (Moderate)	SWMP EWMS Basin management procedure Project induction Targeted ERSED training
Discovery of contaminated soils/ asbestos	Contamination of land and /or waterways from spills/ asbestos/ land contamination	L-4 C-3 13 (Very High	Targeted training for relevant staff, Implementation of CCLMP, AMP, CSWMP and CEMP Implementation of Unexpected Finds Process	L-4 C-2 9 (Moderate)	CCLMP Unexpected Finds Procedure EPA guidelines

Appendix B: Sensitive Area Plans



M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

M12 Motorway (The Project)

Receivers

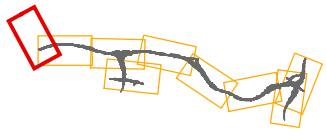
Residential

Commercial

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

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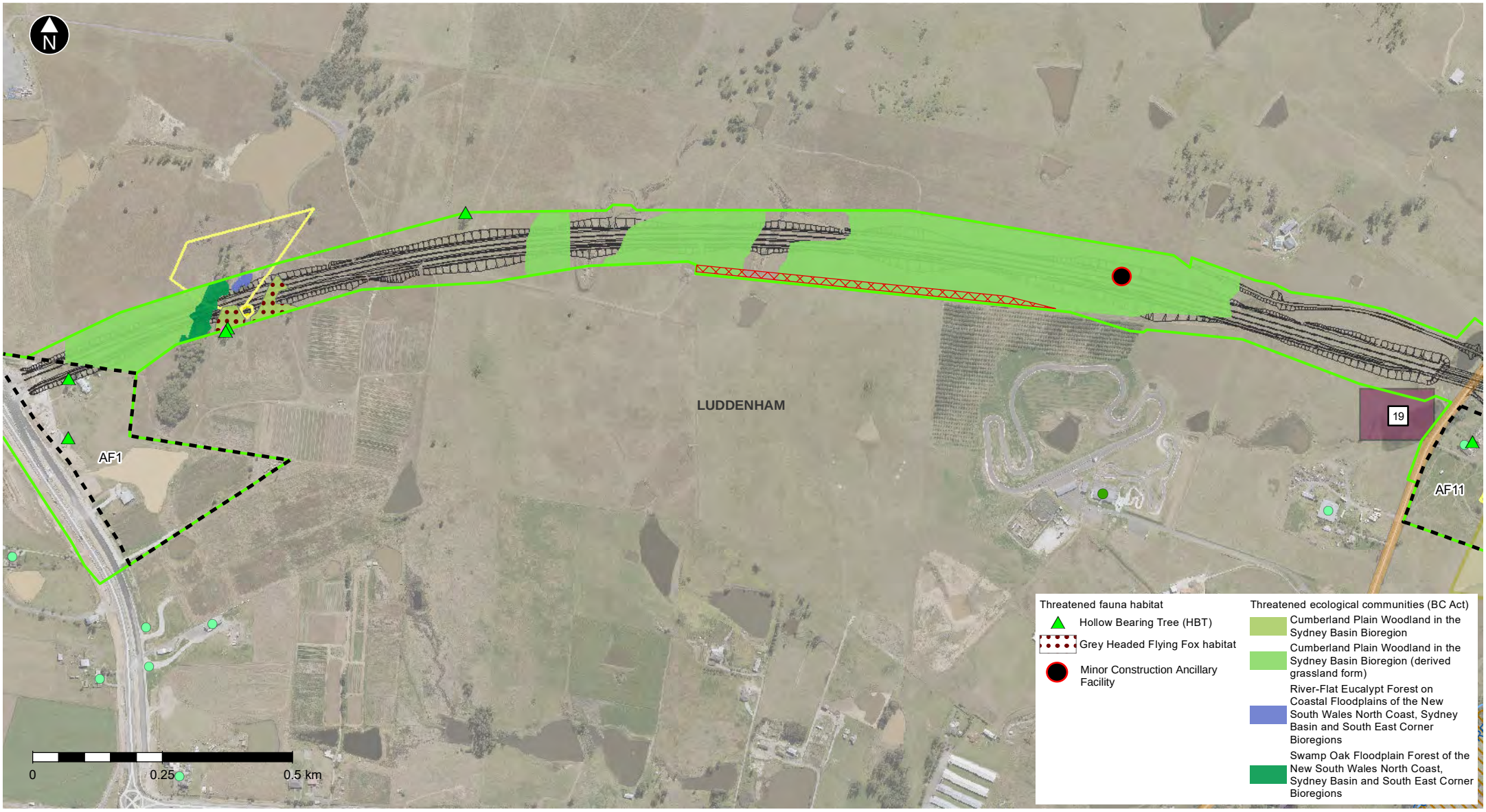


M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

The amended project exclusion zones

M12 Motorway (The Project)

Receivers

Residential

Commercial

Potential areas of existing fill

Areas of environmental interest

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

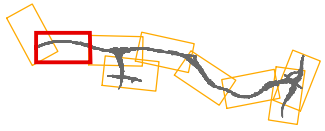
Aboriginal heritage site complex (potential area of sensitivity)

Assessed heritage significance

Local

State

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



Imagery: Aerometrex August 2020

Appendix A6 Sensitive Area Plan for the Project

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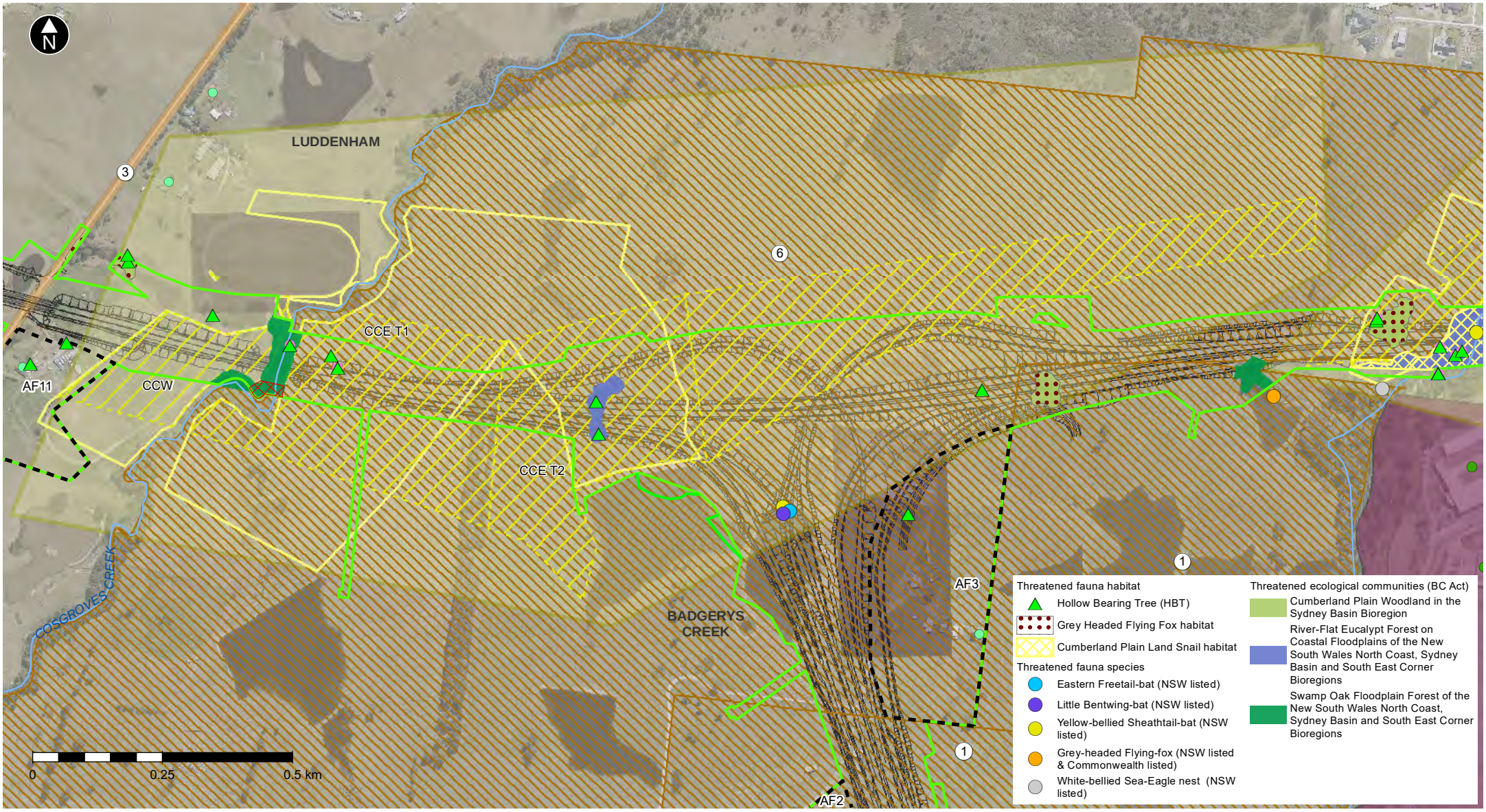

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The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

The amended project exclusion zones

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Receivers

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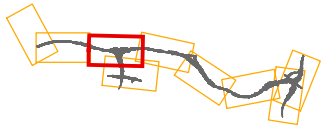

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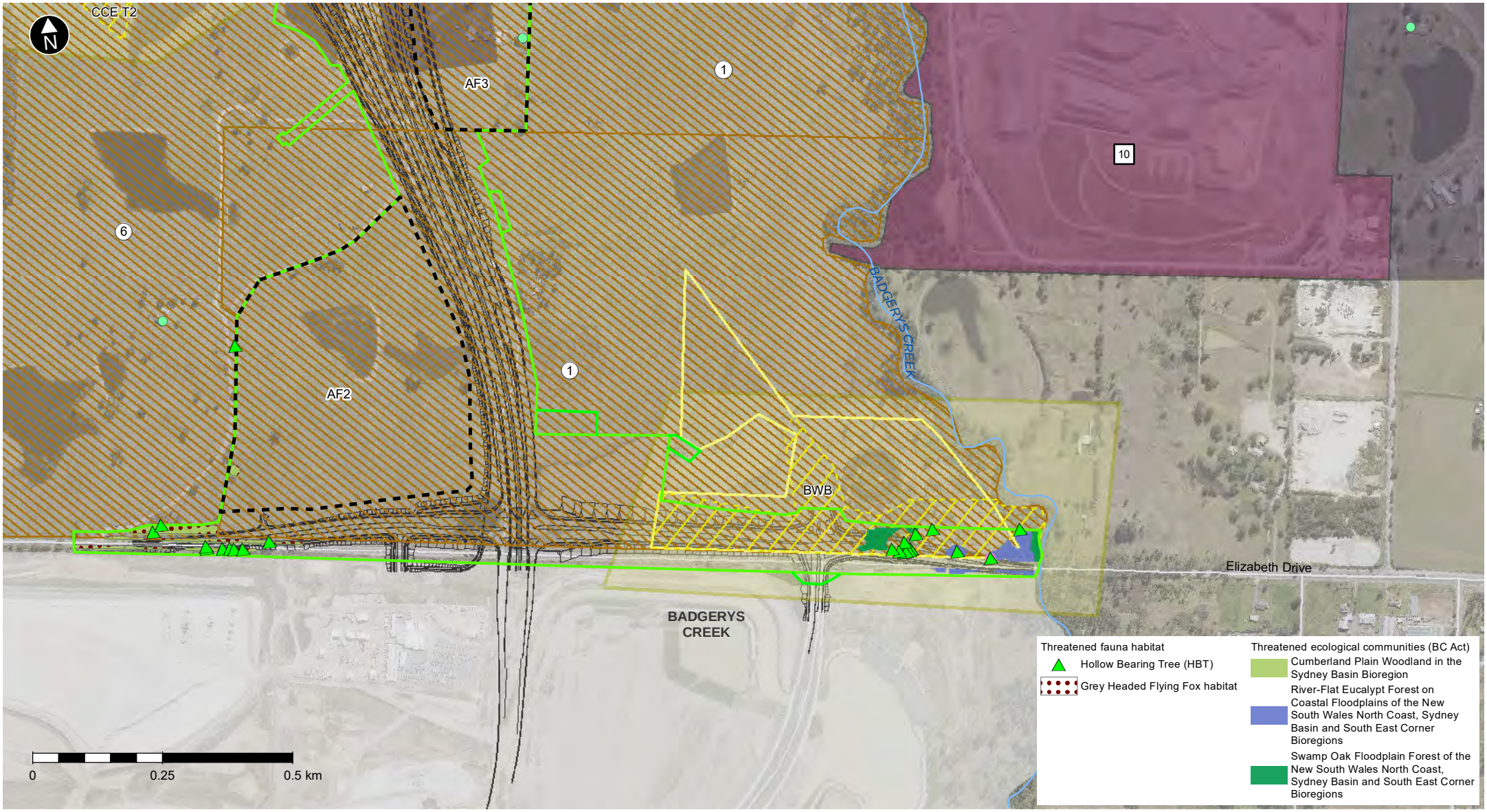

M12 West

The refined project ancillary facilities (CA for West and Central, Jul 2021; ARSR for East, Dec 2020)

M12 Motorway (The Project)

Western Sydney International Airport

Receivers

Residential

Potential areas of existing fill

Areas of environmental interest

Aborigional sites impacted from the main construction works

Aboriginal heritage sensitve area

Aboriginal heritage site complex (potential area of sensitivity)

State

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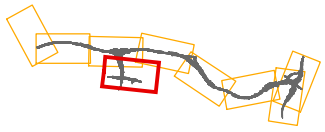

Imagery: Aerometrex August 2020

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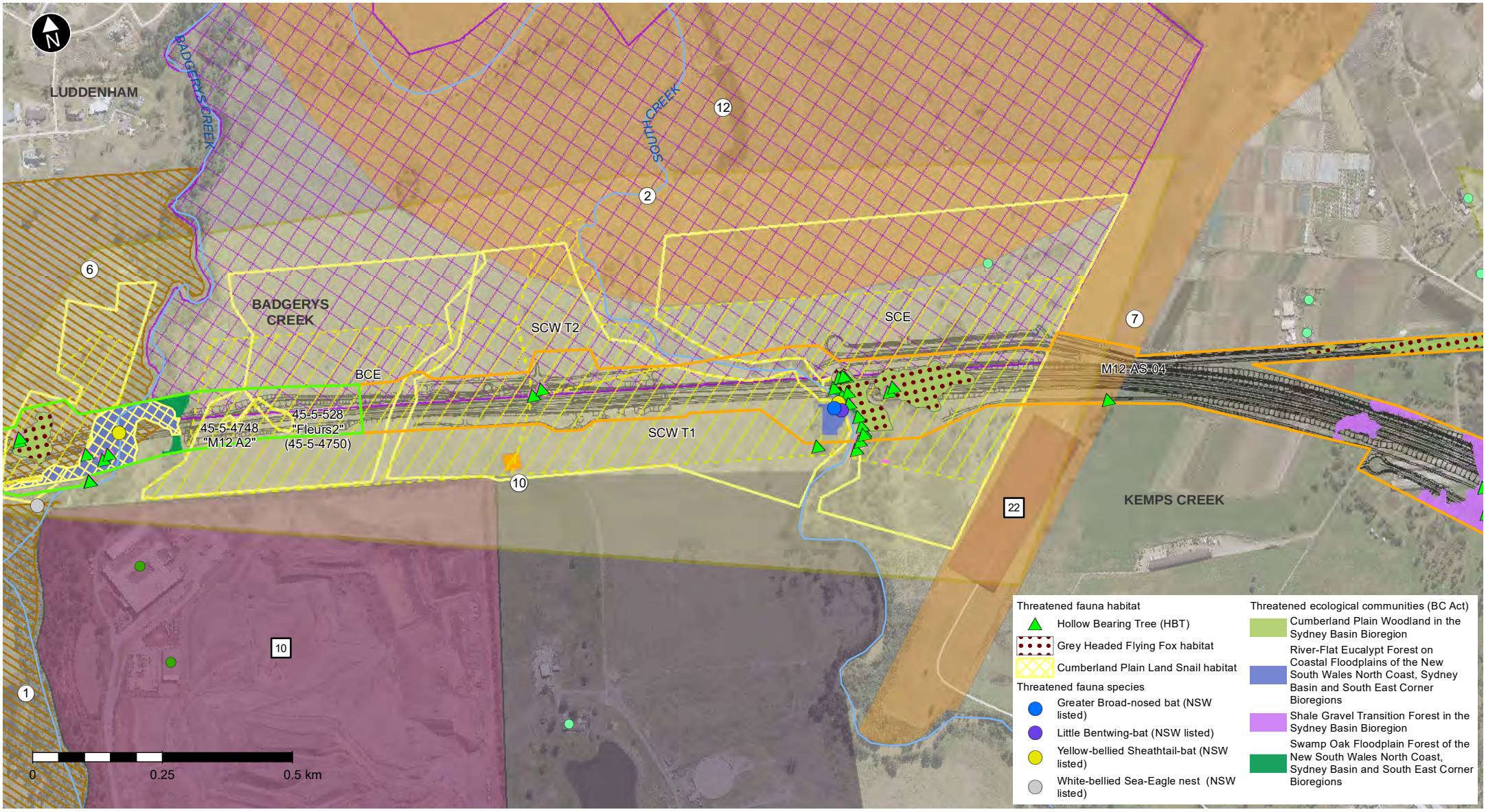


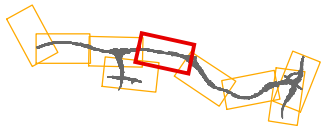
M12 West
M12 Central
M12 Motorway (The Project)

Receivers
Residential
Commercial
Potential areas of existing fill
Areas of environmental interest

Aborigional sites impacted from the main construction works
Aboriginal heritage sensitve area
Aboriginal heritage site complex (potential area of sensitivity)

Assessed heritage significance
Local
State
State and potentially national

Aboriginal heritage sensitive area refers to sites where Aboriginal objects are likely to occur in subsurface deposits. An Aboriginal site complex refers to a grouping of sites that occur in close proximity and appear to be associated with specific landform features



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Created by : GC | QA by : RB

Appendix C: PIRMP Training Register

Date	Trainer Name	Trainee Name	Content Covered
16/03/2023	[redacted]	[redacted]	Emergency Spill Response
		[redacted]	Emergency Spill Response
		[redacted]	Emergency Spill Response

Appendix D: PIRMP Review and Testing Register

Date	Manner of Testing	Tested By	Testing Outcomes
16/03/2023	Emergency Response Drill	M12 West Environment Team	See Debrief

Appendix A10 – Climate Change Monitoring and Adaptive Management Plan

Appendix A10
Climate Change Monitoring and Adaptive Management Framework

M12 Motorway West

Project number:	N00160
Document number:	M12WCO-CPBGG-ALL-EVE-PLN-000001_App A10
Revision date:	08/05/2023
Revision:	01

Details of Revision Amendments

Document Control

The Project Director is responsible for ensuring that this plan is reviewed and approved. The Project Director is responsible for updating this plan to reflect changes to construction, legal and other requirements, as required.

Amendments

Any revisions or amendments must be approved by the Project Director and/or client before being distributed / implemented.

Revision Details

Rev	Date	Reviewed By	Details
A	18/02/2022	C. Mueller	First draft
B	20/05/2022	G. Bolton	2nd Draft following TfNSW/Arcadis review and comment
C	28/06/2022	G. Bolton	3rd Draft following TfNSW/Arcadis review and comment
D	19/07/2022	A. Zvirzdinas	4th Draft following TfNSW/Arcadis/ER review and comment on Rev C
00	27/07/2022	A. Zvirzdinas	First Controlled Issue
01	08/05/2023	A Brajlih	Second Controlled Issue

Document Review

Position	Name	Signature	Date
Project Director	[redacted]	[redacted]	08/05/2023 8/5/23.

Distribution of controlled copies

Copy no.	Issued to	Version

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Acronyms and Abbreviations

Abbreviations	Expanded text
AR5	IPCC 5th Assessment Report
AR6	IPPC 6th Assessment Report
ARSR	Amendment Report to the Submissions Report
BoM	Bureau of Meteorology
CCMAMF	Climate Change Monitoring and Adaptive Management Framework
CCRA	Climate Change Risk Assessment
CO_2	Carbon dioxide
CoA	Conditions of Approval
Construction	Includes all activities required to construct the CSSI as described in the documents listed in Condition A1, including commissioning trials of equipment and temporary use of any part of the CSSI, but excluding Low Impact Work which is carried out to complete prior to the approval of the CEMP, works approved under a Site Establishment Management Plan, demolition of acquired residential houses, structures and sheds, and works specified in Appendix B and approved under an environmental management plan(s) in accordance with Condition A24.
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSWMP	Construction Soil and Water Management Sub-plan
DPE	NSW Department of Planning and Environment (formerly DPIE)
DPIE	NSW Department of Planning, Infrastructure and Environment
EES	Environment, Energy and Science (a group within DPE)
EIS	Environmental Impact Statement
Environmental Assessment Documentation	Collective reference to the M12 EIS, Submissions Report and Amendment Report and supplementary reports as detailed in NSW CoA
Environmental Representative	A suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ESM	Environment and Sustainability Manager
ESR	Environmental Site Representative
Framework	All activities related to this CCMAMF
IPCC	Intergovernmental Panel on Climate Change
ISC	Infrastructure Sustainability Council
OCEMP	Overarching Construction Environmental Management Plan

Abbreviations	Expanded text
OEMP	Operational Environmental Management Plan
Planning Secretary	Secretary of the NSW Department of Planning and Environment, or delegate
Ppm	Parts per million
Primary CoA/REMM	CoA/REMM that are specific to the development of this Framework
QA	Quality Assurance
RCP	Representative Concentration Pathway
REMM	Revised Environmental Management Measure
RMS	Former Roads & Maritime Services (now Transport for NSW)
Secondary CoA/REMM	CoA/REMM that are related to, but not specific to, the development of this Framework
SM	Sustainability Manager
TfNSW	Transport for New South Wales
WHS	Workplace Health and Safety
Work	Any physical work to build or facilitate the building of the CSSI, including low impact work, environmental management measures and utility works. However, it does not include activities that inform or enable detailed design of the CSSI and generate noise that is no more than 5 dB(A) above the rating background level at any sensitive receiver.
WSIA	Western Sydney International Airport

1 Introduction

1.1 Context

This Climate Change Monitoring and Adaptive Management Framework (CCMAMF) forms part of the Construction Environmental Management Plan (CEMP) for the M12 Motorway (West project (the Project). The CPB Contractors and Georgiou Group Joint Venture (CPBGG JV) has been awarded the M12 West stage which is a construct only contract between The Northern Road, Luddenham and about 250 metres east of Badgerys Creek.

The new M12 Motorway will provide direct access to the Western Sydney Airport (WSA) at Badgerys Creek and connect to Sydney's motorway network. The Motorway's east-west alignment consist of 16-kilometres of dual carriageway between the M7 Motorway at Cecil Hills and The Northern Road at Luddenham.

The Motorway will be built as a four-lane divided road and designed to be readily widened to six lanes to meet future demand. It will be designed to 110km/h and posted at 100km/h. The Motorway will provide increased road capacity and reduce congestion and travel times in line with future needs. It will also improve the movement of freight in and out of Western Sydney while serving the Western Sydney Priority Growth Area and the Western Sydney Employment Area.

This report covers the Western Section of the M12 between The Northern Road, Luddenham and approximately 250m east of Badgerys Creek. It is proposed to be four-lane dual-carriageway motorway with a central median for future six lanes, including a new grade separated interchange with the Airport Access Road to provide connection to the WSIA. See figures Figure 1-1 to Figure 1-3 outlined details of the M12 West Stage.

1.2 Background

This Framework document builds upon the work presented in Chapter 8.6 of the Environmental Impact Statement (EIS) (2019) as revised by the Submissions Report (June, 2020) and Chapter 6.16 of the Amendment Report (July, 2020). Specifically, as a part of detailed design, the climate change work conducted during planning has been updated to incorporate risks associated with additional climate change data and validate the risks and their ratings for the M12 West section specifically. This report builds on the TfNSW CCMAMF template and the plans as listed in section 1.3 developed during design phase.

1.3 Scope of this Framework

The scope of this Framework is to describe the climate change monitoring and adaptive management measures to be adopted for the Project during construction in accordance with REMM CC02.

This Framework does not take into account climate change monitoring and adaptive management measures for design and operation.

This CCMAMF was developed to align with the Overarching CCMAMF and will be reviewed and approved by the TfNSW and the ER. Refer to Section 2 of the CEMP that details the overall revision process of CEMP and Sub-plans.

1.3.1 CCMAMF preparation, endorsement and approval

This CCMAMF will be approved by the CPBGG JV Project Director and ESR prior to submission to TfNSW.

The CEMP and Sub-Plans will go through a review and update process as described in section 3.1 of TfNSW Specification G36 to ensure the CEMP and associated documents have been developed in accordance with the OCEMP. TfNSW will provide the CEMP to the ER for approval.

A hold point shall be submitted in accordance with G36 Section 3.1 - Preparation and submission of CEMP. TfNSW shall consider the documents prior to authorising the release of the Hold Point. TfNSW may request additional information for inclusion in the CEMP before authorising the release of the Hold Point. Construction will not commence until release of the Hold Point.

1.3.2 Interactions with other management plans

This Framework has the following interrelationships with other management plans and documents:

- M12 Sustainability Strategy (TfNSW, 2021) which outlines the sustainability objectives and targets and Infrastructure Sustainability Council of Australia (ISC) rating tool credit requirements. The Sustainability Strategy will be developed in accordance with REMM SU01 and NSW CoA E91 and E92 and implemented during detailed design and construction. Targets to reduce greenhouse gas emissions during construction will also be detailed in the Sustainability Strategy.
- M12 Motorway West Package 100% Detailed Design Report: Climate change monitoring and adaptive management framework (WSP, 2021)
- M12 Motorway – West Package Detailed Design, Sustainability Management Plan (WSP, 2021)
- Construction Environmental Management Plan (CEMP) and Sub-plans specifically relating to management measures and monitoring requirements during construction
- The Workplace Health and Safety Management Plan will apply an adaptive management approach to workplace health and safety during construction
- Construction Environmental Management Plan (CEMP) and Sub-plans specifically relating to management measures and monitoring requirements during construction
- Construction Flora and Fauna Management Plan (CFFMP) including the minimisation of vegetation removal
- Construction Soil and Water Management Plan (CSWMP) including site inspection prior, during and following storm events
- Construction Waste and Resources Management Plan (CWRMP) specifically addressing greenhouse gas emissions and resource and energy use
- Construction Air Quality Management Plan (CAQMP) specifically monitoring vehicle and plant emissions during construction
- Construction Flood Management Plan (FMP) addresses flood management protocols and response
- Site Establishment Management Plan (SEMP) addresses the construction of ancillary facilities away from high risk areas
- Sustainability Management Plan (SMP) address ISC rating requirements including Climate Change aspects and the overall sustainability strategy for the project.

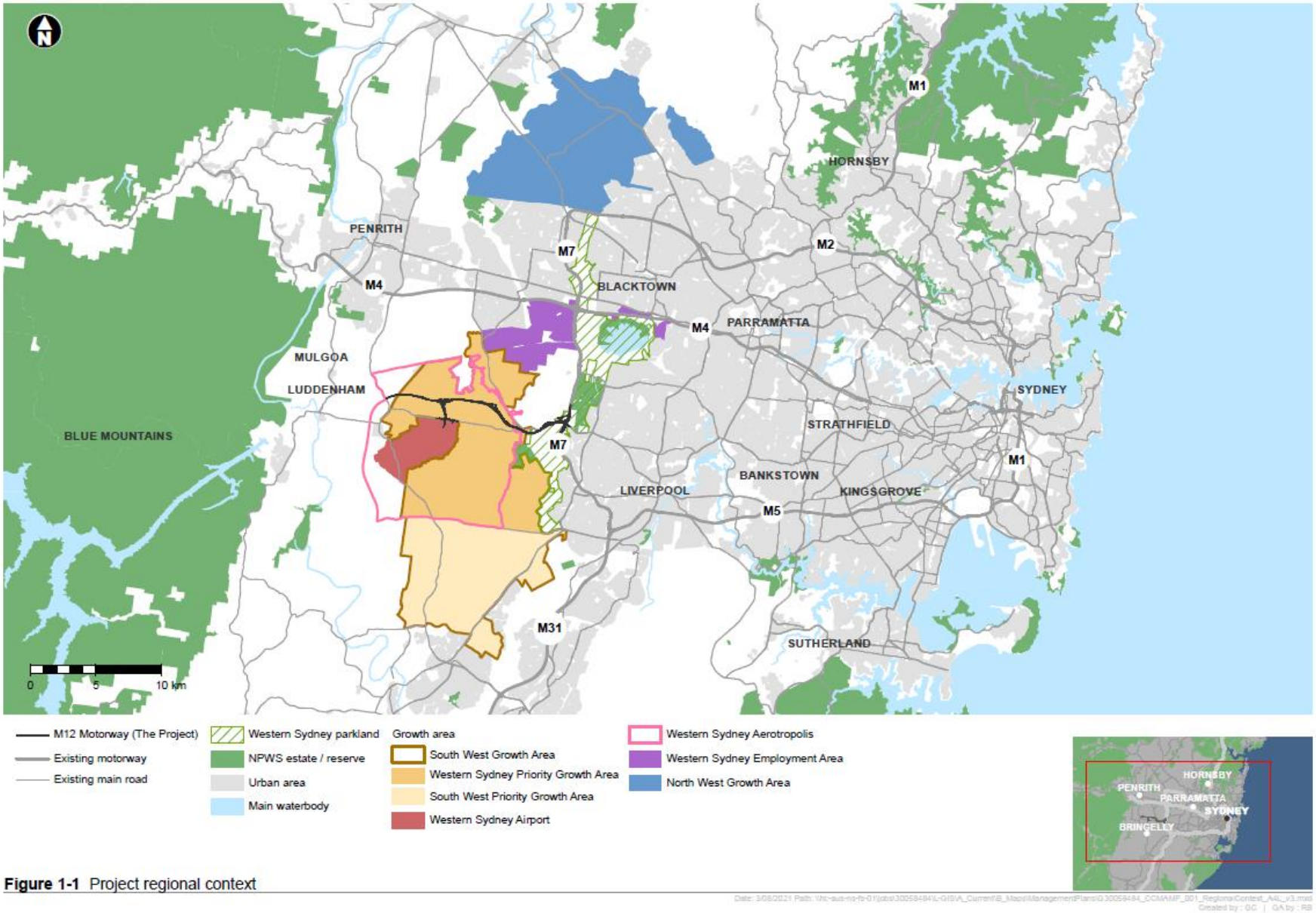

Figure 1-1 Project regional context

Figure 1-1 Project regional context

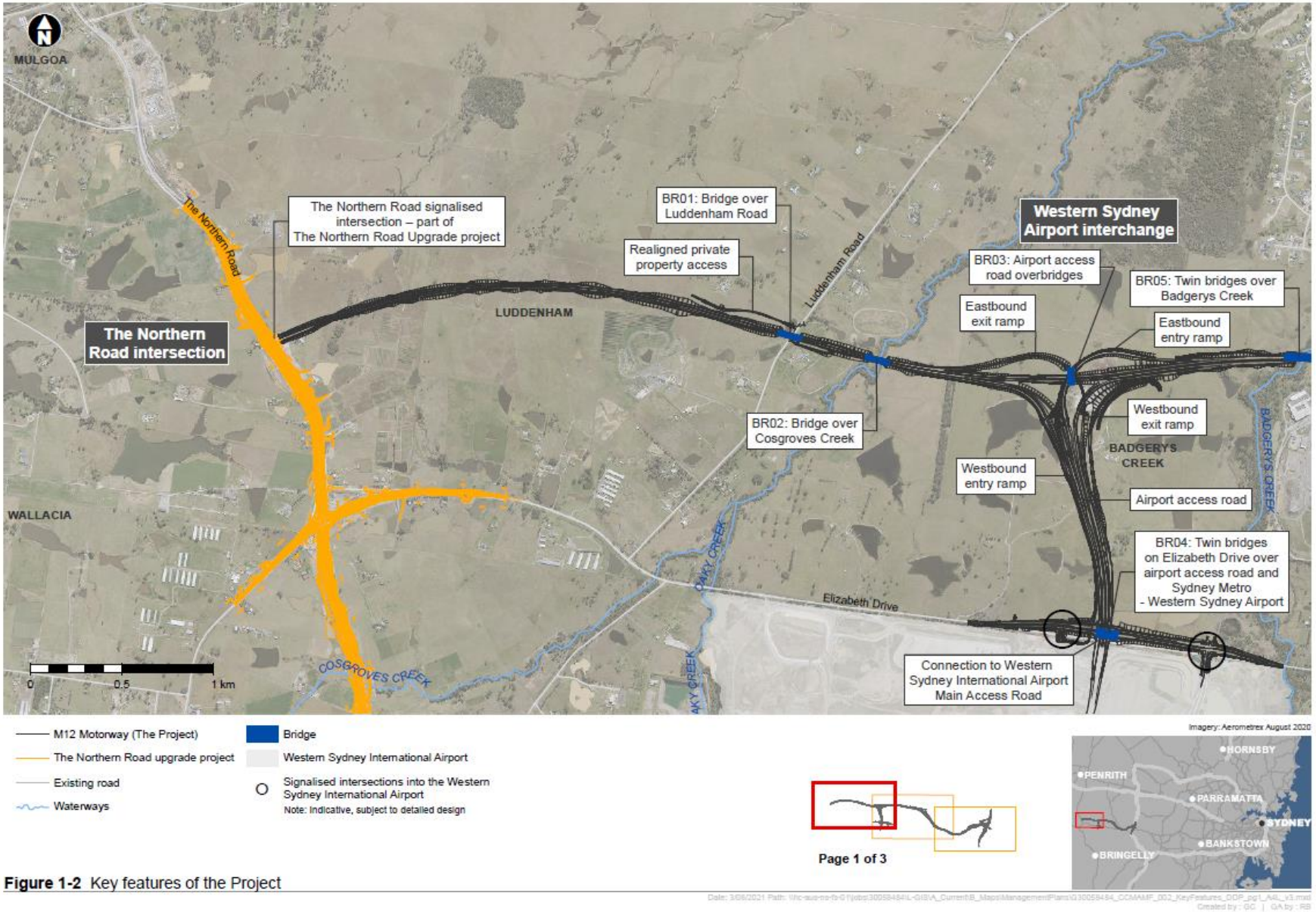

Figure 1-2 Key features of the Project

Figure 1-2 Key features of Project

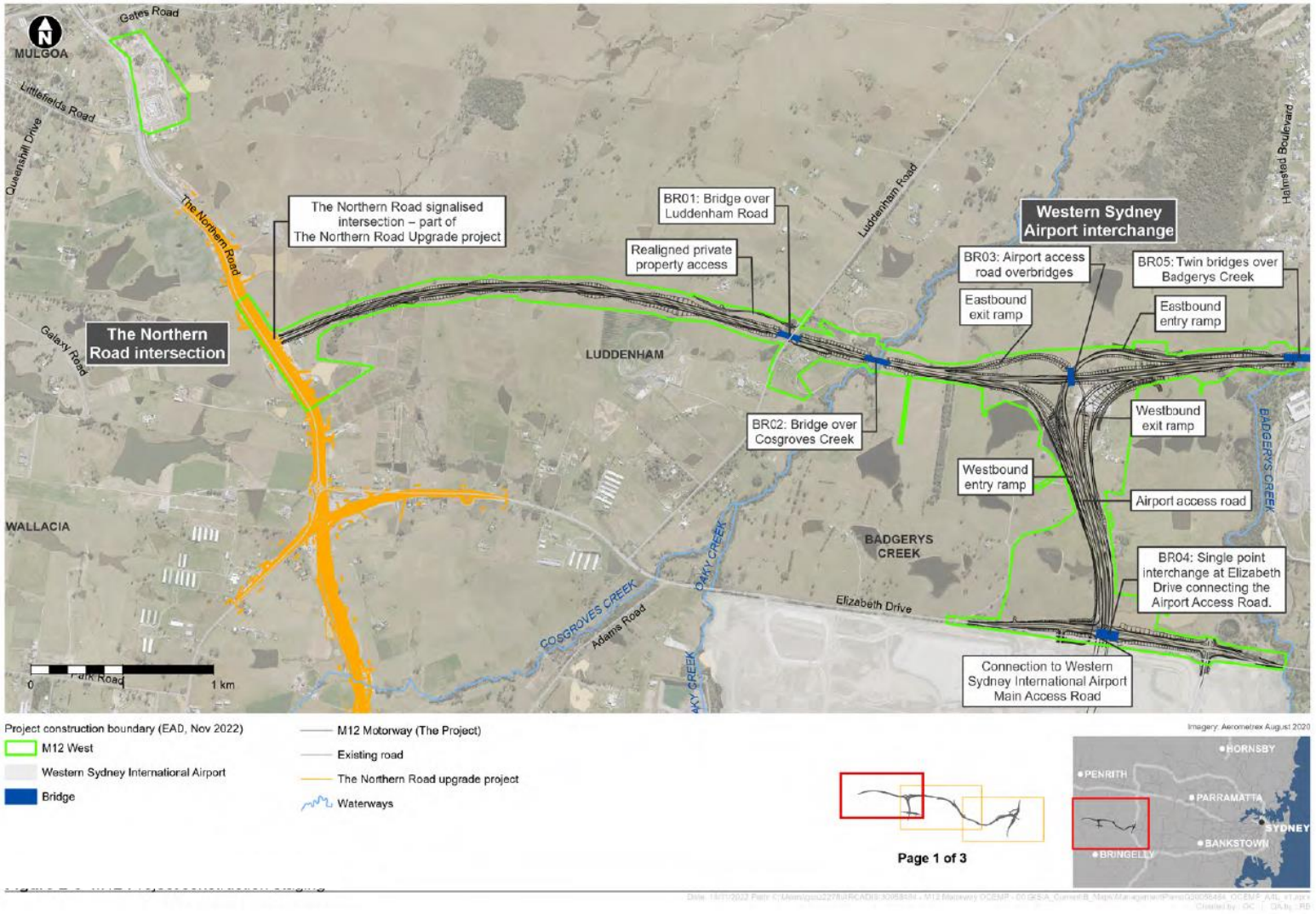

Figure 1-3 M12 Motorway Staging

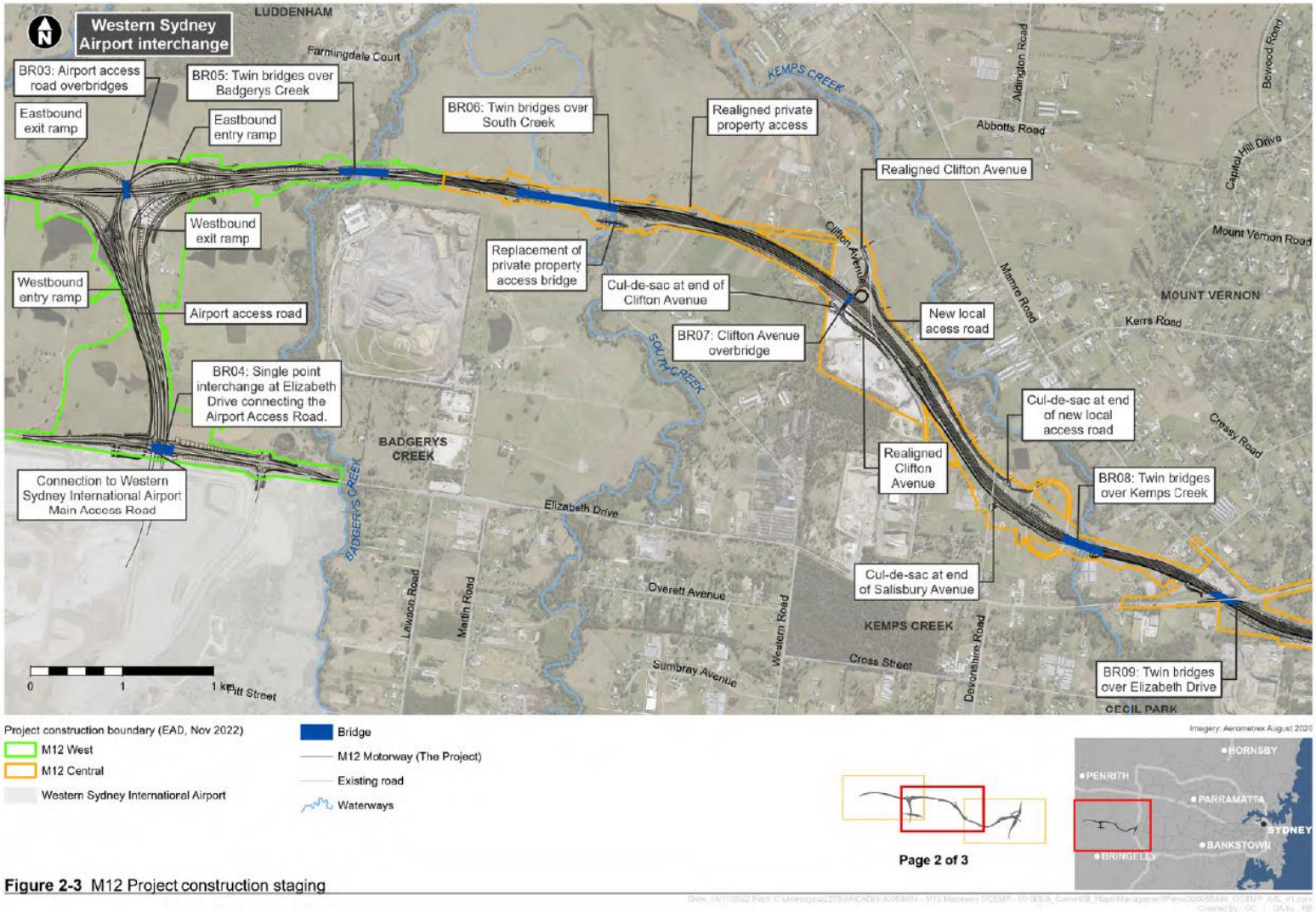

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Figure 2-3 M12 Project construction staging

Figure 2-4 M12 Motorway Staging

1.4 Purpose of this Framework

This CCMAMF provides an overarching management framework to enable CPBGG JV to establish and maintain best practice controls to manage potential climate change impacts during construction of the Project. This CCMAMF forms part of CPBGG JV's environmental management framework for the Project, as described in Section 1.5 of the CEMP. The strategies defined in this CCMAMF have been developed to address the REMM CC02. This CCMAMF includes specific requirements for implementation, monitoring and auditing during the project construction phase.

Implementing this CCMAMF effectively will enable the Project to meet regulatory and policy requirements in a systematic manner and continually improve climate change performance.

The CCMAMF provides:

- An overview of the Project's existing climate and relevant climate change projections
- Climate change impacts related to construction phase of the Project
- Climate change control measures during construction
- Monitoring procedures and criteria to evaluate effectiveness of climate change control measures during construction
- Procedures for periodic review of the Climate Change Risk Assessment (CCRA) and CCMAMF.

This CCMAMF will be available to all site personnel and sub-contractors via the Project document control management system and onsite.

EWMS will be prepared by the CPBGG JV Environmental Site Representative (ESR) and reviewed by the TfNSW Environment and Sustainability Manager (ESM) (or delegate) and independent Environmental Representative (ER) prior to the commencement of the construction activities to which they apply. Construction personnel undertaking a task governed by an EWMS will undertake the activity in accordance with the mitigation and management measures identified in the EWMS. Used together, the CEMP, strategies, procedures and EWMS form management guides that clearly identify required environmental management actions for reference by TfNSW and CPBGG JV. EWMSs will be developed and provided to TfNSW in advance of works under TfNSW G36 Hold point cl 3.2.4.

1.5 Objectives

The key objective of this CCMAMF is to ensure that all relevant requirements related to climate change mitigation and adaptive management are described, scheduled and assigned responsibility.

1.6 Targets

Targets for climate change mitigation and adaptive management during construction of the Project have been established to enable compliance with Project requirements and include:

- Ensure project personnel are informed via toolbox talks and the Project induction of this framework
- Manage extreme events during the construction of the Project through the implementation of feasible and reasonable management measures, such as those detailed in Section 5.

2 Sustainability Requirements

2.1 Relevant legislation and guidelines

Legislation, guidelines and policies relevant to the development of this Framework include:

- *Environmental Planning and Assessment Act, 1979*
- United Nations Sustainable Development Goals
- Transport Environment and Sustainability Policy Framework and Statement (TfNSW)
- TfNSW Sustainable Design Guidelines Version 4.0
- Infrastructure Sustainability rating tool Version 1.2 (Infrastructure Sustainability Council of Australia)
- Commonwealth Direct Action Plan including the Emissions Reduction Fund and Safeguard Mechanism
- National Climate Resilience and Adaptation Strategy
- NSW Climate Change Policy Framework
- Climate Change Fund Strategic Plan 2017-2022
- NSW Future Transport Strategy 2056
- A Metropolis of Three Cities – the Greater Sydney Region Plan (Greater Sydney Commission)
- Western City District Plan (Greater Sydney Commission)
- NSW Government Resource Efficiency Policy
- NSW Waste Avoidance and Resource Recovery Strategy 2014-21
- Technical Guide for Climate Change Adaptation for the State Road Network
- Australian Standard AS 5334-2013 Climate change adaptation for settlements and infrastructure – A risk-based approach
- Australian and New Zealand Standard AS/NZ ISO 31000:2018 Risk Management – Guidelines
- TfNSW Climate Risk Assessment Guideline SD-081.

2.2 NSW Conditions of Approval

There is no requirement under the NSW or Federal Conditions of Approval (CoA) to prepare and implement a climate change monitoring and adaptive management framework. Secondary CoAs relevant to this Framework have been listed in Appendix A. A cross reference is also included to indicate where the CoA is addressed in this document or other Project management documents.

2.3 Revised Environmental Management Measures

The primary REMM relevant to the development of this Framework is listed in Table 2-1. Secondary REMMs relevant to this Framework have been listed in Appendix A. A cross reference is also included to indicate where the REMM is addressed in this document or other Project management documents.

Table 2-1 Primary REMMS relevant to this Framework

REMM No.	Requirement	Document Reference
CC02	A climate change monitoring and adaptive management framework will be prepared and implemented for the Project.	This CCMAMF
	The framework will incorporate performance monitoring criteria and measures and the requirement for periodic review of the climate change risk assessment and framework against updated climate data to ensure currency.	Table 5-1 Section 6.5 Section 6.7.1

	The framework will incorporate the requirement for periodic review of the climate change risk assessment and framework against updated climate data to ensure currency.	Section 6.7.1

2.4 TfNSW design documentation

Design development has progressed, providing additional environmental assessment, and where relevant, it has been included within this Framework. Specific documentation related to this Framework includes the following PS301 documents:

- M12 Motorway West Package 100% Detailed Design Report: Climate change monitoring and adaptive management framework (WSP, 2021)
- M12 Motorway – West Package Detailed Design, Sustainability Management Plan (WSP, 2021b).

2.5 Infrastructure Sustainability Council

The Project is targeting an 'Excellent' rating under the Infrastructure Sustainability (IS) Rating Scheme, administered by the Infrastructure Sustainability Council (ISC). The IS Rating is an assessment of a Project's sustainability performance across a number of categories, including climate change. A Sustainability Strategy has been be prepared by TfSNW and submitted to DPE to achieve the rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool. The two climate change related IS rating credits requirements, specifically Level 2 for Cli-1 'Climate change risk assessment', and Level 2 for Cli-2 'Adaptation measures' are identified in Table 2-2.

Table 2-2 IS Rating climate change risk assessment credit criteria

IS credit	Level	Criteria
Cli-1 Climate change risk assessment	Level 1	A readily available climate change projection is identified and adopted for the asset region over the forecast useful life of the asset. AND Direct climate change risks to the asset over the forecast useful life are identified and assessed.
Cli-1	Level 2	The requirements of Level 1 are achieved. AND A number of readily available climate change projections are identified and adopted for the asset region over the forecast useful life of the asset. AND The climate change risk assessment also considered indirect climate change risks over the forecast useful life of the asset. AND A multi-disciplinary team participated in identifying climate change risks and issues.
Cli-1	Level 3	The requirements of Level 2 are achieved. AND Modelling is undertaken to characterise the likely impacts of the projected climate change for all High and Extreme priority climate change risks. AND A comprehensive set of affected external stakeholders participated in identifying climate change risks and issues.
Cli-2 Adaption measures	Level 1	Adaptation options to treat all extreme and high priority climate change risks are identified, assessed and appropriate measures implemented AND After treatment there are no extreme priority residual climate change risks.
Cli-2	Level 2	The requirements of Level 1 are achieved. AND

		Adaptation options to treat 25-50% of all medium priority climate change risks are identified, assessed and appropriate measures implemented.
Cli-2	Level 3	The requirements of Level 2 are achieved. AND The optimal scale and timing of options is addressed (which may be triggered by when a specific climate threshold is likely to be achieved). AND Adaptation options to treat at least 50% of all medium priority climate change risks are identified, assessed and appropriate measures implemented. AND After treatment there are no high priority residual climate change risks.

3 Existing Environment

Greenhouse gases (GHG) are gases that when released into the atmosphere effectively trap heat influencing global temperatures. The release of GHGs into the atmosphere is caused by both natural processes (such as bushfires) and human activities (e.g. burning fossil fuels and land clearing).

GHG (measured in parts per million (ppm)) have been rapidly increasing since the industrial revolution leading to an increase in the earth's average surface temperature and has contributed to the phenomenon of 'climate change'.

The term 'climate' refers to the typical weather conditions for a specific geographical area, usually averaged over at least 30 years. Climate variability represents the 'normal' day to day seasonal and year to year variability in the components of climate (e.g. temperature, rainfall). However, climate variability may also generate extreme conditions such as flooding, heatwaves and hail which require management.

Climate change is likely to bring about changes in both average climate conditions and the frequency and severity of extreme events. This progressive change has implications for sea levels, ocean temperatures and the functionality of natural ecosystems. Climate change also means that asset owners and managers can no longer rely on prevailing assumptions that climate will be more or less the same as it was over the past 50 or 100 years.

The EIS summarises the key findings on climate change as outlined in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5). The findings include:

- Warming of the climate is unequivocal; the atmosphere and oceans have warmed, the amounts of snow and ice have diminished, and sea level has risen
- Surface temperature is projected to rise over the 21st century. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent. The ocean will continue to warm and acidify, and global mean sea level will rise
- In urban areas, climate change is projected to increase risks for people, economies and ecosystems, including risks from heat stress, storms, extreme rainfall, flooding, water scarcity, sea level rise, and storm surges
- Australia is currently experiencing the effects of climate change, including extreme temperatures, changes to rainfall, frequency and intensity of storm events, increases in bushfire weather, ocean warming and acidification, and sea level rise
- Building adaptive capacity is crucial for effective selection and implementation of adaptation options.

Since the development of the EIS, a gap analysis was performed on the Work conducted during the EIS to ascertain whether or not the IS rating criteria for the credits Cli-1 and Cli-2 had been sufficiently addressed (refer Section 0). This analysis identified the need for updates to the climate variables and climate change projections and associated identification and management of the risks. This updated information is included in the M12 Motorway – West Package 100% Detailed Design Report: Climate change monitoring and adaptive management framework and has been summarised in the following sections.

The existing climatic conditions (Appendix B) represents a historical trend of weather data obtained from an appropriate nearby weather station, expressed as an average value for different climate variables measured at that station. The Orchard Hill Treatment Works weather station (067084) was selected for the climate baseline data due to the dual factors of proximity as well as completeness of data. Notably, the availability of data at Orchard Hill Treatment Works weather station which was significantly higher

than other (closer) weather stations in the area such as Badgerys Creek Automatic Weather station, which although used in the EIS was lacking data on key climate variables.

3.1 Climate change projections

As per AS 5334:2013, Climate change adaptation for settlements and infrastructure – A risk based approach, the climate change projections selected include a medium-term moderate emissions scenario and a long-term high emissions scenario. They include a 2050 projection under Representative Concentration Pathway (RCP) 4.5 and a 2090 projection under a more extreme RCP 8.5. AS 5334 states, this is preferable to provide a range in the data to guide the risk assessment. For comparison, all climate risks were also assessed using the climate baseline data collected from Prospect Reservoir Weather Station.

The RCPs are described according to atmospheric CO2 concentration levels (in ppm), and may also be described by anomalies in global mean surface air temperatures for the period 2081-2100 relative to the average period 1986-2005 (refer Table 3-1). A summary of historical annual trends and projected changes to climate variables for each scenario is provided in Appendix B.

Table 3-1 Climate change projection scenarios

Global climate response	RCP scenario	Project increase in global surface temperature by 2081-2100
Slower response, emissions peak around 2040, then decline.	RCP 4.5, atmospheric concentration of CO_2 projected at approx. 540 ppm by 2100.	Mean projected increase 1.8 °C Anomaly range +1.1 – 2.6 °C
Little curbing of emissions, continuing rapid rise throughout the 21st century.	RCP 8.5, atmospheric concentration of CO_2 projected at approx. 940 ppm by 2100 and continuing to increase.	Mean projected increase 3.7 °C Anomaly range +2.6 – 4.8 °C

4 Climate Change Risk Assessment

A risk assessment was undertaken taking into consideration the requirements of AS 5334:2013, *Climate change adaptation for settlements and infrastructure – A risk based approach* (which follows the risk principles and guidelines of AS 31000:2009, *Risk Management – Principles and guidelines*) and the RMS Technical Guide on *Climate Change Adaptation for the Road Network*.

The assessment built upon the initial climate risk work performed in the EIS, updates were made to the selection of climate variables, as well as baseline and projection data and climate change scenarios used.

The following section provides a summary of the risk assessment relevant to construction only.

4.1 Climate change impacts during construction

Climate change risks relevant to the construction of the Project were determined using climate change projections to the year 2050. A total of 37 risks were identified following the risk assessment completed for M12 West by WSP (2021) for the 100% detailed design. No 'very high' risks were identified, however two 'high' and 21 'medium' risks were identified based on 2030.

Using the risk assessments completed by WSP, it can be concluded that three main risks were identified for construction with a moderate or high risk rating. The risks are outlined in Table 4-1 have been reviewed by CPBGG JV for the construction of M12 West Stage and have been added to the Construction risk register. Adaptation measures associated with the identified risks are detailed in Section 6.

The CCRA will be reviewed periodically to ensure currency based on the latest scientific evidence and research. Where required, the CCRA will be updated, and this CCMAMF will be updated in response, as detailed in Section 6.7.1.

Table 4-1 Climate change risks during construction

Risk scenario	Likelihood	Consequence	Risk rating 2030 (WSP, 2021a)
Increased frequency, severity, and duration of extreme temperatures (days exceeding 35˚C) leading to adverse health impacts for construction workers and potential health and safety incidents.	Possible	Serious	Medium
Increased frequency, severity and duration of extreme precipitation events leading to unsuitable and unsafe conditions for construction to proceed, resulting in an increase in 'stop work' days and subsequent delays to the construction program.	Possible	Serious	Medium
Increased frequency and severity of bushfires leading to smoke generation, resulting in potential health effects for construction workers and health and safety incidents, potential increase in 'stop work' days, and subsequent delays to construction program.	Possible	Major	Medium

5 Climate Change Adaption and Mitigation Measures

The adaptation and mitigation options have been designed to control and minimise the risk of climate change during construction. These options are based on the relevant construction risk scenarios detailed in identified in the Environmental Assessment Documentation and Project CCRAs. The construction risk scenarios include:

- Extreme heat: Increased frequency, severity, and duration of extreme temperatures (days exceeding 35˚C) leading to adverse health impacts for construction workers and potential health and safety incidents.
- Extreme precipitation: Increased frequency, severity and duration of extreme precipitation events leading to unsuitable and unsafe conditions for construction to proceed, resulting in an increase in ‘stop work’ days and subsequent delays to the construction program.
- Bushfires: Increased frequency and severity of bushfires leading to smoke generation, resulting in potential health effects for construction workers and health and safety incidents, potential increase in ‘stop work’ days, and subsequent delays to construction program.

Table 5-1 details the adaptive management options for workplace health and safety and environmental planning during construction that will be implemented by CPBGG JV.

Table 5-1 Climate Change mitigation and adaptation options during construction

ID	Management Measure	When to implement	Responsibility for implementation	Reference of source	Evidence of implementation
CC01	In locating ancillary facilities, the CPBGG JV will consider the risk of flood, strong winds, severe storm events and/or bushfires and consider the requirements detailed in NSW CoA A15-A20	Prior to construction	CPBGG JV ESR CPBGG JV Safety Manager	Section 5 CCRA WHS Protocol	Site planning SEMP FMP CAQMP CSWMP CFFMP
CC02	Prior to attending site, all personnel will undergo induction training detailing the procedures to be undertaken during extreme weather events[2]	Prior to and During construction	CPBGG JV ESR CPBGG JV Construction Manager	Section 5 CCRA WHS Protocol	Induction material CEMP section 3.5 WHS Plan
CC03	Weather conditions will be monitored, and the construction program will be adapted wherever feasible during extreme events	During construction	CPBGG JV ESR CPBGG JV Safety Manager	Section 5 CCRA WHS Protocol	Induction material WHS Plan FMP CAQMP CSWMP
CC04	Stop work protocols will be incorporated into the CPBGG JV project documentation for extreme events and implemented during construction	During construction	CPBGG JV ESR CPBGG JV Safety Manager	Section 5 CCRA WHS Protocol	Induction material WHS Plan FMP CAQMP CSWMP
CC05	CPBGG JV supplied plant materials must be grown by a nursery in a local area of similar climate to the Works.	During construction	CPBGG JV ESR CPBGG JV Landscaping subcontractor	Landscape design and drawings TfNSW Landscape specification R179	Inspection Test plans for landscaping (ITP) Procurement records

[2] An extreme event can be referred to as extreme heat, extreme precipitation, severe storm or wind event and/or bushfire

6 Compliance Management

6.1 Roles and responsibilities

During construction, the Project's organisational structure and overall roles and responsibilities are outlined in Section 3.3 of the CEMP.

Specific responsibilities for the implementation of this Framework are detailed in Section 5.

6.2 Training

To ensure that this Framework is effectively implemented, all site personnel (including sub-contractors) will undergo site induction training that includes climate adaptation and mitigation management procedures to be undertaken during extreme weather events.

Training specific to this Framework will be focused on the adaption measures to be implemented including the Adaptive Management Procedure (EES, 2021) and Stop Work Procedures.

6.3 Communication

The CPBGG JV will adhere to the requirements as outlined in the Overarching Communication Strategy (OCS). The OCS identifies opportunities and tools for providing information and consulting with the community and stakeholders during the construction of the Project. Climate change management information will be communicated to the community and stakeholders in accordance with the principles and procedures outlined in the OCS where required. Further detail about the OCS is provided in Section 3.7.3 of the CEMP.

6.4 Monitoring and inspection

Monitoring of climate change adaptation measures is required to ensure the Project maintains resilience to climate change impacts to minimise adverse impacts on personnel's health during construction and operation, the public's health during operation and delays to construction program.

As defined by the NSW Environment, Energy and Science (EES), "Adaptive management is a procedure for implementing management while learning about which management actions are most effective at achieving specified objectives. Adaptive management is often referred to as structured 'learning by doing'." [1]

A list of monitoring activities and evaluation criteria are specified in Table 6-1. These activities and criteria will be supplemented during construction by the measures outlined in the Construction Environmental Management Plan (CEMP) and Sub-plans, as well the Sustainability Management Plan.

By undertaking monitoring, and analysing and evaluating monitoring data, this enables the Project to plan, manage and evaluate the effectiveness of adaptation measures during construction and operation implement changes, as required.

[1] Adaptive Management definition sourced from NSW EES
https://www.environment.nsw.gov.au/research/adaptive-management.htm

Table 6-1: Monitoring activities

Performance monitoring criteria	Monitoring measures	Timing	Responsibility
Evaluate effectiveness of communicating upcoming extreme climate to personnel and planning for delays to program	Monitor weather forecast to check for upcoming days with predicted extreme heat, extreme precipitation, and bushfire warnings to enable wet weather procedures or stop works to be enacted	Daily	CPBGG JV ESR CPBGG JV Safety Manager
If construction ancillary facilities have been affected by severe storms, or have the potential of	Site inspection to be undertaken in accordance with the Construction Soil	Before, during and after rainfall	CPBGG JV ESR CPBGG JV Safety Manager

Performance monitoring criteria	Monitoring measures	Timing	Responsibility
flooding consider relocation or additional weather protection	and Water Management Plan (CSWMP) before, during and after rainfall events. Inspections and planning for potential flooding events to occur in accordance with the Flood Management Plan (FMP)		
Determine if the WHS practices are effective in preventing personnel health impacts, if not, implement improved protocols	Monitor effectiveness of workplace health and safety practices, including stop work protocols, to be reviewed after the event of extreme heat days	After days exceeding 35˚C	CPBGG JV Safety Manager
Evaluate health and wellbeing of personnel on extreme heat days and determine if additional protocols shall be implemented to minimise health risk	Monitor the health and wellbeing of personnel on high heat days and determine whether stop work protocols should be implemented	Days exceeding 30˚C but under 35˚C	CPBGG JV Safety Manager

6.4.1 Stop Work Protocols

Stop works protocols associated with Climate Change Risks are contained within a number of project documents as detailed in table

Table 6-2 – Stop Work Protocols

Management Plan	Stop Work Protocol	Summary
Workplace Health and Safety Management Plan	• Extreme Heat – risk to workers • Hot works – Fire risk • Wind speed – Cranage activities	Includes protocols to stop works when temperature and wind forecasts pose a significant risk to workers safety
Emergency Response Management Plan (ERMP)	Climate associated emergencies including; Flood, Fire	Includes requirements to stop works, ensure property and personnel safety and evacuation.
Construction Soil and Water Management Plan (CSWMP) and Pollution Incident Response Management Plan (PIRMP)	Storm and rainfall events – offsite water pollution risks	Includes requirements to stop activities that have the potential to cause pollution and implement mitigation measures to prevent material harm.
Construction Flood Management Plan (FMP)	Extreme rainfall and potential flood events – pollution and health and safety of workers	Includes requirements to stop works and prepare the construction site for potential flood events
Construction Air Quality Management Plan (CAQMP)	Wind conditions – offsite dust impacts	Includes requirements to stop dust generating activities during high winds when the dust cannot be controlled to prevent offsite impacts.

6.5 Auditing

Audits (both internal and external) will be undertaken to assess the effectiveness of climate change management measures, in accordance with CEMP and other relevant approvals, licenses and guidelines. Audit requirements are detailed in Section 3.9.3 of the CEMP.

6.6 Reporting and identified records

Reporting requirements and responsibilities are documented in Section 3.9 of the CEMP.

This Framework forms part of the CEMP, as such the CPBGG JV will be maintain accurate records substantiating all construction activities associated with the Project, including measures taken to implement this Framework.

6.7 Periodic review

6.7.1 Climate change risk assessment review

The IPCC Sixth Assessment Report (AR6) was released in August 2021 and the IPCC Synthesis Report is due to be released in 2022. The CCRA will be reviewed against this new climate change data upon release of these reports to identify any new climate change risks and determine additional adaptation measures to be implemented for design, construction, and operations.

A Climate Change Risk Workshop will be organised as part of this CCRA review. The workshop will include a multi-disciplinary team of design and construction staff and TfNSW representatives.

Periodic review of the CCRA will also be undertaken following any design changes that arise during construction and assess if changes will impact the risks or adaptation identified and generate new risks to the Project.

A copy of the updated CCRA identifying changes to the Project's climate change risks and adaptations shall be distributed to all relevant stakeholders. Relevant stakeholder are identified in the Overarching Communication Strategy (OCS) and they include;

- The NSW Department of Planning and Environment (DPE)
- Liverpool City Council
- Penrith City Council
- NSW Environmental Protection Agency (EPA)

Updates to the CCMAMF will follow any updates to the CCRA.

6.7.2 CCMAMF review

Periodic reviews (both annually and when required) will be undertaken and implemented for improvements to this Framework during construction. Continuous improvement will be achieved by the ongoing evaluation of climate change monitoring activities and updates to climate change data. Further detail on periodic review of this Framework can be found within the Sustainability Strategy.

Appendix A Secondary CoAs and REMMs

CoAs

CoA	Requirement	Document Reference
E91	A Sustainability Strategy must be prepared to achieve a minimum excellent 'Design' and 'As built' rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Section 1.3.2 Sustainability Strategy
E92	The Sustainability Strategy must be submitted to the Planning Secretary before the commencement of construction and must be implemented throughout construction and operation.	Section 1.3.2 Sustainability Strategy

REMM

REMM No.	Requirement	Document Reference
CC03	An adaptive management approach will be applied to workplace health and safety planning during construction and operation in line with the WHSMP. This will include use of TfNSW Work Health and Safety Procedures.	Section 5
SU01	A sustainability management plan for the project will be developed and implemented during detailed design, to give effect to the sustainability strategy for the project. The management plan will detail measures to meet the sustainability objectives and targets and Infrastructure Sustainability rating tool credit requirements.	Sustainability Strategy

Appendix B Climate baseline and projection data

The table below has been sourced from the M12 West 100% Detailed Design climate change monitoring and adaptive framework report (WSP, 2021).

Variable	Current Climate*		Climate Change Predictions		Source
	Prospect Reservoir Weather Station	Baseline Period	General Trend	Near term, moderate scenario 2030, RCP 4.5	
Temperature					
Mean maximum daily temperature (°C) – Annual	23.3	1986-2005	↑	+1.3 (1 to 1.9) i.e. 24.6°C (24.3 to 25.2)	1,2
Mean maximum daily temperature (°C) – Summer (DJF)	28.1	1986-2005	↑	+1.3 (0.8 to 2.2) i.e. 29.4°C (28.9 to 30.3)	1,2
Mean minimum daily temperature (°C) – Annual	12.2	1986-2005	↑	+1.3 (0.9 to 1.6) i.e. 13.4°C (13.1 to 13.8)	1,2
Days p.a. over 35°C	10.5	1986-2005	↑	16.3 days	1,2
Days p.a. over 40°C	1.0	1986-2005	↑	2.4 days	1,2
Days p.a. below 2°C	2.5	1986-2005	↓	0.45 days	1,2
Days p.a. below 0°C	0.1	1986-2005	↓	0 days	1,2
Highest temperature for baseline 1986-2005 (°C)	44.7 15 Jan 2001	Discrete event	↑	+1.8 (0.6 to 2.1) i.e. 46.5°C (45.3 to 46.8)	3
Highest temperature for years on record at AWS (°C)	45.3 7 Jan 2018	Discrete event		N/A	
Lowest temperature for baseline 1986-2005 (°C)	-0.5 13 August 2005	Discrete event	↑	+1.2 (0.5 to 1.4) i.e. 0.7°C (0 to 0.9)	3
Lowest temperature for years on record at AWS (°C)	-0.8 30 June 2010	Discrete event		N/A	
Precipitation					
Mean Rainfall (mm) - Annual	879.4	1986-2005	↑↓ Seasonal variation	+0.5% (-11.4 to 7.7) i.e. 883.4 mm (778.9 to 946.7)	1,2
Mean Rainfall (mm) – Spring (SON)	181.1	1986-2005	↓	-0.2% (-18.9 to 12.1) ie 180.7 mm (147 to 203.1)	1,2
Mean Rainfall (mm) – Summer (DJF)	289.5	1986-2005	↑	+4.1% (-9.9 to 19.4) i.e. 301.4 mm (260.8 to 345.6)	1,2
Mean Rainfall (mm) – Autumn (MAM)	245.1	1986-2005	↓	-2.6% (-17 to 18.3) i.e. 238.7 mm (203.3 to 289.8)	1,2

Variable	Current Climate*		Climate Change Predictions		Source
	Prospect Reservoir Weather Station	Baseline Period	General Trend	Near term, moderate scenario 2030, RCP 4.5	
Mean Rainfall (mm) – Winter (JJA)	163.7	1986-2005	↓	-5% (-19.6 to 8.3) i.e. 155.5 mm (131.7 to 177.3)	1,2
Highest daily rainfall event (mm) for baseline 1986-2005	321.0 06 Aug 1986	1986-2005	↑	+4.4% (-1.5 to 13.5) i.e. 335 mm (316.3 to 364.5)	3
Highest daily rainfall (mm) for years on record at AWS	321.0 06 Aug 1986	Discrete event		N/A	
Maximum 1 day rainfall for a 20 year ARI event	N/A	N/A		+9.8% (-1.7 to 22.9)	3
Extreme events					
Severe fire danger days per year	1.1	1986-2005	↑	1.2 to 1.5 days*	4
Lightning	20-25 thunder days per year	1990-1999	↑	5-6% increase per °C warming i.e. 7% to 8.4% increase in 6,7 lightning frequency	6,7
Soil					
Soil moisture	N/A	1986-2005	↓	-2.1% (-10.2 to 2)%*	1
Daily variables					
Evapotranspiration (%)	N/A	N/A	↑	+5.4% (3 to 6.9)	1
Maximum wind gust speed (km/h) for years 2003-2005	89.0	2003-2005	↑	N/A	5
Avg. 9 am wind speed (km/h)	9.6	1986-2005	↓	-1.3% (-4.6 to 0) i.e. 9.4 km/h (9.1 to 9.6)	1,2
Avg. 3 pm wind speed (km/h)	15.1	1986-2005	↓	-1.3% (-4.6 to 0) i.e. 14.9 km/h (14.4 to 15.1)	1,2
Avg. 9 am relative humidity (%)	73.5	1986-2005	↓	-0.4% (-1.6 to 1.3) i.e. 73.1 % (72.3 to 74.4)	1,2
Avg. 3 pm relative humidity (%)	50.5	1986-2005	↓	-0.4% (-1.6 to 1.3) i.e. 50.3 % (49.7 to 51.2)	1,2
Mean daily solar exposure (MJ/(m*m))	16.4	1990-2005	↑	+0.5% (-0.6 to 2.2) i.e. 16.5 MJ/(m*m) (16.3 to 1, 2 16.7)	1,2

Notes:

1 CSIRO BOM 2015, Climate Change in Australia Projections Cluster Report - East Coast, Appendix Table 1c East Coast South

2 CSIRO BOM 2015, Climate Change in Australia Summary Data Explorer, East Coast Cluster Projections

3 CSIRO BOM 2015, Climate Change in Australia Extremes Data Explorer, East Coast Cluster Projections

4 CSIRO BOM 2015, Climate Change in Australia Projections Cluster Report - East Coast, Appendix Table 2, Projections and baseline for Canberra

5 CSIRO BOM 2015, Climate Change in Australia Projections Cluster Report - East Coast, Figure 4.4.2

6 State of NSW and Department of Environment, Climate Change and Water 2010, Impacts of Climate Change on Natural Hazards Profile, Sydney/Central Coast Region

7 IPCC, 2013: Summary for Policymakers. In: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K.]

** Projection data was not available for RCP 4.5 2050 therefore RCP 4.5 2030 was used as the closest available proxy*

NB: Severe fire danger days per year based on Forest Fire Danger Index >50. Based on three climate models given as range from lowest to highest value of 3 projections

NB: Highest temperature recorded in baseline period uses CSIRO projection for 'hottest day' for summer (DJF)

NB: Highest daily rainfall provides indication of change to most extreme annual rainfall event using CSIRO 'wettest day' projections (annual)

NB: all projections use global climate models from the IPCC's Fifth Assessment report, excepting hail and lightning projections

Appendix A11 – Initial Training Plan

Note: TBD = To be determined through inspections, performance reviews, monitoring and auditing systems.	Site induction	Incident response and notification	Erosion and sedimentation management	Environmental monitoring	Heritage management	Flora and fauna management	Identified environmental management skills	Environmental due diligence
Management								
Project Director	✓	✓					TBD	✓
Construction Manager	✓	✓			✓	✓	TBD	✓
Commercial Manager	✓						TBD	✓
Health and Safety Manager	✓						TBD	✓
Environment Manager	✓	✓	✓	✓	✓	✓	TBD	✓
Line management								
Project Engineers	✓	✓	✓		✓	✓	TBD	✓
Site Engineers	✓	✓	✓		✓	✓	TBD	✓
Superintendent	✓	✓	✓		✓	✓	TBD	✓
Remaining site personnel								
Administration Staff	✓	✓					TBD	✓
Leading Hands	✓	✓	✓		✓	✓	TBD	✓
Labourers	✓	✓	✓		✓	✓	TBD	✓
Subcontractors Note: Training will be determined on signing of contract – however the following training requirements are likely.	✓	✓	✓		✓	✓	TBD	✓
Environmental Coordinators/Advisors	✓	✓	✓	✓	✓	✓	TBD	✓

Appendix A12 – Elements and Expectations

The CPBGG JV's approach to environmental management is based on a set of 12 Elements derived from the adopted CPB EMS that describe the requirements for environmental mitigation. Each Element is supported by a set of Expectations or key outcomes to be delivered as part of that Element.

- Element – Key aspects for managing this function on the Project
- Expectation – The outcomes achieved as part of each Element

This two-level hierarchy provides a consistent approach that is applied across all Management Plans on the Project. Those Elements are

Element and Expectations	Where addressed in CEMP
Element 1 – Leadership, Accountability and Culture	
All staff, employees and subcontractors will actively drive continuous improvement in the environmental performance of the Works.	
1.1. Environmental leadership and commitment are demonstrated through participation in environmental management	Appendix A3
1.2. Environmental accountabilities, roles and responsibilities for managers, staff, employees are clearly defined, documented and communicated	Section 3.3
1.3. Environmental leadership and commitment is demonstrated through measurable participation in environmental management	Section 3.3
1.4. Environmental expectations are clearly defined with appropriate reward and disciplinary processes in place.	Section 3.3
Element 2 - Planning	
CPBGG JV will formally and systematically plan and manage for environmental and sustainability performance	
2.1. Adequate resources are provided to effectively implement the CEMP	Section 3.3
2.2. IT systems are defined and established	Project Management Plan
2.3. Identify Significant Environmental Aspects	Appendix A2
2.4. Environmental Sub-plans are prepared and maintained	Appendix B
Element 3 - Legal and Other Requirements	
CPBGG JV will identify and comply with contractual requirements and all applicable environmental legislation, standards and codes of practice.	
3.1. Relevant legal, contractual and other requirements are identified and maintained in a legal and other obligations register	Appendix A1
3.2. All necessary environmental approvals are obtained prior to commencing relevant works and surrendered on completion	Appendix A1
3.3. Work is planned and executed to ensure compliance	Appendix A1

Element and Expectations	Where addressed in CEMP
3.4. Inspections, observations and monitoring are performed	Section 3.9
3.5. All non-compliances are recorded and corrective/preventative actions implemented	Section 3.10
3.6. All energy and greenhouse data are collected and entered into JDE	Section 3.9.5 3.9.5
3.7. Personnel on the site have access to current versions of relevant legislation, standards and codes of practice	Section 5 Appendix A1
Element 4. Risk and Opportunity Management	
CPBGG JV will use a risk management approach during all stages of the Works to identify, assess, control and review environmental risks and harness opportunities.	
4.1. Systematic processes are implemented for identifying environmental risks and opportunities at all stages of the Project	Appendix A2
4.2. Identified risks and opportunities are evaluated according to agreed criteria and recorded	Appendix A2
4.3. Environmental controls appropriate to the level of risk are identified, documented and implemented	Appendix A2
4.4. Feasible opportunities are implemented	Appendix A2
4.5. Identified environmental risks and controls are communicated to all relevant personnel	Section 3.3
4.6 Environmental risks and controls are regularly reviewed.	Section 3.2.1
Element 5. Change Management	
CPBGG JV will identify and manage environmental consequences arising from permanent and temporary changes to the Works.	
5.1. Changes to planned operations that have potential environmental consequences are identified	Section 3.13.2
5.2. Risks associated with identified changes are assessed and controlled before changes are implemented	Section 3.13.2
5.3 All changes with environmental consequences are authorised before they are implemented	Section 3.13.2
5.4. Controls associated with change are communicated to all affected personnel.	Section 3.13.2
Element 6. Communication and Consultation	
CPBGG JV will effectively and openly communicate and consult with external and internal stakeholders to create an environment of trust, openness and involvement.	
6.1. CPBGG JV will create a culture of collaboration across all functional disciplines	Section 3.7.1
6.2. External Environmental stakeholders are identified	Section 3.7.2
6.3. Relationships with external stakeholders are effectively managed	Section 3.7.2
6.4. Internal consultative forums are established with regular meetings scheduled, conducted, documented and communicated	Section 3.1
6.5. Environmental complaints and enquiries are recorded and responded to appropriately	Section 3.7.5
6.6. The effectiveness of internal and external stakeholder engagement is evaluated and improved	Section 1.5.3

Element and Expectations	Where addressed in CEMP
6.7. Share knowledge from lessons learnt internally and consider the need for knowledge sharing with stakeholders and the construction industry	Section 3.7
Element 7. Training and Competency	
CPBGG JV will ensure that Works personnel can competently perform their duties and meet environmental obligations.	
7.1. All personnel have completed an induction containing relevant environmental information before they are authorised to work on the Project	Section **Error! Reference source not found.**
7.2 A training matrix is developed and documented	Section **Error! Reference source not found.**
7.3. Personnel are trained and assessed according to the training plan	Section **Error! Reference source not found.**
7.4. Training records are maintained and accessible to relevant personnel.	Section **Error! Reference source not found.**
Element 8. Subcontractor Relationships	
CPBGG JV will build effective relationships with our subcontractors to ensure they positively contribute to the environmental management and performance of the Works.	
8.1. Selection processes ensure that subcontractors meet CPBGG JV minimum environmental requirements	Section 3.5
8.2. Planning requirements of all subcontractor work scopes are completed and communicated prior to commencing work	Section 3.5
8.3 Compliance requirements for high risk environmental activities are identified and enforced	Section 3.5
8.4 Subcontractor documentation is submitted and reviewed to meet Project requirements	Section 3.4
8.5 Changes to the scope of work are managed as a Project change	Section 3.13
8.6 Subcontractors actively participate in environmental management and training on the Project	Section 3.4
8.7 Subcontractors are reviewed to assess their performance and compliance with our minimum environmental requirements	Section 3.4
Element 9. Incident Management	
CPBGG JV will effectively respond to, report, and investigate all incidents. CPBGG JV will take appropriate corrective and preventative actions and share associated lessons.	
9.1. All incidents are followed by appropriate response and notification	Section 3.8
9.2. All incidents are entered and managed in Synergy	Section 3.8
9.3. Incident investigations are conducted appropriate to the type of incident	Section 3.8
9.4. All personnel conducting incident investigations are trained to competently perform the task	Section 3.3
9.5. Corrective and preventative actions are taken after incidents and lessons are shared with other projects	Section 3.8
9.6. Repeat incidents are regularly reviewed by the project management team.	Section 3.8

Element and Expectations	Where addressed in CEMP
Element 10. Emergency Planning and Response	
CPBGG JV will actively prepare for and respond to emergencies.	
10.1. Potential emergencies are identified using a formal risk assessment process	Section 3.8 and Emergency Response Plan
10.2. Emergency Response Plans and procedures are developed and regularly reviewed	Emergency Response Plan
10.3. Adequate resources are provided to effectively implement Emergency Response Plans and procedures	Emergency Response Plan
10.4. Environmental emergency response drills are conducted	Emergency Response Plan
10.5. Employees, contractors and visitors are given appropriate emergency response training.	Emergency Response Plan
Element 11. Document and Record Management	
CPBGG JV will maintain accurate documents and records relevant to our environmental management system.	
11.1. Current versions of all relevant documents and records are available and controlled	Section 3.11
Element 12. Auditing, Review and Improvement	
CPBGG JV will continually improve our environmental systems and environmental performance by monitoring and reviewing their effectiveness.	
12.1. Environmental performance trends are identified and corrective actions are implemented as required	Section 3.9.5
12.2. A monthly environmental report is produced and distributed	Section 3.9.5
12.3 Regular management reviews are conducted to determine the continuing suitability, adequacy and effectiveness of the Environmental Management	Section 3.12
12.4. Audits are undertaken to ensure compliance with the requirements of the CEMP	Appendix A8
12.5 All audits are undertaken by suitably qualified and experienced personnel	Appendix A8

Appendix A13 – Sustainability Policy

CPBGG JV is committed to ensuring sustainability is considered in all aspects of construction of the M12 West Motorway Project. CPBGG JV will endeavour to identify and implement opportunities that create efficiencies, reduce the projects ecological footprint and provide benefits to the community.
CPBGG JV has adopted the TfNSW Environment and Sustainability Policy to be a guiding policy (see **Appendix A**) for the Project and has adopted the relevant objectives and targets focused under the Roads and Maritime Services (RMS) or TfNSW Environmental Sustainability Strategy 2019-2023 and Sustainability Plan 2021 (*note that TfNSW and RMS have recently combined into one overarching TfNSW Government Agency*).

Transport Environment and Sustainability Policy

The Transport Environment and Sustainability Policy and Sustainability Plan 2021 outline that "Transport for NSW, together with its key agencies NSW Trains, Sydney Trains, Roads and Maritime Services and State Transit Authority are committed to delivering transport services, projects, operations and programs in a manner that balances economic, environmental and social issues to ensure a sustainable transport system for NSW". This will be achieved by working towards:

- Minimising impacts on the environment, whether through transport operations, infrastructure delivery,
- maintenance or corporate activities,
- Procuring, delivering and promoting sustainable transport options that promote value for money
- Complying with relevant legislation,
- Developing, expanding and managing the transport network in a sustainable and climate change
- resilient way.

The Transport Environment and Sustainability Policy is a key strategic and regulatory driver of RMS's Environmental and Sustainability Strategy, discussed below.

RMS (TfNSW) Environmental Sustainability Strategy 2019-2023

RMS, under the umbrella of TfNSW, oversees $94.4billion worth of road and maritime assets, which cover about six per cent of the State's landmass and represent about 26 per cent of the State's infrastructure. To meet the growing needs of the State they deliver new and improved transport links. TfNSW Environmental Sustainability Strategy 2019–2023 builds on the achievements from previous strategies:

- Roads and Maritime Services Environmental Sustainability Strategy 2015–2019.
- Towards a More Sustainable RTA; RTA's Environmental Sustainability Strategy 2010.

The Environmental Sustainability Strategy 2019–2023 identifies 10 focus areas to embed into the delivery of infrastructure and services. This is aimed at building sustainability awareness and capacity in the workforce and improving the environmental performance of workplaces. Each focus area outlines a commitment to mitigate negative environmental, social and economic impacts including but not limited to:

- Minimise energy use and reduce carbonemissions,
- Minimise air quality, noise, water and land
- pollution,

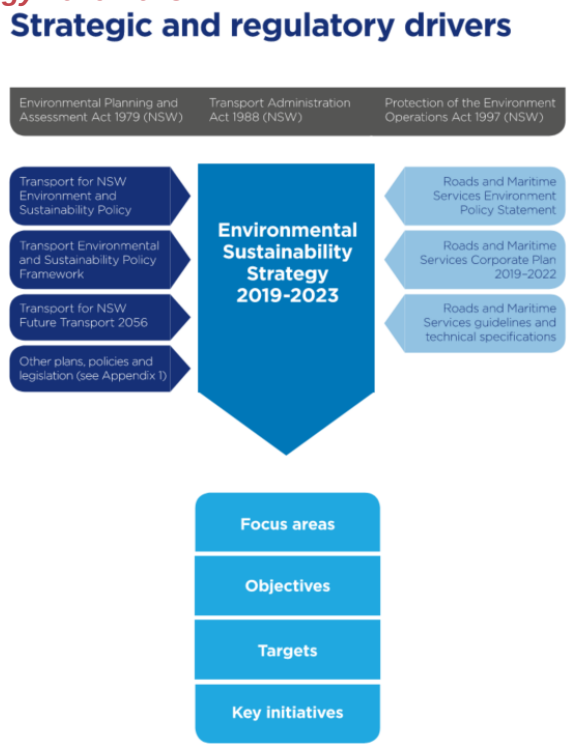

Figure 10 RMS Environmental Sustainability Strategy

- Provide high quality urban design outcomes that contribute to the sustainability and liveability of
- communities in NSW,
- Procure goods, services, materials and works that deliver value for money and contribute to
- environmental, social, and economic wellbeing of the community.

The Strategy addresses a range of legislative requirements and adopts key State Government policies and plans. The strategic and regulatory drivers for the Strategy are illustrated above in **Figure 2-1**. CPB Contractors is also governed by its own organisational policies which form part of the CPB Sustainability Management System and the CIMIC Group Management System (parent company of CPB Contractors). All personnel involved in the delivery of the Project have shared responsibility to actively contribute to the achievement of this policy.

Transport Sustainability Plan 2021

TfNSW have a sustainability vision of creating a NSW where *every journey is people and planet positive*. In 2020, TfNSW have updated its sustainability strategy and developed the Transport Sustainability Plan 2021 which highlights eight (8) focus areas (illustrated below in Figure 2-2) with supporting sustainability goals to address the most important sustainability aspects associated with activities of Transport and where they will concentrate their attention and resources on. The Plan provides a uniform approach to sustainability that embeds sustainability in the decision making process and builds a transport system that is resilient to future shocks and stresses.

Figure 6Key Focus Areas Trasnport Sustainability Plan 2021

The M12 Motorway Sustainability Strategy has developed key focus areas, objectives, initiatives and target themes to align with the Transport Sustainability Plan 2021.

Appendix B

This is provided separately.

Appendix B1 – Construction Traffic and Transport Management Sub-Plan
Appendix B2 – Construction Flora and Fauna Management Sub-Plan
Appendix B3 – Construction Contaminated Land Management Sub-Plan
Appendix B4 – Construction Noise and Vibration Management Sub-Plan
Appendix B5 – Construction Waste and Resource Management Sub-Plan
Appendix B6 – Construction Air Quality Management Sub-Plan
Appendix B7 – Construction Cultural Heritage Management Sub-Plan
Appendix B8 – Construction Soil and Water Management Sub-Plan
Appendix B9 – Construction Flood Management Plan
Appendix B10 – Site Establishment Management Plan