Jake Shackleton
Director, Infrastructure Management
Planning, Industry and Environment
4 Parramatta Square, 12 Darcy Street
Parramatta NSW 2150

Via email: jake.shackleton@planning.nsw.gov.au

1 November 2021

Dear Jake,

The Northern Road Upgrade (SSI 7127) Environmental Management System (Condition D1 – D8) – Request for extension of time to submit required documentation

Condition D1 – D8 of Infrastructure Approval SSI 7127 requires Transport for NSW (TfNSW) to submit the Environmental Management System (EMS) or equivalent to the Secretary no later than one month before the commencement of operation unless another timeframe is agreed with the Secretary. The Northern Road is anticipated to be open to traffic in mid-November 2021. However TfNSW will not be able to meet this timeframe due to the following:

- A new Service Provider, Ventia has been engaged to provide maintenance services for the Sydney West Zone. Ventia will therefore be the maintenance contractor for The Northern Road. Ventia was engaged as the new Service Provider for this area in June 2021.
- Ventia's systems are being prepared in accordance with the TfNSW *QA Specification G36SRAP.* The specification requires the following environmental management documentation:
  1. Business specific Environmental Management System (EMS)
  2. Business specific Environmental Plan (BEMP)
  3. Where required project specific Construction Environmental Management Plans and Work Method Statements.
- Ventia has prepared the BEMP and is currently in the process of preparing their EMS to be specific to the Sydney West Zone. Currently TfNSW is unable to provide the Department with a final version of the EMS. In the interim Ventia will be working under the BEMP to manage any works within the area.
- It is anticipated that Ventia's EMS will be available by the second half of 2022.

TfNSW requests an extension to submit the required EMS by August 2022.

For the first 12 months post operation the construction contractor (Georgiou Group and CPB) will maintain The Northern Road Project in accordance with existing approved CEMP. If Ventia is required to undertake works on The Northern Road they will carry out these works under the BEMP.

The BEMP is the overarching component of the Ventia EMS. The flow chart in Attachment A outlines how the EMS and BEMP operate. The BEMP will be complemented with supporting environmental management documents which include sub- plans and procedures, listed in Section 3.3 of the BEMP. Refer to Attachment B for a full copy of the current BEMP. The purpose of the BEMP is to outline the resources, processes and procedures required to deliver the maintenance services in accordance with TfNSW *QA Specification* G36SRAP. The BEMP outlines Ventia's approach and strategies to avoid or mitigate any detrimental effects on the environment.

Transport for NSW has prepared a compliance table outlining how each operational condition of approval and mitigation measure will be complied with during the transition period. See Attachment C. Transport for NSW is committed to ongoing compliance with the conditions of approval during operation.

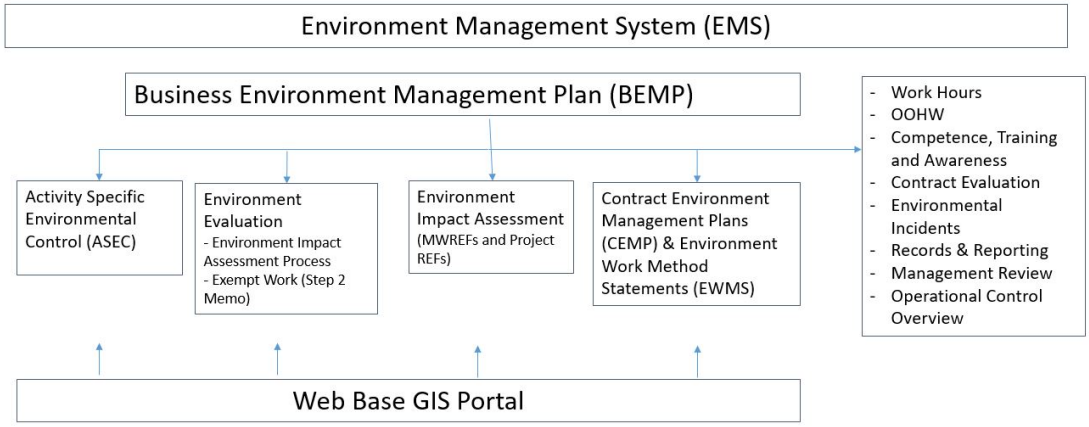
Transport for NSW will make the BEMP available on the project website and commits to providing DPIE with monthly updates on the progress of the completion of the Ventia EMS.

Should you require any further information regarding the above matter, please contact Kimberley Holliday, Senior Environment Officer, on 0439 746 184 or by email Kimberley.Holliday@transport.nsw.gov.au.

Yours Sincerely

Jeffrey Gilham
Senior Project Manager
Western Sydney Project Office
Transport for NSW

Attachment A - Flow chart showing EMS and BEMP structure



Attachment B - Ventia BEMP Version 4

SRAPC PARKLANDS ENVIRONMENTAL MANAGEMENT PLAN

Sydney Roads Asset Performance Contracts

Contract Number: 19.0000302968.1752

TABLE OF CONTENTS

REVISION HISTORY

Revision

The latest version of this Plan will be available on the project management system for Ventia personnel to access.

The Contract Manager is responsible for ensuring that this plan is reviewed and approved.

The Quality and Assurance Manager is responsible for updating this plan to reflect changes to legal and other requirements as required.

Issue authority

This plan is a mandatory document and is issued under the authorisation of the Contract Manager. As such, the processes, procedures, practices and methods of control defined herein shall be complied with by all personnel engaged on the project and cannot be amended without the agreement of the Contract Manager and the Client's Representative.

This plan shall be subject to periodic review (in conjunction with internal audits and management review) and if required, amended to reflect changes in contractual or management requirements or to correct disparity identified during auditing.

Amendment

Each revision of the Plan will be distributed to all registered copyholders with an instruction that the superseded copy be destroyed.

Revision changes will be identified and listed in the table below. When amendments occur, the entire document will be reissued with revision number updated accordingly.

Prior consultation and acceptance will be sought from the client prior to submitting any amendments of this plan.

Table 1-1: Document Control

REVISION	DATE	DESCRIPTION	AUTHOR
1	16/02/2021	Issued for draft 1 review	Alex Ross
2	26/03/2021	Issued for draft 2 review	Alex Ross
3	05/05/2021	Issued for draft 3 review	Alex Ross/Grace Corrigan
4	02/06/2021	Issued for draft 4 review	Alex Ross

DEFINITIONS AND ABBREVIATIONS

ABBREVIATIONS	DEFINITION
FMECA	Failure Mode Effects and Criticality Analysis
ICAC	Independent Commission Against Corruption
ITS	Intelligent Transport System
MoU	Memorandum of Understanding
OHS&R	Occupational Health, Safety and Rehabilitation
PSMC	Performance Specified Maintenance Contract
RFT	Request for Tender
ROI	Registration of Interest
SP	Special Project
SPP	Special Project Proposal
SRAPC	Sydney Roads Asset Performance Contract
TAMP	Tactical Asset Management Plan
TfNSW	Transport for New South Wales
TMC	New South Wales Transport Management Centre
TMU	Traffic Monitoring Units
VMS	Variable Message Signs
VSLS	Variable Speed Limit Signs
WH&S	Work Health and Safety

COMPLIANCE TABLE

REQUIREMENTS FOR PART 4: ENVIRONMENTAL MANAGEMENT PLAN			RETURNABLE INFORMATION REFERENCE
Clause Ref.		**Requirements**	**Section**
		The Environmental Management Plan identifies:	
Schedule 2 Clause 3.7.1	▪	The Service Provider must implement an Environmental Management System (EMS) that complies with the NSW Government Environmental Management Systems Guideline, apply best practices as per ISO 14001 Environmental Management Systems Requirements and conforms to the requirements of TfNSW Specification G36SRAPC, including the preparation of an Environmental Management Plan	Section 4
Schedule 2 Clause 3.7.2	▪	The Environmental Management Plan shall describe in detail the Service Provider's approach and strategies to avoid or mitigate any detrimental effects on the environment in fulfilling obligations under the SRAP Contracts. The plan should define the environmental responsibilities of the Service Provider and each position within the Service Provider's management team including key personnel, authority and roles of key personnel, lines of responsibility and communication, minimum skill levels of each role and interfaces with the overall organisational structure	Section 5
Schedule 2 Clause 3.7.3	▪	The Environmental Management Plan shall describe in detail the Service Provider's approach and strategies to perform the following key functions	Section
Schedule 2 Clause 3.7.3 (a)	▪	Identification of environmentally sensitive areas;	Section 6
Schedule 2 Clause 3.7.3 (b)	▪	Cooperation and coordination with environmental response and regulatory agencies;	Section 7.2
Schedule 2 Clause 3.7.3 (c)	▪	Identification and assessment of environmental impacts;	Section 6
Schedule 2 Clause 3.7.3 (d)	▪	Development and implementation of mitigation measures;	Section 8.1
Schedule 2 Clause 3.7.3 (e)	▪	Development and implementation of monitoring programs;	Section 8.2
Schedule 2 Clause 3.7.3 (f)	▪	Review of effectiveness of mitigation measures;	Section 8.3
Schedule 2 Clause 3.7.3 (g)	▪	Development and implementation of environmental incident response measures; and	Section 9
Schedule 2 Clause 3.7.3 (h)	▪	Quality control processes for environmental management	Section 10

REQUIREMENTS FOR G36SRAP SPECIFICATION		RETURNABLE INFORMATION REFERENCE
Clause Ref.	**Requirements**	**Section**
Clause 2	Environmental Management System To be developed for work under the contract and accredited to ISO 14001:2015	4
Clause 3	Environmental Assessment	
	3.2 Activity Specific Environmental Control (ASEC) Documents	6.3
	3.3 Environmental Evaluation	6.4
	3.4 Environmental Assessment	6.4
	3.5 Environmental Assessment Process	6.4
Clause 4	4.2 Environmental Management Plan	4.3
	4.3 Business Specific Environmental Management Plan (BEMP)	4.3
	4.4 Construction Environmental Management Plan (CEMP)	8.1.3
	4.5 Preparation of documents	2 & 4
	4.6 Submission of documents	2.3
	4.7 Implementation and update of Documents	4
Clause 5	Regulatory Requirements	5.3
Clause 6	Working Hours	5.6
Clause 7	Communications	7
Clause 8	Environmental Assurance	
	8.1 Resources, Responsibilities and Authorities	5.7.1
	8.2 Competence, Training and Awareness	10.3
	8.3 Selection and Management of Subcontractors	10.2
	8.4 Planning and Risk Management	10.4
	8.5 Contractor's Monitoring, Inspection and Auditing	10.1
	8.6 Principal's Surveillance, Inspection and Auditing	10.1
	8.7 Environmental Non-conformance	10.1
	8.8 Environmental Incidents	9.2
	8.9 Records and Reporting	10.5
	8.10 Waste and Beneficial Reuse Reporting	10.5.2 & 4.3.8
	8.11 Management Review	10.5.5
Clause 9	Operational Control	
	9.1 Site Boundary Delineation	6.4.1
	9.2 Site Shutdown	9.2.3
	9.3 Environmental Emergency Planning and Response	9
	9.4 Soil and Water Management	4.3.1
	9.5 Acid sulfate Soils	4.3.2
	9.6 Contaminated Land	4.3.3
	9.7 Spill Prevention and Response	9.2.2
	9.8 Air Quality	4.3.4
	9.9 Fire Safety	4.3.11
	9.10 Noise and Vibration	4.3.5 & 6.4.6
	9.11 Biodiversity	4.3.6

	9.12 Pesticides	
	9.13 Aboriginal Heritage	4.3.7
	9.14 Non-Aboriginal Heritage	4.3.7
	9.15 Waste and Materials Management	4.3.8
	9.16 Sustainability	4.3.9
	9.17 Traffic and Transport	4.3.11
	9.18 Landscape Character and Visual Amenity	4.3.11
	9.19 Socio-economic	4.3.11
	9.20 Environmentally Sensitive Areas	6.2
	9.21 Site Facilities	6.4.1 & 4.3.10
	9.22 Restoration of site	4.3.10
Clause 10	Web based GIS Portal	6.5
	10.1 Provide a Geospatial Information Capacity	
	10.2 Environmental Application	
	10.3 Coordinate System	
	10.4 Geometry and Schema	
	10.5 GIS Layers	
	10.6 Digital File naming	
	10.7 Data Forms	
	10.8 Metadata	
	10.9 Data Exchange	

ACKNOWLEDGEMENT OF COUNTRY

Ventia acknowledges the Traditional Custodians of this Country on which we operate. Recognising those Elders past, present and emerging who share their knowledge, elevating country and cultural practices of Aboriginal people, creating a unique and vibrant place for all.

We recognise the land on which we work represents the largest community of Aboriginal people throughout Australia, which are diverse in nature, providing us with extensive opportunities to acknowledge and learn about their cultures to which we pay our respects.

Ventia respects those existing relationships with the Aboriginal community and offers to strengthen them into developing respectful, rewarding and sustainable ones that benefit all on our journey.

1. OVERVIEW

This Business Environmental Management Plan (the Plan) outlines Ventia's approach and strategies to fulfil our obligations under the SRAPC and avoid or mitigate any detrimental effects on the environment. The Plan specifies how we will meet or exceed our requirements under Schedule 2 of the SRAPC and G36SRAP Environmental Management Specification. This BEMP and its requirements are applicable to all of Ventia's strategic partners and contractors when completing works under the SRAPC.

1.1 Purpose

The purpose of this Business Environmental Plan is to outline the resources, processes and procedures required to deliver the Services in accordance with the SRAPC and G36SRAP. This plan sets out Ventia's environmental solution that seeks to:

- Clarify the Ventia Environmental Policy
- Detail our approach and strategies to avoid or mitigate any detrimental effects on the environment in fulfilling legal obligations and obligations under the SRAPC G36 Specification
- Define the environmental responsibilities with the Ventia team
- Summarise our compliance obligations
- Outline the environmental management processes and practices to be implemented to minimise potential impacts
- Provide a framework for monitoring, auditing, reporting, reviewing and improving environmental performance
- Document the procedures for investigating and resolving any non-conformances and initiating corrective and preventative measures
- Identifying opportunities to deliver better environmental performance
- Leaving a legacy of environmental initiatives.
- The plan will be implemented upon mobilisation and all staff inducted into its requirements. The plan will be reviewed and updated with improved environmental management measures as required.

1.2 Relationship with other plans

The Environmental Management Plan is part of the suite of plans that make up the Contract Management System. It has links with other plans, as Figure 1-1 shows.

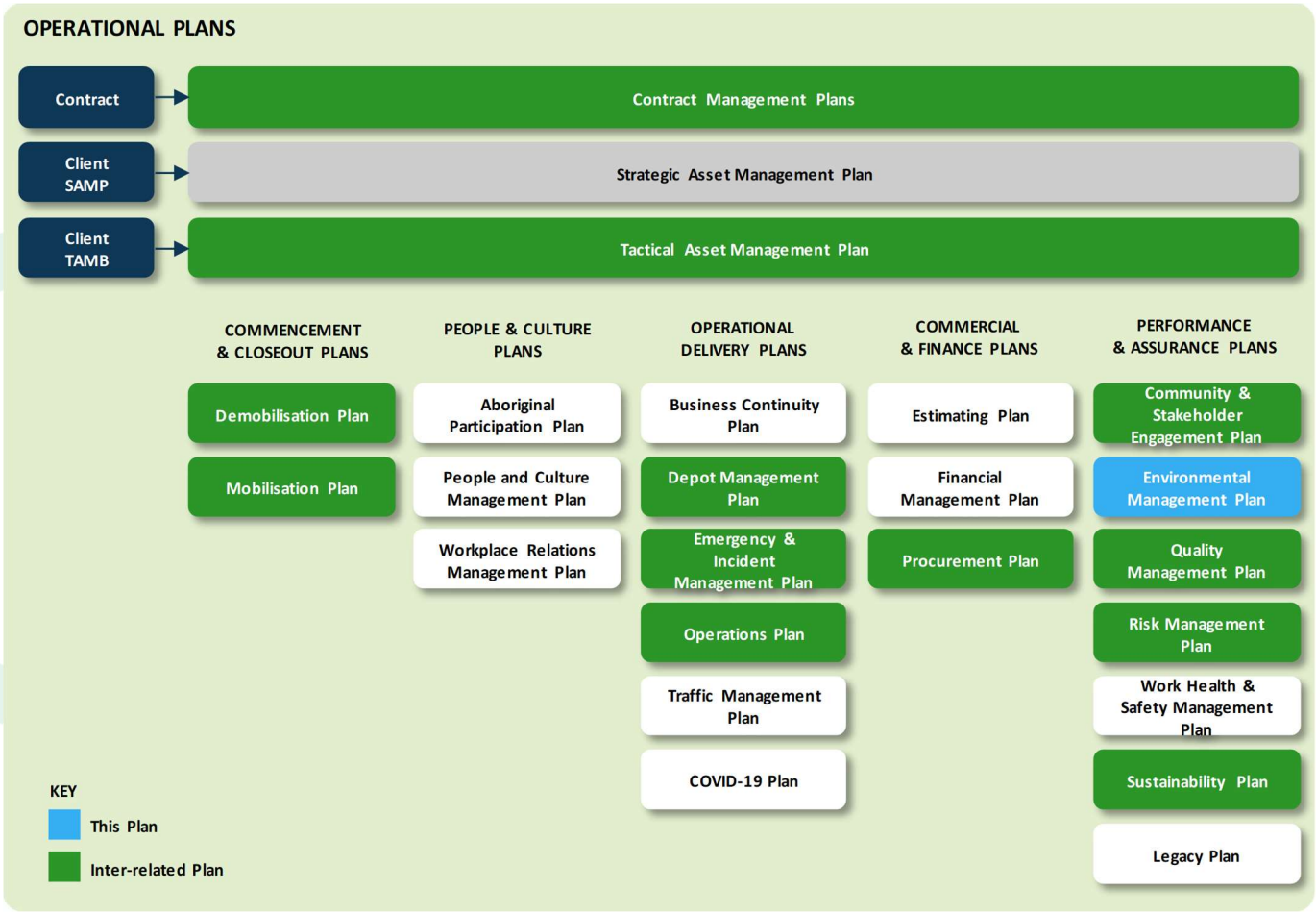


Figure 1-1: The Environmental Management Plan has inter-relationships with a number of other plans as many of the other plans will be finalised and commence implementation during the Mobilisation Stage

2. INTRODUCTION

Transport for New South Wales (TfNSW) requires an environmental management approach which minimises the environmental impact of SRAPC, leaves enduring benefits for communities, and contributes to the future liveability of Sydney.

This Plan provides Ventia staff, workers and subcontractors with framework to understand the potential environmental hazards, risks and opportunities associated with all works under the contract for the SRAPC - Parklands Region and how to manage them effectively.

Our systems, processes, and procedures will ensure all operations are conducted in accordance with relevant legislation, contractual requirements, and the G36SRAP specification. Our robust environmental management system (EMS) is tailored SRAPC's requirements and is consistent with ISO 14001:2015.

3. ENVIRONMENTAL MANAGEMENT SYSTEM

3.1 Global Management System (GMS)

Ventia will adopt Ventia's Global Management System (GMS) as the management system for the SRAP Contract. To manage risk and ensure conformity of services provision and compliance with legislation and applicable standards, the customer-focused GMS integrates all our business functions and compliance requirements under a single, accessible framework.

The GMS is certified as meeting the requirements of:

- AS/NZS 4801/OHSAS 18001 Safety management
- ISO 9001 Quality Management

We are expecting to upgrade to ISO 45001 during Ventia's next surveillance audit period between May - August 2020, demonstrating our commitment to continuous improvement. Figure 4.1 is a pictorial view of the GMS.

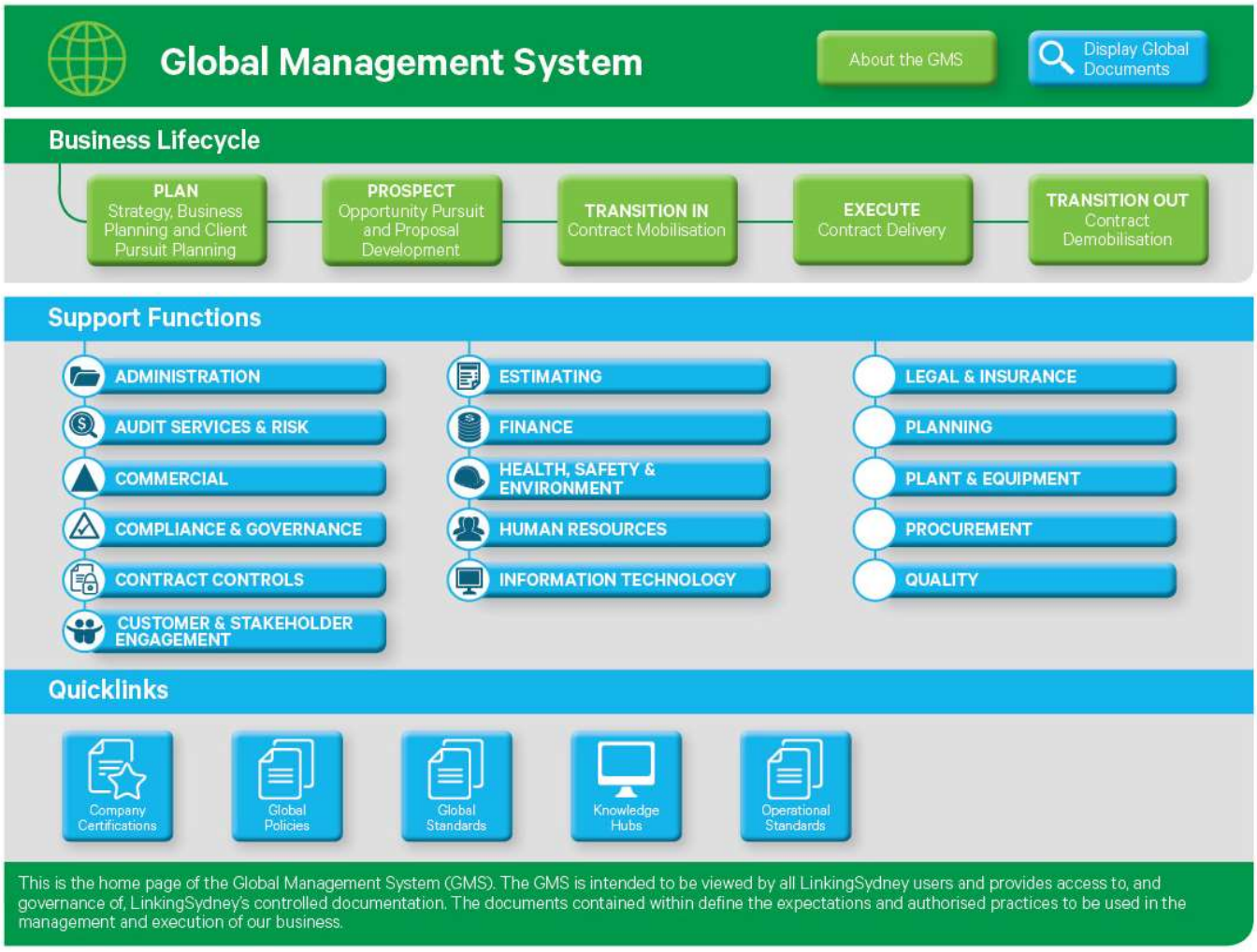


Figure 3-1 Global Management System

3.2 Environmental Management System framework

The Contract Management System (CMS) will be available via the intranet and contains all processes, plans, procedures, instructions and forms which relate to our work, including contract-level controlled documents.

The Environmental Management System (EMS) will form part of this CMS. The EMS will be independently certified and will comply with the NSW Government Environmental Management Systems Guideline and accredited to ISO 14001 Environmental Management Systems Requirements.

The SharePoint-based intranet provides a portal to other internal systems, including:

- Business and service group intranet pages
- Team sites: Document and information sharing sites with established standard filing structures for each contract
- Knowledge Hubs: Web pages that provide information about, and access to, support services, forums and guides to other quality material
- System tools, including:
  - **Promapp:** Our role-based process visualisation tool, allowing our team to easily visualise all their responsibilities and activities, providing tailored views of all plans, procedures, systems and other relevant requirements.
  - **Better Way Database:** Improvements will be registered and managed via this database.
  - **Vensafe (Ventia Event and Action Management System):** Details of inspections, audits, change activities, actions and non-conformances will be entered in this system. BEAMS also provide modules to facilitate management of associated corrective actions.
  - **GIS Based SAP Work Order and Asset Management Tools (Asset Vision):** Our comprehensive SAP solution covers Finance, Procurement, Asset Management and Work Order Management and is accessed through modern, ArcGIS based Web Apps. This allows all environmental data to become part of our standard work creation, planning and execution processes, with key environmental processes supported with high levels of automation and smart data capture.

Ventia's EMS consists of a suite of management documents, including Management Plans, Processes, Procedures, Forms and Guidelines which will be developed prior to the commencement of work under the contract.

3.2.1 Plan-Do-Check-Act

In compliance with ISO 14001, our EMS follows the Plan-Do-Check-Act model, see figure 3.2.1. The Environmental Management Plan, and each of the sub-plans, follow the same structure of elements. This supports our goal of delivering better decision-making to TfNSW, with an emphasis on structured planning, evidence-based actions, rigorous monitoring, and continuous improvement.

Figure 3.2.1: Plan-Do-Check-Act model

Plan

Establish environmental objectives and processes necessary to deliver SRAPC, including objectives, targets and risk mitigation measures. This process ensures the objectives of TfNSW and Ventia are aligned through all phases of the Project.

PLAN elements of the EMS include:

- Scope and purpose
- Environmental policy, leadership and commitment
- Governance
- Legislative requirements
- EMS structure
- Risk assessment and Environmental Aspects and Impacts Register development.

Do

Execute the project as planned and in accordance with objectives and targets.

DO elements of the EMS include:

- Execution of the Environmental Aspects and Impacts Register
- Implementation of environmental controls
- Execution of roles and responsibilities
- Training and competency
- Subcontractor management
- Incident and emergency management
- Complaints and stakeholder management.

Check

Monitor the processes and procedures against the objectives and targets and report findings and recommendations.

CHECK elements of the EMS include:

- Review
- Auditing
- Monitoring.

Act

Update processes in response to monitoring activities, non-conformities and recommendations.

ACT elements of the EMS include:

- Continual improvement
- Change management.

3.3 Business Environmental Management Plan

This Business Specific Environmental Management Plan has been developed in accordance with:

The Guidelines for the Preparation of Environmental Management Plans (NSW Department of Infrastructure, Planning and Natural Resources, 2004)

TfNSW QA Specification G36SRAP (Environmental Management)

PART 4, Schedule 2 of the SRAP Contract.

The BEMP is the overarching component of the Ventia EMS and will be complemented with environmental management supporting documents including sub-plans, procedures and minimum standards as listed below in sections 3.3.1 to 3.3.12.

Supporting documents will be prepared at mobilisation stage for key areas which have particular relevance to SRAPC. The sub-plans will provide assurance of our commitment to manage these in accordance with Clause 9 of G36SRAP specification, key aspects of which are summarised below.

As our project specific risk register develops through the life of the contract, additional supporting documents will be added, or existing ones updated as required.

3.3.1 Soil and water management

Soil and water management is a key environmental aspect of our works, with many of our works near or over waterways.

A Soil and Water Management Plan (SWMP) will be developed as part of this BEMP to implement appropriate soil and water management measures for work under the contract.

Erosion and sediment control

Project-specific SWMPs or Erosion and Sediment Control Plans (ESCPs) will be developed by the Project Delivery Teams where required to manage specific soil and water risks during construction and will form part of the CEMP. All project-specific SWMPs or ESCPs will be reviewed by the Ventia Environmental Representative prior to submission to TfNSW and are to include site specific drawings with locations of controls to be implemented and include standard drawings from the Blue Book as required.

It is the responsibility of the Ventia Project Engineer, Supervisor and Contractor Supervisor to implement erosion and sediment controls as per the approved SWMP/ESCP and continually monitor their effectiveness throughout construction.

It is the responsibility of the Contractor Supervisor and Ventia Supervisor to monitor the weather via the Bureau of Meteorology (BOM) website every day and record the weather in the pre-start.

The SWMP/ESCP will also include an erosion and sediment shutdown procedure (ERSED Shutdown) which will include additional controls to be implemented to prepare the site before a 10 mm rainfall event within a 24 hour period. The ERSED shutdown checklists are to be completed by the Contractor Supervisor and verified by the Ventia Supervisor and sent through to the Ventia Engineer and Environmental Representative. The checklist is to include photos of all controls implemented as part of the ERSED Shutdown Procedure.

All Ventia Environmental Staff, Engineers and Supervisors as a minimum will complete the four-day Erosion and Sediment Control (Blue Book) training as specified in G36SRAP clause 9.4.1.1.

Water quality

The SWMP/ESCP will include specific water quality control measures to prevent impacts to water quality and drainage lines including, but not limited to:

- Location of plant/vehicle washdown areas 50m away from surface water bodies or drainage lines
- Safe storage of chemicals
- Measures for safe storage and disposal of wastewater

Works in or over water

All works over or adjacent water bodies will have a site-specific EWMS developed by the Project Delivery Team including controls to be implemented to protect water quality. The EWMS is to be reviewed by the Ventia Environmental Team and submitted to TfNSW Environmental Branch for review and approval.

Water extraction

The majority of works will require water extraction from town water supply only and it is the responsibility of the Contractor and Ventia Project Delivery Team to acquire Sydney Water licenses and standpipe meters for any town water used as part of the project works.

Extraction of water from licensed groundwater bores or surface water bodies is unlikely for works under the contract, however if required, a water extraction licence will be obtained from the NSW Office of Water or Department of Primary Industries as required.

3.3.2 Acid sulfate soil management

Acid Sulfate soils (ASS) are natural sediments that contain iron sulphides. They are common along the NSW coast. When disturbed or exposed to air these soils can release acid, damaging structures and harming or killing flora and fauna.

An Acid Sulfate Soil Management Procedure (ASSMP) will be developed as part of this BEMP to detail the general process that will be followed if actual or potential acid sulphate soils are identified and how to manage this onsite.

Desktop investigations will be conducted by the Ventia Environmental representative during the development of the environmental approval for the project to determine the likelihood of encountering ASS. If the desktop assessments determine that encountering ASS is likely (e.g. Class 1 to Class 4 soils), then further intrusive investigations and confirmatory testing will be conducted prior to commencement of works.

Project-specific ASSMPs will be developed by the Project Delivery Teams where required to manage specific Acid Sulfate Soil risks during construction and will form part of the CEMP.

3.3.3 Contaminated land management

Unexpected contamination may be encountered across the network in the form of unexpected asbestos containing material (ACM) or other contaminants in soil, groundwater or sediments during construction works.

A Contaminated Lands Management Procedure (CLMP) will be developed as part of this BEMP to identify and manage potential contamination during development and minimise the risks to people and the environment when unexpected contamination is encountered.

An Asbestos Management Plan (AMP) will be developed as part of this BEMP to identify and manage risks associated management of asbestos and asbestos containing materials (ACM) for works under the contract.

An Unexpected Hazardous Materials Procedure (UHMP) will be developed as part of this BEMP to manage unexpected contamination, asbestos and other hazardous materials finds during work under the contract.

Desktop assessments for likelihood of encountering contamination will be conducted by the Ventia Environmental Team during the development of the environmental approval for the project. If there is a reasonable likelihood of encountering contamination during works, an external contaminated lands consultant will be engaged to conduct further assessment such as a Phase 1 (preliminary site investigation) or Phase 2 (detailed site investigation).

Following the results of the Phase 1 or Phase 2 investigations, if a remedial action plan (RAP) is required, this will be developed by the consultant, reviewed by the Ventia Environmental representative and submitted to TfNSW Environmental Branch for their review and endorsement.

Project-specific CLMPs will be developed by the Project Delivery Teams where required to manage specific contamination risks during construction and will form part of the CEMP.

3.3.4 Spill prevention and response

Spills and leaks of chemicals may occur during construction because of chemical storage, refuelling and damage to hydraulics on plant and equipment.

A Chemical Storage and Bunding Standard and Spill Response Procedure (SRP) will be developed as part of this BEMP to minimise the possibility of pollution resulting from chemical spills and leaks as part of the works under the contract.

Project-specific SRPs will be developed by the Project Delivery Teams where required to prevent and manage spills during construction and will form part of the CEMP.

All plant and machinery used on site must have a vehicle pre-start inspection conducted prior to the commencement of each shift by the plant operator. The pre-start checklists are to be recorded on site along with any plant servicing records to ensure the plant/vehicle is fit for work and minimal risk of hydraulic or diesel leaks or spills.

All spills, no matter how minor, are to be reported through to the Ventia Supervisor and through to the Ventia Environmental Representative and a 624 Environmental incident report form submitted to TfNSW Environmental Branch within 72 hours.

3.3.5 Air quality management

Typical sources of air pollutants from our works could include releases of dust from site and emissions from plant and equipment, both of which can impact residents or members of the public near our works.

An Air Quality Management Procedure (AMP) will be developed as part of this BEMP to identify typical sources of sources of air pollutants that may result from works under the contract and the appropriate evaluation, mitigation, monitoring and reporting processes to manage air quality during construction.

We will also detail Ventia's rigorous requirements, for instance compliance of plant and equipment with emissions standards, and reporting requirements under the Clean Air data management tool.

Project-specific AMPs will be developed by the Project Delivery Teams where required to prevent and manage air quality risks during construction and will form part of the CEMP.

3.3.6 Fire safety

A Fire Safety Procedure (FSP) will be developed in accordance with G36 and G22 requirements for works under the contract.

Site specific fire safety controls for projects will be included in the CEMP for the project and will include fire safety awareness and training requirements, as well as fire mitigation measures to be implemented on site during construction.

3.3.7 Noise and vibration management

Noise and vibration are important aspects related to Ventia's works within the SRAPC. When working in highly urbanised areas with many sensitive receivers, it is important that we mitigate and minimise noise and vibration from our works as much as possible.

A Noise and Vibration Management Plan (NVMP) will be developed as part of this BEMP to outline the mitigation measures to be implemented to minimise noise and vibration impacts resulting from the work under the contract.

Project-specific NVMPs will be developed by the Project Delivery Teams where required to prevent and manage noise and vibration risks during construction and will form part of the CEMP.

Project-specific Out of Hours Works (OOHW) applications will also be developed for the project, detailing predicted noise impacts for works at night and the appropriate noise mitigation measures to be implemented. The OOHW applications are to be developed by the Ventia Project Delivery Team, reviewed by the Ventia Environmental Team, and submitted to TfNSW Environmental Branch for review and endorsement prior to the commencement of night works.

3.3.8 Flora and fauna management

Ventia’s work under the contract has the potential to have varying and widespread impacts to local and regional biodiversity including, but not limited to impacts to native flora and fauna, habitat destruction, improper management or spreading of noxious weeds and removal of vegetation to be retained or endangered ecological communities.

A Flora and Fauna Management Plan (FFMP) will be developed as part of this BEMP to outline the relevant management measures to minimise impacts to local and regional biodiversity resulting from work under the contract.

A Weed Management Procedure (WMP) will be developed as part of this BEMP to manage weeds across the network.

Project-specific FFMPs will be developed by the Project Delivery Teams where required to prevent and manage risks to flora and fauna during construction and will form part of the CEMP.

3.3.9 Pesticides

A Pesticide Use Procedure (PUP) will be developed as part of this BEMP to manage the storage, handling and application of pesticides for works under the contract.

A six-monthly forward works program (FWP) for weed spraying activities will be provided by the contractor and sent to the Ventia Environmental Team. The FWP will be submitted to TfNSW Environmental Branch for distribution of public notification of pesticide use. The pesticide use records for the previous six months' works will be submitted through to TfNSW Environmental Branch at the same time for their recording purposes.

3.3.10 Heritage management (Aboriginal and Non-Aboriginal)

There is a potential of encountering and impacting items of Aboriginal and non-Aboriginal heritage during our work under the contract.

A Heritage Management Plan (HMP) will be developed as part of this BEMP which will detail the approach and requirements for evaluating both Aboriginal and non-Aboriginal heritage prior to works being undertaken, and the mitigation measures required to minimise any impacts during our works. We will also detail the process to follow if unexpected heritage is encountered during our works. All procedures will be in line with TfNSW guidelines.

Ventia will ensure that safeguards will be implemented to ensure that any specific conditions of any approvals, licences and permits required for each project (where required) are met. Heritage approvals required for work under the contract will be developed in accordance with the TfNSW guidelines and procedures referenced in clause 5.3 1 of G36SRAP, and be submitted to Heritage NSW following review and approval by TfNSW heritage specialists (in accordance with Hold Point 6 of G36SRAP).

During the planning process for tactical projects conducted under a MWREF or PRREF, Ventia Environmental Representative will confirm the requirement for a Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) to be conducted by TfNSW Heritage branch. The findings of the PACHCI assessment will be incorporated in the environmental assessment (MWREF or PRREF) for the project and further consultation conducted by Ventia project delivery team if required.

Non-Aboriginal heritage approvals will be confirmed by Ventia Environmental team representatives during the project planning phase following directions from TfNSW Environmental and Heritage Branches. Any heritage approvals requiring sign off from external parties e.g. Heritage NSW will be submitted to TfNSW for processing with the relevant governing body. Any specific requirements from these external approvals will be incorporated into the environmental assessment as safeguards.

Project-specific HMPs will be developed by the Project Delivery Teams where required to prevent and manage risks to Aboriginal and Non-Aboriginal heritage during construction and will form part of the CEMP.

3.3.11 Waste management

Various waste streams will be generated because of the work under the contract including routine maintenance activities, improvement works projects or site office/depot activities.

A Waste Management Plan (WMP) will be developed as part of this BEMP to describe how Ventia will manage wastes on our sites in accordance with legislative requirements and the G36SRAP specification, including transportation, storage, disposal and reporting. Ventia will follow the waste hierarchy of avoid, reduce, reuse, recycle, landfill. We will go beyond compliance by continuously improving our practices and using innovation to reduce our waste.

Ventia will adopt the waste management hierarchy principles of Avoid, Reduce, Reuse, Recycle, Dispose for all Ventia's works under the SRAP contract. Ventia will adopt initiatives and systems to achieve the resource and

waste management targets as set out in clause 9.15.1 of the G36 SRAPC. Specific initiatives and systems will be included in the Waste Management Plan for as part of this BEMP.

Project-specific WMPs will be developed by the Project Delivery Teams where required to prevent and manage noise and vibration risks during construction and will form part of the CEMP.

3.3.12 Environmental Sustainability

Ventia's vision is to improve the lives of our customers and community, leaving a legacy of a safer network, better journey's, vibrant places and sustainable communities. Our overarching Sustainability Plan details how we will achieve this broader vision. Environmental and sustainability employees will work closely together with project delivery teams and contractors to achieve common environmental sustainability goal, including those specified by G36SRAP:

- **Sustainable procurement**: We recognise that sustainable procurement is critical to our approach to embedding sustainability across the Contract Works. Further detail of our approach to achieving this is included in the Sustainability Management Plan and the Procurement Management Plan.
- **Sustainable Offices:** Ventia will endeavour to be a paperless office where possible through the use of tablets and apps. Paper that is purchased for use on the contract will be high recycled content (>50%). We will ensure that no single use kitchen items are supplied to any of our worksites.
- Considerations has been given to sustainability as part of our depot and mobilisations management plans such as solar panels and rainwater collection tanks established as part of our depot and opportunities to improve the sustainability performance of the office facilities will continue to be investigated.
- **Maintenance of tree canopy:** Ventia will establish baseline data of tree canopy cover using GIS mapping systems, to establish a pre-project total. This will enable us to demonstrate that tree canopy cover is maintained in the final design totals.
  - We will work with our partners, AECOM to ensure all designs give due consideration to the retention of tree canopy where possible.
  - To gain a comprehensive understanding of the SRAPC asset base, we have already captured the canopy extents of road trees in our GIS based SAP Asset and Work Management System.
  - An example is shown in Figure 3-2
- **Energy Efficient Lighting:** Ventia understands the importance of moving to more energy efficient options. All permanent street lighting or lighting installed for public amenity or safety will utilise light emitting diode (LED) technology for new installations or end of life replacements.

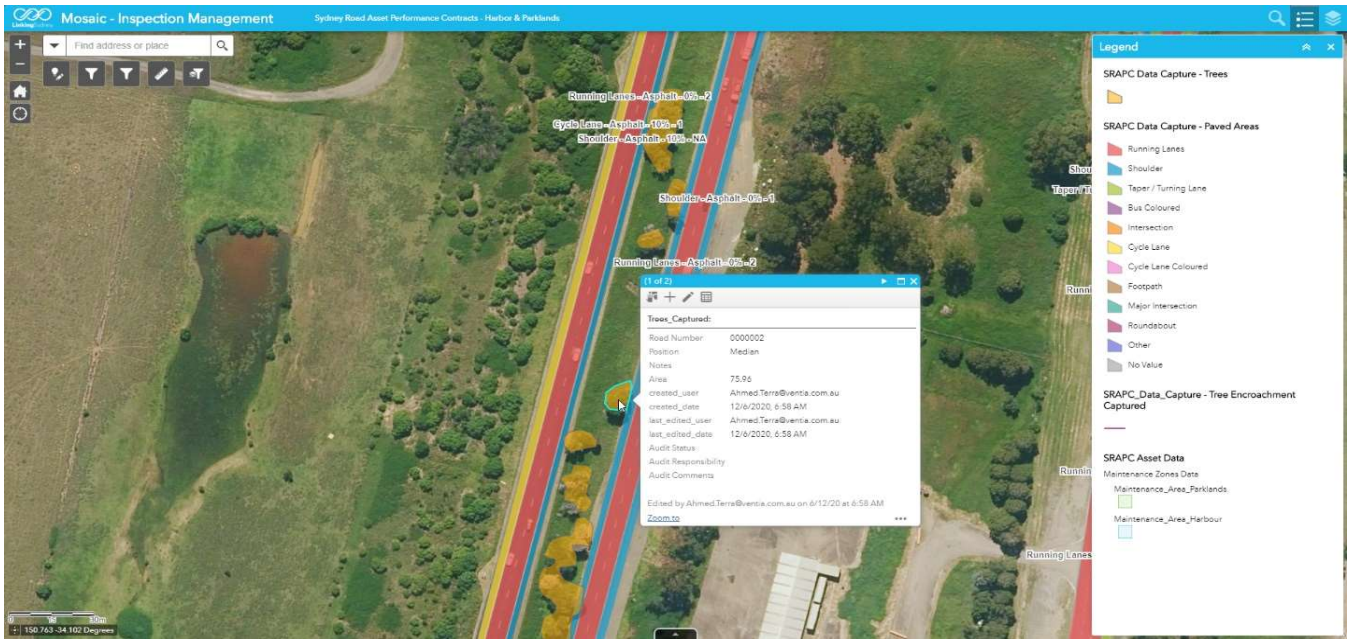


Figure 3-2: GIS based SAP Asset and Work Management System

3.3.13 Site facilities

Many of our projects will require the use of site facilities such as site compounds and lay down yards.

Documents within our EMS will provide detail of how we will work in accordance with Hold Point 12, by describing how we will evaluate the use of these areas to ensure that appropriate areas are selected. We will also describe how we will obtain approvals for their use in accordance with TfNSW requirements.

3.3.14 Other key aspects

Other key environmental aspects which will be included in the broader EMS, and assessed in project specific environmental assessments, include traffic and transport, Landscape and Character Visual amenity, Fire safety and Socio-economic considerations.

3.4 Construction Environmental Management Plan

When specified by the Minor Works REF or Project REF environmental approval, Projects and Maintenance activities will have a specific Construction Environmental Management Plan (CEMP) developed. The CEMP will define the environmental controls to be implemented in order to comply with the relevant REF Safeguards, and SRAPC G36 Specification requirements for work under the contract.

The CEMP will include any necessary sub plans including Environmental Work Method Statement (EWMS), Noise and Vibration Management Plan (NVMP), Erosion and Sediment Plan (ESCP) and others as required based on the scope of works. The CEMP and all associated sub-plans and documents are to be internally endorsed by the Ventia Environmental Management Representative (EMR) before submission to TfNSW Environment Branch for review and approval. Final endorsement of the CEMP by TfNSW Enviro Branch must be obtained before construction can commence.

3.5 Preparation of documents

3.5.1 BEMP

This BEMP has been developed by Ventia for the SRAPC in accordance with:

- Environmental Management Guidelines, Edition 4 (NSW Department of Planning, Industry and Environment 2019)
- Guidelines for the Preparation of Environmental Management Plans (NSW Department of Infrastructure, Planning and Natural Resources, 2004)
- TfNSW G36 SRAPC Environmental Specification
- Relevant TfNSW Environmental guidelines and procedures

The BEMP is to be developed and reviewed by the Ventia Environmental Manager or Team Leader who have tertiary qualifications in Environmental Science or Engineering and a minimum of five years' experience in environmental management for road construction.

3.5.2 CEMP

A template CEMP will be developed by the Ventia EMR and Team Leader who have tertiary qualifications in Environmental Science or Engineering and a minimum of five years' experience in environmental management for road construction.

CEMPs will be developed for specific projects when required by the Project Delivery Team in accordance with the G36 SRAPC Specification as well as addressing all safeguards included in the determined REF for the project or maintenance activity.

The CEMP will be reviewed and endorsed by the Ventia EMR or designated Ventia environmental representative (e.g. Team Lead or Officers) in agreement with the TfNSW Environmental Branch before being sent to TfNSW Environmental branch for review and final endorsement.

3.6 Environmental Policy

Ventia's Environmental Policy will demonstrate the commitment of all Ventia staff, workers and subcontractors working under the contract and detail our intent and direction around environmental performance and providing a framework for setting environmental objectives. It will also include commitments to the protection of the environment, fulfilling compliance obligations and continual improvement of the EMS.

We can achieve this by:

- Complying with SRAPC's and our own statutory requirements through proactive engagement and consultation
- Identifying and understanding the environmental aspects inherent to the activities we undertake and effectively managing those potential impacts
- Establishing responsibilities and ensuring that appropriate environment and sustainability training to our employees, contractors and visitors is undertaken
- Using resources and materials efficiently by seeking to avoid, reduce, reuse and recycle materials as far as practical to minimise our energy, waste and water footprint
- Commitment to ecologically sustainable development for work under the contract
- Compliance with all relevant environmental legislation and TfNSW Specifications and Guidelines

- The Environmental Policy will be communicated to staff during inductions and displayed on notice boards in the site office. All key aspects of our Environmental Policy are captured in our detailed business processes, ensuring people understand how it translates to everyday activities.

4. APPROACH AND STRATEGIES TO AVOID OR MITIGATE ANY DETRIMENTAL EFFECTS ON THE ENVIRONMENT

In line with TfNSW's priorities, we are committed to avoiding any detrimental effects on the environment and mitigating our impact where that is not possible. We are aware of our regulatory environmental responsibilities and have developed our own objectives and targets that go beyond these to further TfNSW's Stewardship principles.

Key strategies to avoid or mitigate impacts on the environment include:

- Defining roles and responsibilities
- Committing to business wide environmental objectives and targets
- Identifying, interpreting and ensuring compliance with regulatory requirements
- Ensuring these requirements are communicated and understood by all involved in the planning and delivery of our works
- Obtaining the appropriate environmental approvals prior to commencing any works.
- This alignment is key to our approach. We will continue to collaborate with TfNSW to ensure our approaches remain integrated, and that our targets remain relevant to new challenges and issues that may arise.

4.1 Roles and responsibilities

Our clearly defined organisational structure supports the project's quality objectives, and clearly defines the lines of reporting, and include the names and roles of key personnel specific to the project. Roles and responsibilities with respect of environmental requirements for the Parklands SRAPC are included below in Table 4.1.

Table 4-1: Environmental Roles and Responsibilities

ROLES	RESPONSIBILITIES	MINIMUM SKILL LEVEL
Contract Manager	The Contract Manager has ultimate responsibility for leading the business and its functions to deliver the contracted service to TfNSW. This includes ensuring all Ventia personnel are made aware of the Environmental Policy and related Environmental Plans to manage environmental risks and ensure compliance with contractual and legislative requirements.	Environmental Awareness training
Network Custodian	The Network Custodian actively listens to our customers and community and monitors the performance and impact of the asset network. These customer insights shape our asset management and delivery strategies and plans ensuring minimisation of impacts to the community, raising the engagement with our aboriginal community, and pursuing sustainable and environmental outcomes.	Environmental Awareness training
Contract Management Team	Demonstrate leadership and commitment with respect to environmental management by; ▪ Taking accountability for the effectiveness of the EMS ▪ Ensuring that the environmental policy and environmental objectives are established and are compatible with the strategic direction and the context of the organisation ▪ Ensuring the integration of the EMS requirements into the organisations business processes ▪ Ensuring that the resources needed for the EMS are available ▪ Communicating the importance of effective environmental management and of conforming to the EMS requirements ▪ Ensuring that the EMS achieves its intended outcomes ▪ Directing and supporting persons to contribute to the effectiveness of the EMS ▪ Promoting continual improvement in the environmental and sustainability space ▪ Ensuring that the requirements of this BEMP are met and that awareness of the requirements is delivered to the Business ▪ Providing respective Business units with sufficient resources to carry out their responsibilities under this BEMP ▪ Supporting other relevant management roles to demonstrate their leadership as it applies to their areas of responsibility.	Environmental Awareness training

ROLES	RESPONSIBILITIES	MINIMUM SKILL LEVEL
Environmental Management Representative (Environmental Manager)	▪ Advising on environmental matters specified in G36SRAP ▪ Liaison with the Principal and other relevant authorities ▪ Maintaining a register of all environmental management documents for the contract ▪ Ensuring the Business Environmental Management Plan and Construction Environmental Management Plans are established, implemented and maintained in accordance with G36SRAP ▪ Overall responsibility for on-site environmental controls ▪ Ensuring regular environmental inspection and audits of the works are undertaken ▪ Identifying and implementing opportunities for improvement ▪ Carrying inspections and ensuring regular inspections and auditing of projects and maintenance activities are conducted to ensure that environmental safeguards are being followed ▪ Reviewing the findings of environmental audits and ensuring that non-conformances are responded to with appropriate corrective actions and lessons learnt ▪ Preparing monthly reports ▪ Facilitating environmental inductions and toolbox talks ▪ Notification of environmental incidents	Tertiary qualifications in Environmental Science, engineering or equivalent Minimum 5 years' experience in transport construction environmental management
Environmental Lead	▪ Liaising with TfNSW environmental team ▪ Will be embedded at least 50% of their time at TfNSW premises and only permitted to work on Ventia's scope under the SRAP contract ▪ Reviewing environmental assessments and speciality reports to ensure they are adequate for submission to TfNSW ▪ Advising on environmental matters in relation to compliance with G36SRAP and statutory requirements ▪ Conducting regular site inspections and audits on projects and maintenance activities to ensure that environmental safeguards are being followed ▪ Identifying and implementing opportunities for improvement ▪ Notification of environmental incidents	Tertiary qualifications in Environmental Science, engineering or equivalent Minimum 3 years' experience in transport construction environmental management
Environmental Advisors/Co-ordinators	▪ Identification and communication of environmental risks/constraints during the early stages of project initiation and liaison with Ventia project delivery teams	Tertiary qualifications in Environmental Science, engineering or equivalent

ROLES	RESPONSIBILITIES	MINIMUM SKILL LEVEL
	▪ Liaising with TfNSW Environmental teams throughout the EIA process and providing feedback, where necessary ▪ Preparing and reviewing EIA documentation to provide early planning environmental advice to implement, monitor and continually improve the support and sound planning for projects to ensure compliance ▪ Liaising with environment and planning consultants as well as the Ventia project delivery team ▪ Reviewing Construction Environmental Management Plans (CEMPs) ▪ Maintaining Ventia awareness of environmental legislation, industry trends, innovations and updates and promotion of environmental risk control ▪ Conducting regular site inspections and audits of projects and maintenance activities during construction to ensure environmental compliance and safeguards are being followed ▪ Assisting in the identification and reporting of environmental risks and facilitating the achievement of environmental best practice and risk minimisation across the business ▪ Ensuring environmental incident reporting is in line with legislation and contractual requirements ▪ Assisting in environmental incident investigations as appropriate including the review of incident reports	
Sustainability Manager	▪ The Sustainability Manager will work collaboratively with the Environmental Manager and wider team to achieve common environmental and sustainability goals.	Environmental Awareness training
Project Managers	▪ Facilitating their direct reports attending relevant internal environmental awareness sessions so they understand their environmental obligations ▪ Supervising their direct reports and relevant subcontractors to ensure appropriate environmental planning and approval requirements are attained for their works ▪ Identifying and managing project level operational aspects and impacts ▪ Ensuring construction areas are appropriately maintained in accordance with environmental approvals ▪ Ensuring crews and subcontractors have the correct environmental documentation and understanding of environmental requirements prior to and during work, including responsibilities for preparing project specific CEMPs, Preparing REFs and Conducting Site Risk Assessments ▪ Undertaking environmental inspections ▪ Assisting with environmental incident investigations as appropriate	Environmental Awareness training
Project Engineers	▪ Directing and implementing on site environmental management measures across their projects. ▪ Managing on site engineering in relation to environmental processes	Environmental Awareness training

ROLES	RESPONSIBILITIES	MINIMUM SKILL LEVEL
	▪ Ensuring works are undertaken in accordance with environmental approvals ▪ Ensuring site staff and contractors are aware of environmental obligations for their projects and understand their own individual roles in relation to environmental management on site. ▪ Assisting in the identification and reporting of environmental risks and facilitating the achievement of environmental best practice and risk minimisation across the business ▪ Assisting in environmental incident investigations as appropriate including the review of incident reports	Minimum 2-day erosion and sediment control course
Supervisors	▪ Directing and implementing environmental management measures across their sites ▪ Ensuring works are undertaken in accordance with Environmental Approvals and site-specific CEMPs ▪ Identifying and managing operational aspects and impacts, and implementing mitigation controls on site to prevent environmental impacts ▪ Assisting with environmental incident investigations as appropriate including the review of incident reports	Environmental Awareness training Minimum 2-day erosion and sediment control course
All Ventia SRAPC staff/personnel	All personnel are bound to comply with the requirements of this EMP, as far as it is applicable to the nature and scope of their work. This include employees, contractors engaged by Ventia to undertake works	Environmental Awareness training

4.2 Environmental training and awareness

An environmental skills and training matrix will be developed for staff and contractors undertaking work for Ventia as part of the SRAPC. The matrix will identify the level of environmental training and qualifications for each role within the Business as well as identify gaps in training and awareness within the Business. The training register will be reviewed annually or as required and updated accordingly by the Ventia Environmental Manager.

Environmental training and awareness items will be delivered throughout the course of the SRAPC, including but not limited to those included below in Table 4-2.

Table 4-2: Summary of Environmental training and awareness.

TRAINING TYPE	DESCRIPTION	ROLE REQUIREMENTS	DELIVERED BY	FREQUENCY
Environmental Awareness Training	Overview of environmental requirements under SRAPC	All Ventia staff and strategic partners	Ventia Environmental Team	Annually
Basics of Erosion and Sediment Control (Blue Book) 2 Day Course	Basic understanding of erosion and sediment control	All Ventia Environmental Staff Supervisors Project Engineers	Certified external training provider	Once for all roles required
Ventia Induction	Introduction to SRAPC environmental requirements	All Ventia staff, strategic partners and subcontractors	Online or by approved Ventia inductor	Every two years
Asbestos Awareness Training	Basic understanding of asbestos identification and management measures	All Ventia staff, strategic partners and subcontractors	Certified external training provider	Every two years
Company SHEQ Toolboxes	Covers environmental risks and management measures	All Ventia staff and strategic partners	Ventia Environmental Team	Monthly
Project-specific inductions	Includes all site-specific environmental risks and associated controls to be implemented as per the CEMP/approval	All Ventia staff, subcontractors and visitors entering the site	Project Engineer Ventia Supervisor Contractor Supervisor	Once before entering the site
Project-specific toolboxes	Covers project/site-specific environmental risks and associated management measures	All Ventia staff and subcontractors working on the site	Ventia Supervisor Contractor Supervisor	Minimum monthly or as required
Pre-starts	Covers specific environmental risks and associated control measures to be implemented for the shift's work	All Ventia staff and subcontractors working on the site	Ventia Supervisor Contractor Supervisor	Daily

4.3 Objectives and targets

Ventia's objectives have been developed to go beyond compliance to align with TfNSW stewardship principles and support TFNSW's objectives for the SRAPC, as displayed in Table 4-3.

Environmental objectives and targets for work under the contract are set by the Environmental Manager, and endorsed by Senior Management to be specific, measurable, achievable, realistic and timebound.

The Environmental Manager will track all objectives and targets monthly and will review and report on performance annually to check whether further improvements should be considered.

The Environmental Manager will have overall responsibility for setting, monitoring, communicating and implementing strategies to achieve environmental objectives.

Table 4-3: Ventia Environmental Objectives and Targets

TFNSW STEWARDSHIP PRINCIPLES	OBJECTIVE	VENTIA'S TARGET	KEY INITIATIVES
Safety & Performance	Compliance with all environmental related legislation	Zero regulatory infringements (penalty notices or prosecutions) or warnings Accurate, timely and transparent reporting of environmental incidents and non-conformances	Clear, concise EMS available to our team and contractors, and implemented across all our works. Site specific CEMPs to clearly detail site requirements to our staff and contractors Environmental awareness training sessions provided to our staff and supply chain partners Procurement process to include an assessment of contractors' commitment to environmental best practice Regular site environmental inspections in accordance with inspection and audit schedule
Integrity	Promote proactive environmental management	Meet or exceed the requirements of the environmental audit and inspection schedule	Regular reviews and updates to inspection and audit schedules to reflect changes within our operation and delivery of works Clearly communicated KPIs for all roles in relation to inspection and audit obligations Inspection plans are setup and managed in SAP, allowing for real time reporting to the Senior Leadership team and TFNSW on inspections and audits planned and undertaken. Accessible to all via our GIS based SAP Apps and our interactive dashboards.
Customers	Minimise and mitigate noise and vibration impacts	All affected stakeholders are identified and informed of potential impacts prior to works KPI of zero avoidable complaints Go beyond compliance with regards to noise and vibration management through continuous innovation	Streamlined approach (weekly meetings) within the Ventia team between project delivery, communications, and environmental teams to ensure all obligations in relation to noise are achieved through effective planning. Explore technology to reduce noise impacts to our customers such as quietest (e.g. battery operated) plant and equipment
Sustainability	Support the principles of ecologically	Sustainability Targets are detailed in the Sustainability Management Plan	The Ventia Environmental Team will work together with the Sustainability team to assist in achieving these common goals.

TFNSW STEWARDSHIP PRINCIPLES	OBJECTIVE	VENTIA'S TARGET	KEY INITIATIVES
	sustainable development		Consideration to sustainability outcomes will be given at the environmental assessment stage such as sustainability in design e.g. reduction in tree canopy loss and sustainable procurement. The Environmental Team will work with delivery teams to ensure sustainability outcomes are considered during site works such as waste minimisation, reductions in potable water and energy use on site. On the SRAPC we are using rainwater collected from tanks at the Rockdale depot for daily road sweeping operations, and for other network usage, following recent upgrades to collection and storage of the rainwater. This minimises the use of potable (i.e. drinking) water in operations and ensure compliance with the Sydney Water restrictions. The sweeper is filled at the depot and uses approximately 500L per shift. Rainwater is also available to project work sites, and has been used at the VBA bridge team on some Cathodic protection projects for the following: During coring of concrete on bridge piers Pre-soaking of concrete Anode installation On-site toilets In gurneys for cleaning piers before painting Making concrete (for small mixed quantities by hand on-site). The initiative to use rainwater from the tanks started in February 2020 and by mid-June 2020 over 49,000L had been extracted, with the bridges team alone using around 12,000L a month. Opportunities to use the rainwater are being continually identified. Ventia will leverage lessons learned and ongoing innovation from this project to install the extraction and storage infrastructure to use the rainwater collected from commencement of the Contract Works.

TFNSW STEWARDSHIP PRINCIPLES	OBJECTIVE	VENTIA'S TARGET	KEY INITIATIVES
Innovation	Continuously drive environmental excellence through innovation	Celebrate and share environmental innovation with TfNSW and industry	Relationships have already been formed at tender stage with Macquarie University, and we will look to continue to build on this relationship to explore innovation to improve our practice through engineering research. Through lessons learnt on the SRAPC, we understand that noise and vibration are key areas of concern, causing distress to TFNSW customers if not properly managed. Our innovations to improve performance in this area are detailed in this plan (for instance, the use of smart compaction to reduce vibration). Our partners, including Strategic Partners AECOM and Ward Civil, share our commitment to innovation. We will continue to work with them to drive innovation and improve environmental performance.

4.4 Regulatory requirements and compliance

4.4.1 Regulatory requirements

Permits and licensing

To provide assurance of compliance, all environmental permits and licenses required for any works or project-specific activities are identified during the Environmental Assessment Process.

Potential permits and licensing required as part of environmental assessments include but are not limited to:

- The Part 7 Fisheries Management Act permit for:
  - Activities involving dredging and reclamation work
  - Activities temporarily or permanently obstructing fish passage
  - Harming marine vegetation.
- Environmental Protection Licence (EPL) in accordance with the Protection of the Environment Operations Act 1997 (PoEO Act)
- Section 60 Heritage Act Permit to disturb or excavate sites listed on the State Heritage Register or to which an interim heritage order (IHO) applies
- S140 Archaeological Permit to disturb or excavate sites not listed on the State Heritage Register
- An Aboriginal Heritage Impact Permit (AHIP) under section 90 of the National Parks and Wildlife Act (NPW Act) to manage harm or potential harm to Aboriginal objects and places
- Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) approvals when deemed necessary by TfNSW will be drafted by the Ventia Environmental Representative and submitted to TfNSW Environmental Branch along with the first draft submission of the environmental assessment. The final

PACHCI document will be provided by TfNSW Environmental Branch to the Ventia Environmental Representative during the return of the first draft comments of the environmental assessment

- ISEPP Consultation, Growth Centres SEPP Consultation and Neutral or Beneficial Effect Consultation will be conducted with relevant Local Councils, State Emergency Services (SES), State Government Departments and Utilities providers when triggered by the Environmental Assessment. The Project Engineer or Communications and Stakeholder Engagement Representative (CSE) representative will draft the letters/correspondence to the relevant parties and feedback will be incorporated into the environmental assessment by the Ventia Environmental Representative
- National Parks and Wildlife Services (NPWS) are required to co-determine all environmental assessments for works that take place within National Parks
- Property acquisition/lease agreements will be submitted by the Ventia Project Engineer or Project Manager and acquired by TfNSW Property Group in consultation with landowners for any projects requiring leasing or acquisition of property

All necessary licences, permits and approvals required will be obtained and maintained as required throughout the life of the works. The Ventia Project Engineer or Project Manager is responsible for ensuring all environmental licenses and permits are obtained and maintained on their projects and is supported by the Environmental Team Lead and Advisors/Co-ordinators to ensure compliance with requirements.

All work extents are captured in our easy-to-use GIS-based SAP Web Apps. This planning workflow will allow our Environmental Team to support our Project Development and Delivery Teams in establishing the specific requirements for each activity, store those requirements, and track the status of their approval.

The GIS-based apps also perform an initial automated assessment of common checks, which can be verified or adjusted by the Environmental Team as required or at the request of TfNSW.

4.5 Legislative requirements

All environmental assessments and works under the contract are to comply with environmental legislation as listed below where applicable to the scope of works being conducted, including:

Environmental Planning Legislation

- Crown Land Management Act 2016 (NSW)
- Environmental Planning and Assessment Act 1979
- Local Government Act 1993
- Roads Act 1993

Conservation and Heritage Legislation

- Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (NSW)
- Biodiversity Conservation Act 2016 (NSW)
- Coastal Management Act 2016 (NSW) and associated SEPPs
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)
- Heritage Act 1977 (NSW)
- Marine Estate Management Act 2014 (NSW)
- National Parks and Wildlife Act 1974 (NSW)
- Native Vegetation Act 2003 (NSW)
- Threatened Species Conservation Act 1995 (NSW)

Pollution and Waste Management Legislation

- Biosecurity Act 2015 (NSW)
- Environmentally Hazardous Chemicals Act 1985 (NSW)
- Fisheries Management Act 1994 (NSW)
- Marine Pollution Act 2012 (NSW)
- Ozone Protection Act 1989 (NSW)
- Pesticides Act 1999 (NSW)
- Pesticides Regulation 2017 (NSW)
- Protection of Environment Administration Act 1991 (NSW)
- Protection of Environment Operations Act 1997 (NSW)
- Protection of Environmental Operations (Waste) Regulation 2014 (NSW)
- Waste Avoidance and Recovery Act 2001 (NSW)
- Water Management Act 2000 (NSW)

Contaminated Land Legislation

- Contaminated Land Management Act 1997 (NSW)
- Protection of the Environment Operations Act 1998 (NSW)

Fire Controls Legislation

- Rural Fires Act 1997 (NSW)

Work Health and Safety

- Work Health and Safety Act 2011
- Work Health and Safety Act 2017 (NSW)

Hazardous Substances Legislation

- Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)

4.6 Identifying and interpreting requirements

Compliance with existing and changing legislative and other requirements is assured by the Plan-Do-Check-Act cycle that underpins the structure of our EMS (detailed in Section 3). The cycle simplifies and clarifies the process of identifying, interpreting and communicating legislative and other requirements, and maintaining ongoing compliance.

Environmental legal requirements and obligations will be identified and tracked, including those that are:

- Established within Commonwealth, State/Region or Local Government legislation (Acts, Regulations, Planning Instruments etc.)
- Specific to operations that are established by regulatory authorities, e.g. EPA
- Contained in licences, permits, planning consents, environmental Improvement Notices etc.
- Specific to operations that are established by TfNSW and are contained in the service contract between Ventia and TfNSW (or in supporting documentation).

We use other audit tools to ensure that all our processes are compliant with regulatory requirements and guidance information. These assist with identifying the legislative (and other compliance) requirements associated with the scope of work and the identified environmental hazards.

These tools include:

- Public databases of legislation (such as Federal and State regulatory agencies), codes of practice and other supporting information
- Environmental legal registers.
- To confirm that legal and regulatory requirements are being met, the Environmental Manager and Environmental Team Lead will conduct environmental compliance activities, including internal audits, inspections, and document reviews.

A documented review of the Legal Reference Register will also be conducted at both a Corporate and contract level on a bi-annual, or as-required basis. The review will be recorded as per appropriate document record requirements and copy of the register maintained.

4.7 Communication requirements

To ensure requirements are complied with, the Environmental Manager will be responsible for communicating any changes or updates to relevant legislation, TfNSW Specifications or Ventia process changes to Ventia Project delivery staff and Managers via company toolboxes, email alerts or targeted training sessions.

The Ventia Environmental Team Lead and Environmental Officers will ensure that all project management plans, risk registers, EWMS, and other documents are updated and applicable to the scope of works to reflect the requirements of current applicable legislation, standards, and other requirements relevant to environment.

Changes to legislation that apply to project works will be communicated at pre-start meetings or toolbox talks, and key updates will be placed on SHEQ noticeboards by the Project Engineer, Project Manager or Supervisor.

Conditions of environmental approvals (REFs) will be included in site-specific CEMPs and ECMs for projects and (when required) maintenance activities. The Project Engineer and Site Supervisor will be responsible for the onsite implementation of the conditions of approval. The Environmental Team Lead and Officers will conduct regular site inspections (fortnightly where possible) to ensure that environmental conditions of approval are being met. The Ventia Environmental Team will also conduct environmental audits (once every 3 months) on projects to ensure that all environmental conditions of approval are being complied with.

TfNSW Environmental Branch will be notified immediately of any breaches of conditions of approval identified by the contractor or by Ventia Environmental staff during inspections or audits. A non-conformance report (NCR) will be raised by the Project Engineer for any breaches of approval conditions and the corrective actions completed within the assigned timeframes.

4.8 Restricting work to normal working hours

Ventia will restrict works to normal working hours where possible, ensuring the community is aware of when works will occur and that noise is limited to times when it is of least impact.

The Ventia environmental team will work with the community and stakeholder engagement team to ensure relationships with our stakeholders are maintained. Outcomes of community consultation and notification will be included in environmental assessments to ensure due consideration is given to the needs of TfNSW customers.

Ventia Project Engineers and Supervisors will be responsible for ensuring that approved working hours for work are communicated to contractors as well as the requirement to maximise the amount of work completed during normal hours where practical.

Normal working hours for works under the contract are detailed in Table 4.3.

Table 4-4 Normal working hours

DAY	APPROVED WORKING HOURS
Monday - Friday	7.00am to 6pm

DAY	APPROVED WORKING HOURS
Saturday	8.00am to 1.00pm
Sundays and public holidays	No works

4.8.1 Works outside of normal working hours (OOHW)

Works may be undertaken outside of these normal hours in certain circumstances, for instance emergency works or where Road Occupancy Licenses (ROL) do not permit work during normal hours. Additionally, due to the densely populated areas in which we work, it is not always feasible to safely undertake all of our works with the necessary lane closures during normal hours.

Where works outside of normal hours must be completed, an Out of Hours Work (OOHW) application must be developed by the Project Engineer or Contractor representative submitted to the Ventia Environmental Team for review. The OOHW application will then be forwarded to the TfNSW Environmental Branch for review and approval before the commencement of works.

The procedures and requirements for OOHW will differ depending on whether works are being undertaken as exempt activities or with a Review of Environmental Factors (REF) approval. See section 4.4 for further details.

For each of these circumstances, the following requirements must be met:

REASON FOR OOHW	REQUIREMENTS
OOHW for Exempt Activities	Works do not take more than two nights to complete Works can implement the requirements of the ASEC documents (see section 4.3) Construction Noise Estimator Tool is used to determine Consultation and Community notification requirements Where the above requirements cannot be met, a Step 2 memo will need to be approved by TFNSW prior to works being undertaken in accordance with the requirements of G36SRAP.
OOHW for activities with a REF	Ventia Environmental Representative will assess the impacts of the OOHW in the REF for the review of TfNSW based on feedback on the project scope and methodology provided by the Project Delivery Team. The assessment is to be conducted by the Enviro Co-ordinators or Team Lead, with collaboration from the Ventia Community and Stakeholder Engagement and Project Delivery Teams. The OOHW process for projects under an REF include: ▪ Review scope of works for the project ▪ Confirm which works must be completed during OOH and provide justification as to why they cannot be completed during the day ▪ Confirm the construction methodology, including the plant/machinery to be used ▪ Using the RMS Noise Estimator Tool or TfNSW approved noise tool, assess the relative background noise levels based on the surroundings ▪ Using eth outputs from the RMS Noise Estimator Tool or TfNSW approved noise tool, assess the noise impact radius of the works and map them out on a figure ▪ Confirm the notification radii for residents and businesses impacted by the works as well as any cumulative impacts of noise from other nearby projects ▪ Confirm any additional Communications and Stakeholder requirements based on the noise impacts e.g. respite offers, specific notification etc. ▪ Confirm any additional controls required to manage high noise impacts on residents e.g. implementation of noise blankets, additional noise monitoring etc.

REASON FOR OOHW	REQUIREMENTS
	▪ Develop OOHW application based on the noise assessment in the REF and submit to TfNSW for their review and approval prior to commencement of works

4.8.2 Leveraging technology to aid in managing working hours

The Ventia SRAPC Asset and Work Management Systems include Click Field Service Edge. Click is a fully automated work scheduling tool that considers all aspects of work planning to produce a dynamic 30-90-day schedule.

Click has been setup to consider Activity specific and Asset specific calendars, rules and objectives. This means we can specify when each type of Exempt Activity is preferred, however click will consider all attributes e.g. noisy activities are preferred during the day (objective), however these assets can only be safely accessed at night (rule), and at a specific location can only be accessed for two consecutive nights across all activities within a defined period(rule). It also considers a wide range of other factors, such as KPI requirements and is capable of weighing place objectives e.g. high place priorities certain activities, high movement prioritises certain activities. When Click cannot meet all its rules for a given activity, it will place the activity into 'Jeopardy' for review by the NDH and Environmental Teams as required.

4.9 Environmental approvals

Ventia will ensure all activities have the appropriate environmental impact assessment (EIA) or environmental approvals determined by TfNSW Environment Branch before carrying out activities. The Ventia Environmental Assessment Process is used to determine environmental assessment requirements in accordance with the EP&A Act 1979 and State Environmental Planning Policy (Infrastructure) 2007 (ISEPP).

The Ventia SRAP Parklands Environmental Team will confirm the type of EIA required for a project with the TfNSW Environmental branch prior to preparation. Where works fall under Division 5.1 of the EP&A Act 1979, a Minor Works REF (MWREF) or Project REF (PRREF) will be required to be developed by Ventia and submitted to TfNSW Environmental Branch for review and determination and release of hold point before proceeding with works.

The process does not apply to:

- “Emergency Works” as describes in clauses 5 and 97 (1) (e) of the State Environment Planning Policy (Infrastructure) 2007,
- Any activity or part of an activity for which assessment under Part 4 (State Significant Development) or Part 5.1 (State Significant Infrastructure) of the Environmental Planning & Assessment Act (NSW) applies

“Emergency works” (as defined by ISEPP) do not require an environmental assessment, however, emergency situations are to be reported to TfNSW immediately and classified by TfNSW Sydney Maintenance in accordance with ISEPP. TfNSW Sydney Maintenance will communicate this to relevant parties (e.g. TfNSW environment and TfNSW communications) prior to work.

4.9.1 Resources - key personnel, authority and roles

To deliver environmental excellence on SRAPC, Ventia have developed an organisational structure that provides sufficient resources, both at leadership level and site personnel, to effectively implement the EMP, as well as site-specific CEMP requirements. Our teams will always be trained to address environmental risk and enable Ventia to conduct activities in an environmentally competent manner. Section 4.1 details the roles and responsibility of the Ventia team.

The Ventia environmental team will be initially resourced by an Environmental Manager, Environmental Lead, and two Environmental Officers (also referred to as co-ordinators/advisors throughout this document) who will have the experience described in Table 4-1 of this document. Environmental staff will be recruited by the environmental manager, or other suitably qualified staff, and report to the environmental manager. The environmental lead is responsible for allocating projects to the environmental officers based on workload, capability, location, and other considerations. Resourcing levels will be assessed throughout the contract based on project demands and other considerations.

4.9.2 Interfaces with the overall organisation

Responsibility for environmental compliance, best practice, and innovation will be embedded across the whole business, from senior management to all levels of operational staff.

Specialist resources will be allocated to the Environmental Team, which will comprise of an Environmental Management Representative, an Environmental Lead, and Environmental Co-ordinators. The environmental team will provide specialist environmental advice to senior leaders and offer support across the project.

Our approach to communicating with staff to develop and maintain an environmentally focused culture is details in Section 6.1.

5. IDENTIFICATION AND ASSESSMENT OF ENVIRONMENTAL IMPACTS

5.1 Approach

Environmental impacts of the works under the contract will be assessed through the Ventia Environmental Assessment Procedure which will be in line with the RMS Environmental Assessment Procedure for Routine and Minor Works (EIA-PO5-1) and the RMS Environmental Assessment Procedure for Project Review of Environmental Factors (EIA-P05-2).

In addition to environmental approvals, Ventia will capture all Environmentally Sensitive Areas in our GIS-based SAP Asset and Work Order Management tools. The tools are web-based, intuitive, and accessible to both Ventia and TfNSW in the office or the field. The tools allow us to set up automated assessment processes and approval workflows that combine environmental data with Asset and Work Order management.

As such, our assessment and approval processes are substantially automated and streamlined, with clear visibility of all requirements on each work order. A work order can represent an entire project area, or a simple reactive or routine maintenance activity.

Key environmental datasets are held as part of job templates for activities, and refined in our planning apps, such that the impact assessments can cover all environmental aspects.

5.2 Environmentally Sensitive Areas (ESAs)

Ventia has identified ESAs through the following background searches:

  - Heritage items:
- Roads and Maritime section 170 register
- NSW State Heritage database
- Commonwealth Environmental Protection Biodiversity Conservation (EPBC) Heritage items
- Australian Heritage Places Inventory
- Local environmental Plan (LEP) Heritage Plan
- Aboriginal Heritage Information Management System (AHIMS).

Biodiversity:

- NSW Bionet
- Threatened species
- OEH Wildlife Atlas
- Commonwealth EPBC Act - Protected matters
- Fish habitat
- Consideration should also be given to:
- Flood zones
- Contamination
- Acid Sulphate Soils
- National Parks.

The Environmental Assessment Procedure will identify ESAs though the use of heritage layers on Ventia's GIS Portal as shown in Figure 5-1.

All spatial data is available to our Work Order Lifecycle workflows. This allows us to automate the assessment of many environmental considerations. We are also able to associate specific requirements on a work order that must be completed or addressed prior to it being available for dispatch.

If the system is unsure, or if specified by our workflows, it can route a Work Order for approval by the Environmental Team at the planning stage if further environmental assessment is required. These workflows will be configured during transition and maintained throughout the contract lifecycle.

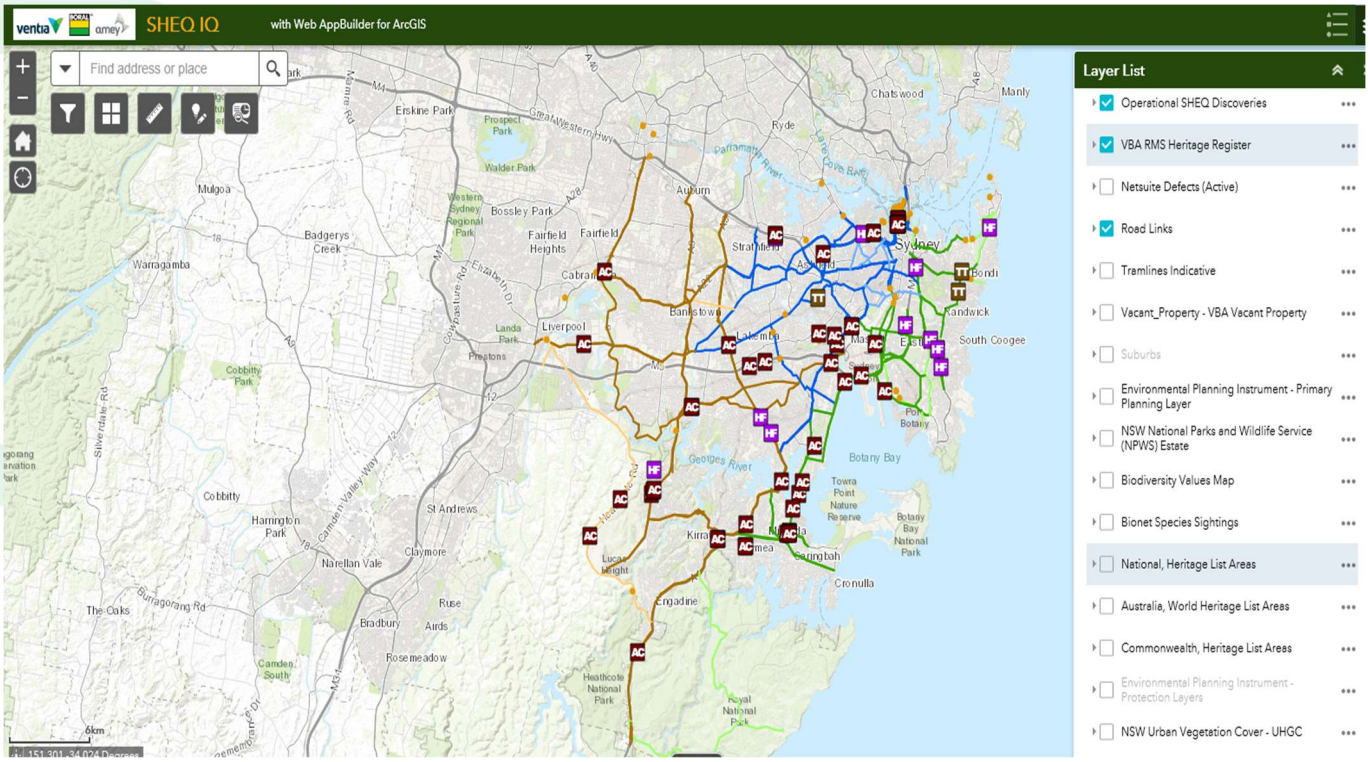


Figure 5-1 Our existing Environmental GIS tools used on Sydney SRAPC

5.2.1 Examples of environmentally sensitive areas

Details specific to the Parkland Zone can be found in Addendum 2 - Parkland Zone.

5.3 Activity specific environmental controls (ASEC)

A suite of ASEC documents will be developed for works that are considered exempt developments under ISEPP and fall under step 1 of the EAPRMW. The template provided in Annexure G36SRAP/B will be used to prepare the documents for each of the 55 activities listed in section 3.2 of G36SRAP, at a minimum.

The ASEC documents will include but not be limited to:

- Description of works
- Outline of machinery or vehicles
- Typical timeframe the works will occur i.e. within normal construction hours or outside normal construction hours
- Environmental Controls that would be implemented.

The ASEC documents must be approved by the Principal for release of Hold Point 1 prior to such works being undertaken.

These will be associated with our activity-based job templates in SAP, allowing us to consider all requirements them in our planning, scheduling and delivery of works.

5.4 Environmental evaluation and assessment process

The first step in the environmental assessment process is to determine the level of environmental assessment required in accordance with the EPA Act 1979 and State Environmental Planning Policy (Infrastructure) 2007 (ISEPP).

For activities that do not meet the scope of ASEC documents, and are therefore not considered to be exempt activities, further environmental assessment and approval will be required. Liaison with TFNSW staff will be required to confirm the level of environmental assessment required.

5.4.1 Site boundary and delineation

The construction boundary means the area that would be directly impacted to build a project. All our works must be undertaken within the approved construction boundary that applies to Work Under the Contract.

Measures, including the use of GIS maps to clearly define our site boundaries, will be implemented as part of our works process. Crews will use tablets to understand their works area. A key component of the environmental assessment will be clearly defining the construction boundary.

5.4.2 Determining the level of environmental assessment

The Environmental Assessment Procedure for routine and minor works has been provided by TfNSW to provide a framework for assessing the potential environmental impact of routine and minor works carried out:

- In the road corridor
- On TfNSW owned, controlled, or managed properties and infrastructure.

The procedure enables routine and minor works to be undertaken by TfNSW and its contractors (including Ventia) in accordance with statutory responsibilities. It applies a consistent approach to environmental impact assessment for routine and minor works.

In the context of the procedure, routine and minor works are regarded by TfNSW as general maintenance and minor works of minimal or minor environmental impact.

The levels of Environmental Assessment for new projects are:

- Step 1 Checklist
- Step 2 memo
- Minor Works Review of Environmental Factors (MWREF)
- Project Review of Environmental Factors (PRREF).

The process does not apply to:

- “Emergency works” as describes in clauses 5 and 97 (1)(e) of the State Environment Planning Policy (Infrastructure) 2007,
- Any activity or part of an activity for which assessment under Part 4 (State Significant Development) or Part 5.1 (State Significant Infrastructure) of the Environmental Planning and Assessment Act (NSW) applies
- “Emergency works” (as defined by ISEPP) do not require an environmental assessment, however, emergency situations are to be reported to TFNSW immediately and classified by TFNSW in accordance with ISEPP.

Figure 5-2, Environmental Assessment Procedure flowchart describes how the level of environmental assessment required is determined.

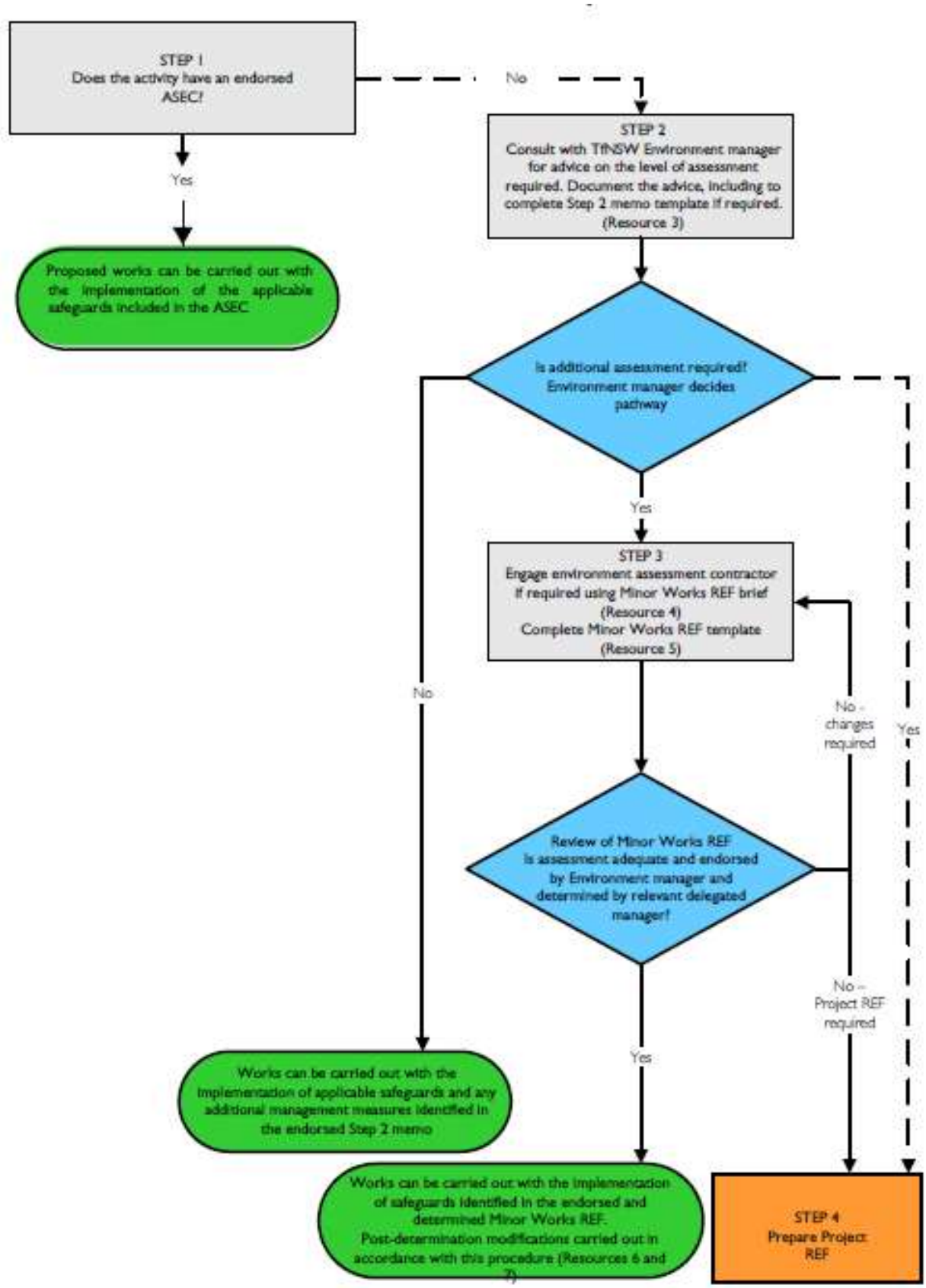


Figure 3-1: Roads and Maritime Services *Environmental assessment procedure for routine and minor works flowchart* - **Amended by Ventia March 2021 based on TfNSW Environment feedback on inclusion of ASEC process**

Figure 5-2 Environmental Assessment Procedure for Routine and Minor Works

5.4.3 Step 1 assessments (exempt activities) - ASECS

All works characterised as exempt development under ISEPP and fall under Step 1 of the TfNSW Environmental Assessment Process for Routine and Minor Works (EAPRMW) will have an ASEC developed for them which are to be approved by TfNSW before the commencement of works under the contract. These ASECs will form part of the BEMP and once approved by TfNSW, the activity can commence without any further environmental assessment.

Our automated process

For the SRAPC, we developed a partially automated process for step 1 activities.

Background searches are currently automated, but members of the planning team need to check works for compliance with Respite 2 requirements, and to ensure they are within the disturbed zone prior to dispatching work.

Ventia's updated system will build on this process. Automated background searches will be incorporated into our GIS-based SAP web apps for Work Order Management.

Each asset in our asset database will be tagged with whether it exists:

- Fully within the disturbed zone
- Partially within the disturbed zone
- Outside the disturbed zone.

It will also be tagged with any asset specific safeguards required.

Our SAP-based Asset and Work Management system requires all Work Orders to have at least one asset associated with them, meaning this dataset allows us to automatically consider the location.

This dataset will also include if the activity exists on the activity checklist and detail the applicable safeguards.

All work activities we perform also exist in SAP as a job templates to facilitate automated scheduling in Click.

Together, this asset and job template data allows the tools to perform automated checks. Any scenarios that cannot be calculated, such as if the data suggests a review is required (e.g. asset is only partially within the disturbed zone), will be routed to the Environmental Team's approval inbox. The NDH will be notified, and the Work Order cannot be dispatched to a field crew until the review is complete.

If works are located within proximity of an environmentally sensitive area, or if standard safeguards cannot be applied, further assessment and approval may be required.

Documentation

Records will be maintained to demonstrate that background searches were undertaken prior to works proceeding under a step 1. Given the level of automation, this data will be held in our Asset and Work Management Systems.

5.4.4 Step 2 Memo (exempt activities)

Where activities that are considered exempt, but do not have an approved ASEC developed, confirm the level of environmental assessment required for the works with the TfNSW Environmental branch. Step 2 Memo will be required and submitted to TfNSW Environmental Branch for review and approval before the commencement of works.

Any changes in scope of works following determination of the Step 2 Memo must be included in the Step 2 Memo and resubmitted to TfNSW again for review and determination.

5.4.5 Further environmental assessment (Minor Works REF and Project REF)

Where works do not meet the criteria to be undertaken as exempt activities, further environmental assessment is required in accordance with the process flow detailed in Figure 5-3.

The Ventia environmental team will liaise with the TFNSW environmental team to confirm what level of environmental assessment is appropriate prior to preparation. For works that are included in the Environmental Assessment Process for Routine and Minor Works (EAPRMW), a Minor Works REF is to be developed and submitted to TfNSW Environmental Branch for review until determination.

Works that don't fall within the scope of the EAPRMW are to have a Project REF developed by Ventia and reviewed by TfNSW Environmental Branch. The Project REF is to be reviewed and updated by Ventia until final determination by TfNSW Environmental Branch.

5.4.6 Environmental Assessment Process

The Ventia Environmental Lead or team member assigned to a project would review all relevant information including but not limited to the project brief, project scope, background searches, proximity to sensitive areas, proposed work methodology, proposed construction program, at the early planning stages of a project. The Ventia environmental representative would assess whether the works could be performed in accordance with an ASEC or require further assessment. Where works have been identified to require further assessment, the Ventia environmental representative would contact the TfNSW environmental branch with feedback on what level of assessment and if any specialist studies would be required. TfNSW environmental branch would then concur or request further details so that the level of assessment and type of specialist studies would be identified.

Once the project brief and scope has been provided by the Ventia Project Delivery Team to the Ventia Environmental representative, the REF Scoping Checklist it to be completed by both the Ventia Project Delivery and Environmental Representatives. Once this document is complete, the Ventia Environmental Representative will confirm the level of environmental assessment required for the project with the TfNSW Environmental Branch.

The MWREF or Project REF will be developed by the Ventia Environmental representative or by Ventia's strategic project partners AECOM. AECOM will be available to prepare environmental assessments and specialist studies for Ventia projects where they cannot be self-delivered in house. Ventia's environmental staff Team Lead or Officers will be responsible for reviewing all environmental assessments and speciality reports to ensure they are of a high quality before first submission to TfNSW Environmental Branch.

Once reviewed, the MWREF/Project REF will be returned to the Ventia Environmental Representative for updates to be made in house or by AECOM or other approved environmental subcontractor before returning to TfNSW Environmental Branch for review.

Determination of an EA is at the discretion of TfNSW Environmental Branch. Where needed, the submission process detailed in G36SRAP and summarised in Figure 5-3 will be followed, adhering to Hold Points 2 and 3.

If there are any changes to the scope of the works following determination of the MWREF or Project REF, TfNSW must be consulted with to assess these changes and determine whether a consistency review or Addendum REF is required to be developed and submitted to TfNSW for approval.

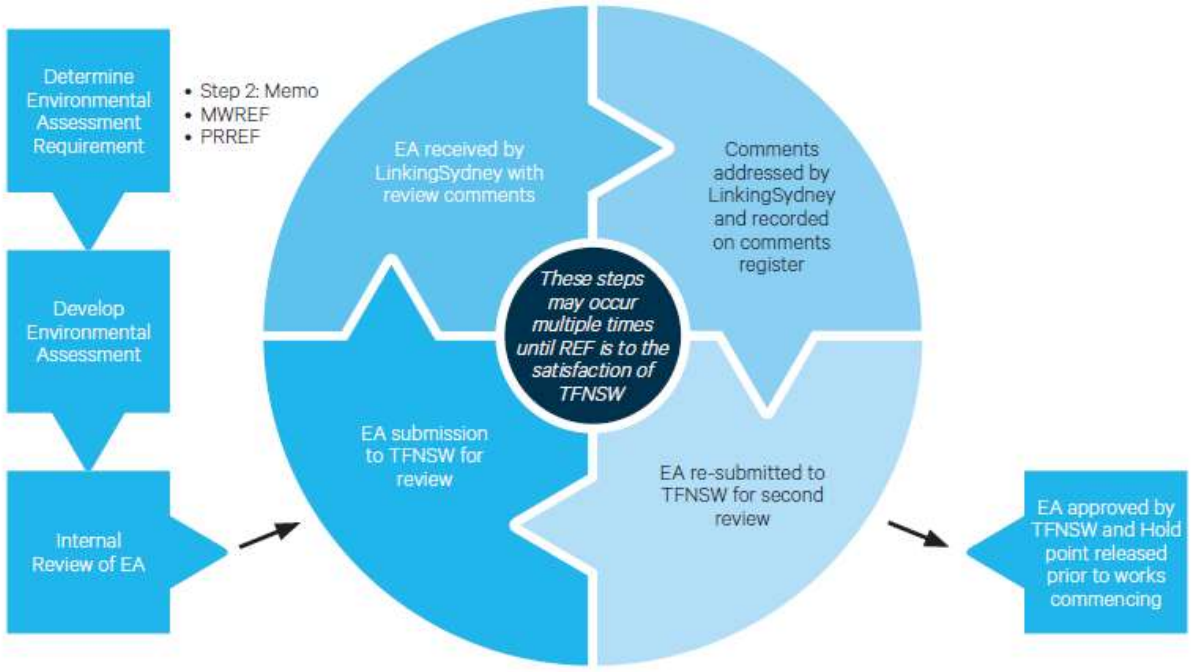


Figure 5-3 Environmental Assessment Process Flow

5.4.7 Hold points

A register of Hold Points will be included in the Quality Management Plan. G36SRAP/A lists the Environmental Hold Points that must be observed.

These Hold Point requirements will be imbedded within the relevant EMS documentation to ensure compliance with the requirements and any project-specific hold points are to be signed by the relevant TfNSW Environmental Representative or delegate and stored in the project folder in the Ventia Sharepoint.

5.4.8 Noise assessments

The quantitative method is a simplified way to identify the cause of potential noise impacts. It avoids the need to perform complex predictions and modelling. The RMS Noise Estimator Tool is an excel spreadsheet which allows the user to conduct a simple quantitative noise assessment. If it has been established based on feedback from TfNSW Environmental team that noise from works should be assessed using the noise estimator tool and the results fed into the Environmental Approval for the project.

The RMS Noise Estimator Tool will also be used for Out of Hours Work (OOHW) application assessments as required. Ventia may develop a GIS-based application based on the Nosie Estimator Tool outputs to generate noise assessments following contract initiation. Any GIS-based applications developed will require written approval by TfNSW Environmental Branch prior to implementation.

5.5 Web-based GIS portal

5.5.1 Web-based client portal

Ventia's web-based client portal will provide TfNSW with access to the various apps and dashboards used to manage the services performed under the contract.

Figure 5-4 illustrates the current home page for SHEQ IQ database under current SMC. The Ventia system under the SRAPC will have equivalent capabilities.

The features of the GIS portal will include but not be limited to those listed in section 10.1 of G36SRAPC.

The GIS system will be used for the duration of work under the contract to support design, construction, operations and general maintenance activities. The application and capabilities of the system will be consistent with section 10.2 of G36SRAPC.

The layers which will be included in the GIS portal are being sourced but will include those listed in section 10.6.2 of G36SRAPC:

- Principal owned data sets, such as roads, stockpile sites, city boundaries
- Biodiversity data sets, including NSW Bionet, threatened species, Commonwealth EPBC Act Protected Matters, vegetation mapping
- Cadastral information
- Land use (zoning)
- Heritage, including Roads and Maritime Section 170 register, NSW heritage database, Commonwealth EPBC heritage list, Australian Heritage Places Inventory, Local Environmental Plan/s heritage items, and Aboriginal Heritage Information Management System (AHIMS)
- Flood information
- Fish habitat
- LGA boundaries
- Contamination
- SEPP (eg drinking water catchment, coastal wetland)
- Acid sulfate soils
- National Parks (eg estate boundaries, key habitat corridors) and
- Bushfire prone land

Map layers will be used for documents including, but not limited to, environmental assessments, specialist reports, BEMP, CEMP, Environmental Management Plans, Environmental Work Method Statements, and sensitive area maps.

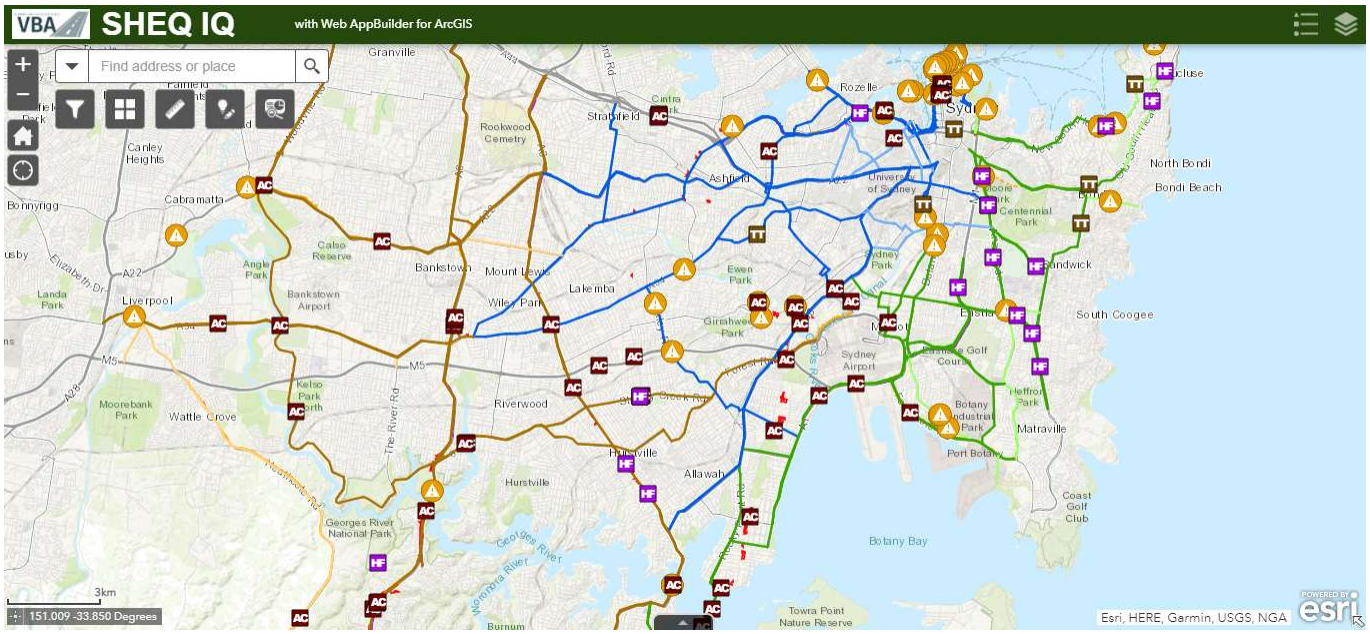


Figure 5-4 The current landing page for the current SMC web-based GIS portal, SHEQ IQ

5.5.2 Integration with Environmental Spatial Datasets

Figure 5-5 illustrates how our GIS-based SHEQ IQ database integrates environmental layers and registered data points with network asset information.

The screenshot shows a mix of environmental input data points such as heritage finds, asbestos finds and contamination finds over base map of environmental land use data including network asset locations.

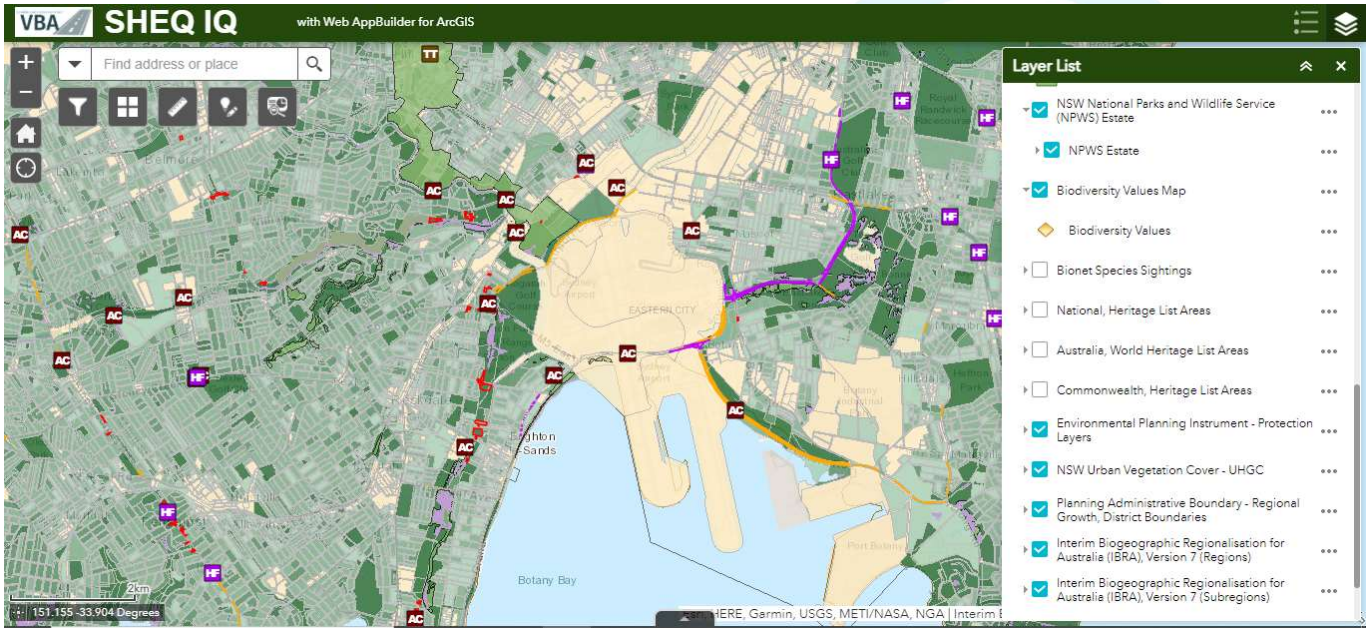


Figure 5-5 SHEQ IQ environmental layers integrated with SMC Asset data, defects and other information

5.5.3 Capturing asset extents

Asset extents are captured in the GIS layers of the Asset IQ database and defects across the network are captured by Blackmoth technology and uploaded into the database. These asset extents are used in the environmental

assessment process to determine site boundaries, clearing limits and clean up/management responsibilities for contamination or unexpected finds such as asbestos.

Figure 5-6 illustrates how we capture asset location and extents to aid our environmental assessment process.

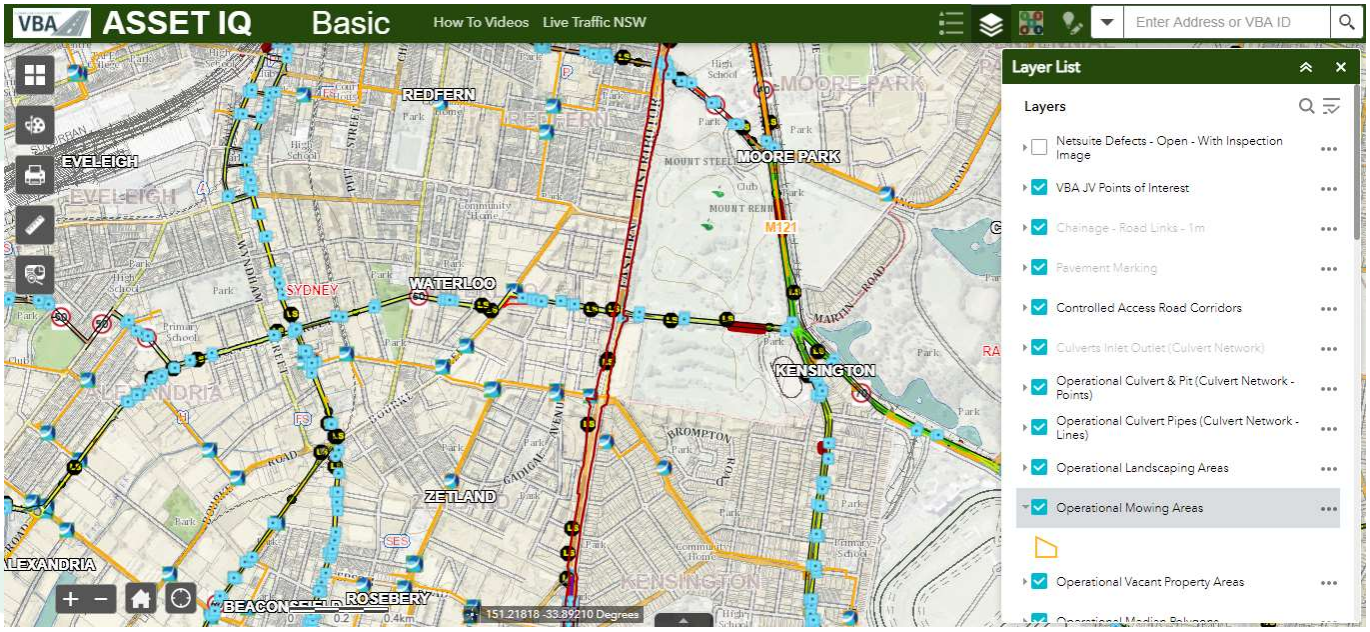


Figure 5-6 Capturing asset locations and extents in Asset IQ

6. COMMUNICATIONS

Ventia is committed to placing TfNSW's customers first. This includes communities, local councils, community groups, and environmental groups. Our approach keeps customers informed when works are happening in their area and engaged with the positive impact our works will have on their community.

6.1 Internal communications

To deliver our environmental commitments, it is vital to ensure our teams are aligned around our goals.

Ventia will ensure all persons doing work under our control are aware of their contribution to the effectiveness of the EMS, and implications of not conforming with EMS requirements. This will include induction and training around:

- Ventia's contract-wide environmental values and requirements and awareness of Ventia's Environmental Policy
- Site-specific environmental management requirements
- Environmental incident reporting requirements

The Environmental Manager and Environmental Lead will be responsible for communicating any issues or changes to the environmental assessment process or environmental management. Table 6-1 shows the regular internal communication forums that will be used to reach all staff where required:

Table 6-1 Communication frequency

COMMUNICATION FORUM	FREQUENCY	PARTICIPANTS
Monday morning weekly update (or similar)	Weekly	All Ventia office staff
Monthly SHEQ toolbox	Monthly	All Ventia staff
Site and office noticeboards	Monthly	All Ventia staff
SHEQ alerts and lessons learnt	As required	All Ventia staff (and contractors if necessary)

Other channels will be used for updates as required, depending on the messaging and level/ function of the audience (for instance, senior management, front-line staff, or sub-contracted service providers):

- Inductions
- Toolbox talks
- Environmental Alerts
- Environmental awareness training
- Face-to-face discussions or meetings. All meetings will be minuted and distributed to relevant parties.

6.1.1 Embedding environmental excellence into our culture

Ventia will strive to go beyond compliance by encouraging innovation and awareness through regular events and activities for staff, supporting our acknowledgment of the importance of country to indigenous Australians.

The annual business calendar will include environmental awareness initiatives such as corporate tree planting, as well as events to celebrate World Environmental day and National Recycling Week. These initiatives and events will be supported and promoted from senior management and participation open to all Ventia employees working under the Parklands SRAPC.

6.2 Cooperation and coordination with environmental response and regulatory agencies

6.2.1 Internal Communication

All environmental incidents will be directed to the Ventia Environmental Site Representative (ESR) for the project or maintenance activity. The incident will then be escalated to the Ventia Supervisor or Project Engineer who will notify the Ventia Environmental Team representative as per the Ventia Unplanned Events Process. The Ventia EMR or Environmental Lead will be responsible for notification to TfNSW Environmental Branch.

6.2.2 Communication with TfNSW Environmental Branch

All environmental incidents, no matter how minor will be reported to TfNSW Environmental Branch by the Ventia Environmental Team in accordance with the Environmental Incident Classification and Reporting Procedure. An Environmental incident 624 form will be submitted to TfNSW Environmental Branch and TfNSW Environmental Operations ("EnvOps") email within 72hrs of notification of the incident.

Ventia will notify TfNSW as soon as practicable and, in any case in writing within 24 hours, of any incidents which have been reported to the EPA under Part 5.7 of the POEO Act. All other environmental incidents will be reported to TfNSW verbally and in accordance with TfNSW's Environmental Incident Classification and Reporting Procedure.

All environmental incidents will be logged into Ventia's online incident management portal to retain incident details, initial corrective actions and root cause analysis. All Category 1 environmental incidents will be investigated by the Ventia Environmental and Project Delivery Teams and any contractors involved to determine root causes and a Lessons Learnt will be developed and provided to TfNSW Environmental Branch upon request.

6.2.3 Communication with external regulatory bodies

The Environmental Manager (EMR) is the main point of contact for external stakeholders regarding specific environmental issues and will liaise directly with external regulators following approval from TfNSW Environmental Manager to do so.

Ventia Contract Management personnel must be available to liaise with the TfNSW Environmental Representative, NSW EPA, and other authorities (if required), on a 24-hour basis. Those authorised to take immediate action as required by NSW EPA and other external stakeholders are:

- Ventia SRAPC Environmental Manager
- Ventia SRAPC Network Custodian Manager
- Ventia SRAPC Program Director

If these personnel are unavailable, any of the above can delegate authority to take immediate action and undertake external communications.

Ventia also understand the importance of proactive communication with agencies such as National Parks and Wildlife Service NSW. As some of works will be within National Parks, we value the importance of building relationships with these agencies to effectively and efficiently manage works and obtain timely responses for required environmental endorsements and approvals from them.

6.3 Community and stakeholder communications

Collaboration between the Environmental and Community and Stakeholder Engagement Team is vital to achieve positive community and stakeholder engagement. Environmental assessments will include community and stakeholder considerations and will detail the project specific community engagement requirements.

To ensure proactive engagement, we have identified potential issues and impacts as a result of our activities for stakeholders and community members. These have been outlined below with our proposed response and management measures in table 7.3.

Table 6-2 Key Issues for delivery

KEY ISSUE	CONCERNS	RESPONSE
Construction noise and vibration (including out of hours works)	▪ Noise and vibration impacts from work ▪ Property damage due to vibration ▪ Construction hours ▪ Out of hours work and respite periods ▪ Construction fatigue	▪ Implement an automated noise prediction tool to predict noise impacts and other sources of noise to avoid cumulative impacts and accurately notify the community. ▪ Commence early and proactive communication. ▪ Distribute regular communication material signage, where appropriate. ▪ Consult the community as to their preference for work program (focus / reference groups, community/customer surveys). ▪ Collaborate with environmental and work teams to ensure work is coordinated effectively and mitigation measures are in place. ▪ Carry out monitoring for noise or vibration, where required. ▪ Implementation of the complaint's management procedure.
Traffic, transport and access	▪ Congestion impacts to the network for road users ▪ Public transport access and availability ▪ Access and congestion on local roads ▪ Emergency vehicle access during works ▪ Pedestrian and cyclist (active transport) access during construction ▪ Access changes to residential properties or businesses	▪ Integrating information into TfNSW communication channels such as livetraffic.com ▪ Ventia Communications and Engagement Team to be involved in traffic work planning. ▪ Develop specific communication strategies for larger projects and major road work. ▪ Distribute material to inform the local community of changes. ▪ Communication with key stakeholder such as Emergency Services prior to activity. ▪ Use of Variable Message Signs (VMS) to inform network customers, pedestrians, cyclists or public transport users of changes. ▪ Advertise major traffic, public transport or access changes, if required. ▪ Communicate upcoming changes at community roadshows/information sessions, if required ▪ Communication with interfacing projects to mitigate conflicts during activities.

All environmental complaints will be managed in accordance with the Enquiries and Complaints Management section of the Community and Stakeholder Engagement Plan.

Table 6-3 Ventia Contacts (Environment)

AGENCY	CONTACT PERSON	CONTACT NUMBER
24-hour Community Response Line	n/a	TBC
Ventia Program Director	James Bennett	0448 366 474
Ventia Environmental Manager	Alex Ross	0409 945 018
Ventia Communications & Community Engagement Manager	n/a	TBC

7. MITIGATION MEASURES

7.1 Development and implementation of mitigation measures

7.1.1 Managing environmental site risks

A structured approach to risk allows better decision making, ensuring Ventia's environmental impact is minimised.

Ventia will identify, review and respond to environmental risks throughout the contract. Key elements of our approach include:

- Gaining a clear understanding of environmental risks and what mitigation measures can be implemented
- Developing a site-specific CEMP and ensuring its requirements are implemented and understood by all onsite
- Developing EWMS where appropriate and ensuring its requirements are embedded into work practices

The Risk Register described in section 9.4 of this EMP will be used as a guiding document for the preparation of site-specific/operational risk registers.

7.1.2 Environmental site risk assessment workshop

Collaboration is key to mitigating risk. An environmental site risk assessment workshop will be held for any project requiring a REF, to include agenda items and key attendees in accordance with the requirements of G36SRAP Clause 8.4.3.1.

It will be attended by the TfNSW Sydney Region Environment Manager, a member of Ventia's environmental team, the on-site ESR and any other key personnel of the Project Delivery Team such as site supervisors and engineers.

The scope of this workshop will include but not limited to:

- The identified steps in the activity
- The environmental hazards and associated risk levels (initial risk)
- Determination of the level of environmental assessment and any specialist reports required
- Identify the type and level of community engagement required for the project
- Confirm the expected timeframes for project delivery
- Control measures to be implemented in accordance with the EA, statutory requirements and the requirements of G36SRAP
- Assessment of residual risk levels (Where the risk level is high, an EWMS is required for that activity)
- Developing and documenting agreed site controls to be included in the CEMP, including specific locations of environmental controls and environmentally sensitive areas including how the effectiveness of such controls will be ensured.

7.1.3 Proposed mitigation measures

Mitigation measures will be developed to address environmental risks identified across the Business during works under the contract. As the environmental risks are varied, specific management plans and procedures will be developed as part of this BEMP and accordance with the environmental aspects covered in the SRAPC G36 including, but not limit to the aspects listed below in Table 7.1.

ENVIRONMENTAL ASPECT	RELEVENT VENTIA EMS DOCUMENT CONTAINING MITIGATION MEASURES
Soil and water	Soil and Water Management Plan
Acid Sulfate Soils (ASS)	Acid Sulfate Soil Management Procedure
Contaminated Land	Contaminated Land Management Procedure
Spill prevention and response	Chemical Bunding Minimum Standard
	Spill Response Procedure
Air quality	Air Quality Management Procedure
Fire prevention	Fire prevention Minimum Standard
Noise and vibration	Noise and Vibration Management Plan
Biodiversity	Flora and Fauna Management Plan
	Pesticide Use Procedure
Aboriginal heritage	Heritage Management Plan
Non-Aboriginal heritage	Unexpected Heritage Finds Procedure
Waste management	Waste Management Procedure
Sustainability	Environmental Sustainability Plan
Landscape character and visual amenity	Landscape Character and Visual Amenity Procedure
Socioeconomic	Managing Socioeconomic Impacts Minimum Standard

Table 7-1: Overview of Ventia EMS documents containing mitigation measures for environmental impacts

7.1.4 Construction Environmental Management Plans (CEMP)

For projects which involve higher environmental risk, and therefore require a working approval under a Minor Works REF or Project REF, Ventia will develop, implement and maintain a CEMP. The need for a CEMP will be indicated in a Minor Works REF (MWREF), or where the project requires a Project REF. This approach aims to avoid and mitigate environmental risk.

Each CEMP will be submitted on a Ventia CEMP template that aligns with the requirements of G36SRAP. A draft CEMP template is attached as Appendix B. Ensuring alignment with TfNSW, the template will be approved for use by TfNSW by the release of Hold Point 4.

- CEMPs will be site-specific, and will:
- Address the requirements of the REF and G36SRAP.
- Detail the safeguards that will be implemented on site
- Detail any specific conditions of licenses and permits obtained for the project.
- Address the aspects and impacts of the project.

- Provide reasonable and practicable management measures, that provide for the consistent management of construction environmental management.
- Detail the permitted working hours, whether these be normal working hours or approved OOHW in accordance with G36SRAP Clause 6.3.
- Detail any project specific requirements related to working hours, such as specific activities that can be conducted outside of normal hours, and processes to ensure work crews understand their requirements.

Thorough review provides additional certainty and assurance. Completed CEMPs will be endorsed by Ventia's Environmental Management Representative prior to submission to TfNSW. A CEMP review, which acts as a checklist of requirements, will accompany each CEMP for ease of review. This checklist will tabulate details of each individual requirement of the specification and the REF, and where it has been addressed in the CEMP.

The CEMP will be submitted to TfNSW in accordance with G36SRAP Clause 4.5.2. No works will commence on the project until the CEMP has been reviewed and endorsed by TfNSW, in accordance with the release of Hold point 5.

Continuous monitoring and improvement of CEMPs enables continuous better decision making. The CEMP will be treated as a live document, and we will monitor its effectiveness.

The CEMP will be updated whenever there is a change to the construction program, scope of works or methods to ensure control measures continue to be effective, and to allow for new learnings and best practice to be incorporated. Any updates will be communicated to the relevant TFNSW Environmental Team member.

7.1.5 Environmental Work Method Statements (EWMS)

EWMS are construction communication tools that describe the methods and sequence of a construction activity, the environmental hazards or risks associated with each step of the activity, and the related site-specific controls. These ensure that work is always completed to Ventia's high standards, and consistently meets all regulatory requirements.

Continuous improvement is embedded in our processes. EWMS are live documents and will be updated as necessary to address any changes onsite to ensure environmental impacts are mitigated.

In accordance with G36SRAP/C, EWMS are required for the following works:

- Clearing and grubbing
- Works over water
- Works within waterways
- Works near environmentally sensitive areas
- High risk activities identified in the initial risk assessment workshop
- Other activities considered high risk identified at any stage of the contract.

A draft EWMS template has been prepared by Ventia to address the elements detailed in G36SRAP Clause 8.4.2.2. The template is designed to be easy to use and follow on site.

The template is attached as Appendix A to this BEMP and will be reviewed and approved by TFNSW prior to the mobilisation stage, and in accordance with Hold point 4.

7.2 Development and Implementation of monitoring programs

7.2.1 Environmental monitoring

Environmental monitoring will be undertaken as required by project specific approvals, licenses and permits, in accordance with relevant Australian Standards and approval requirements. Where specific monitoring is required, it will be detailed in the CEMP.

Audits

Audits of projects conducted under a MWREF or PRREF will be determined by a risk-based approach if they meet the following criteria:

- The project/work scope requires an EWMS
- The project/work construction duration is greater than 3 months
- The works are being conducted in or adjacent an environmentally sensitive area (e.g. National Parks)
- The works are deemed 'high risk' by the Ventia Environmental Team

Environmental audits will be conducted once within the first three months of a project, and either as required, or every three months thereafter until the completion of construction.

Audits are to be conducted by a member of the Ventia Environmental Team and will assess compliance of both documentation and onsite controls with the CEMP, environmental approval and G36 SRAPC requirements.

Non-conformance reports (NCRs) will be assigned to the Contractor and Ventia Project Delivery Team (Engineer and Project Manager) for any non-compliance with environmental project requirements. The NCR will be assigned an appropriate timeframe for a corrective action report (CAR) to be provided by the Contractor/Project Delivery Team to close out the action.

Audit reports and findings will be recorded by the Ventia Environmental Team member and logged in BEAMS.

Principal's Audits

The Principal (TfNSW) may at any time conduct an audit on Ventia's projects (CEMPs) or EMS (BEMP and other documentation and systems) for the SRAPC, given appropriate prior warning. The Principal may issue NCRs to Ventia following the audit for any non-compliances with the SRAPC contract, or G36 Specification. NCRs would require the Ventia projects and Environmental Teams to implement appropriate corrective actions, followed by the submission of a completed corrective action report (CAR), detailing Ventia's response within the allocated timeframe.

7.2.2 Equipment calibration

All Ventia inspection, measuring and testing equipment used to verify compliance against the drawings, specification and statutory requirements will be controlled and recorded in the CMS.

Calibration certificates will also be maintained and team members responsible for management of subcontractor work will also be responsible to ensure all their equipment is calibrated and records stored on the CMS.

Control, calibration and maintenance of monitoring and test equipment will be in accordance with the Ventia procedures or manufacturer’s specifications.

Measuring equipment for inspection and product compliance purposes will be calibrated at prescribed intervals against certified equipment having a known relationship to nationally recognised standards.

Any equipment identified as having doubtful accuracy or precision will be removed from use and calibrated. Where any inspection, measuring and test equipment is found to be out of calibration, the validity of the previous inspection results will be assessed and documented.

7.3 Review of effectiveness of mitigation measures

Our approach to reviewing the effectiveness of mitigation measures is rigorous, transparent, and data driven. This means that any issues are spotted and addressed quickly, and opportunities for improvement and innovation are easily visible.

7.3.1 Environmental inspections

Site environmental inspections provide both a qualitative and quantitative review of the effectiveness of our approach, addressing the adequacy and effectiveness of environmental controls.

Site inspections will:

- Be performed by a member of the environmental team, project delivery team (e.g. Ventia Supervisor or Engineer) or contractor representative (e.g. Contractor Engineer, Supervisor or Team Lead)
- Cover environmentally high-risk activities and processes, works in or near environmentally sensitive areas, implementation of EWMS onsite, site preparedness for adverse weather conditions and availability of emergency equipment
- Assess the adequacy of environmental controls as per the approved CEMP, EWMS, ECM or other project-specific documentation
- Assess the effectiveness of the delineate of the construction site boundary
- Identify and inform corrective and preventative actions that correspond to identified environmental issues including nonconformities
- Be recorded in BEAMS once complete to track the progress and close out of non-conformances and corrective actions

Environmental inspections for projects taking place under a MWREF or Project REF will be scheduled weekly as a minimum to identify any environmental aspects where harm to the environmental has potential to occur. More frequent inspections may be required for high risk works or following poor contractor performance. Findings from the inspections are to be shared with the Ventia project delivery staff and/or contractors and appropriate corrective actions and timeframes agreed upon before submission into BEAMS.

7.3.2 Principal's Inspections

The TfNSW Environmental representative, may at any time, conduct an inspection of the Ventia projects or maintenance activities for works under the SRAPC, given adequate prior warning. During these inspections, a member of the Ventia Environmental Team is to be present. Any non-conformances and appropriate corrective actions and timeframes are to be discussed prior to completion of the inspection. Following the inspection, the TfNSW Environmental Officer will provide an inspection report which is to be completed and returned with evidence of corrective action close out within the appropriate timeframes.

Using innovative systems to manage environmental inspections

Environmental inspections will be programmed and planned in our GIS-based SAP Work Management Tools.

Data will be captured in the field using apps and stored into both our Work Order and compliance managements tools. Data will be accessible to all via the GIS-based web apps.

Through these, TfNSW will have access to a minimum of 90 days of planned inspections, and the information from all previous inspections. The apps also include self-serve data extract capabilities, which can be configured to meet TfNSW's needs. We will work with TfNSW to identify and set up specific column layouts and data formats to aid TfNSW internal processes or data import requirements.

Corrective and Preventive Actions (CAPAs) will be recorded in BEAMS and tracked to completion.

8. DEVELOPMENT AND IMPLEMENTATION OF ENVIRONMENTAL INCIDENT RESPONSE MEASURES

8.1 Development of incident response measures

Incident response procedures (such as spill response procedure, unexpected finds procedure) will be developed as part of the mobilisation phase of the contract. These procedures will be regularly reviewed and updated in accordance with any changes to the business including risk priorities.

Project-specific incident response plans will also be developed where deemed necessary by environmental assessments.

8.2 Incident classification and reporting

Environmental incidents are managed according to their classification:

TYPE OF INCIDENT	DESCRIPTION	EXAMPLES
Environmental incidents (Category 1 and 2)	**Category 1** Potential breaches of legislation or failures of process that result in actual off-site harm, or residual on-site harm OR Works undertaken outside approved areas without required approval or assessment Or Any Material Harm pollution incident	▪ Pollution incidents, e.g. spills to land or water, uncontrolled releases of hazardous substances, illegal transport or disposal of waste, emissions of dust, offensive odours or noise beyond the site boundary ▪ Conservation breaches, e.g. unauthorised damage to flora or fauna, unauthorised dredging within a waterway ▪ Heritage breaches, e.g. unauthorised harm to Aboriginal objects and Aboriginal places, unauthorised damage to state or locally significant heritage items ▪ Planning and compliance breaches e.g. failure to comply with relevant legislation or environmental approvals, permits, CEMPs or EWMS
	Category 2 Failures of processes or events that do not result in off-site harm, or residual on-site harm. The incident may result in temporary harm which can be rectified to pre-existing conditions	
Reportable events	An event which occurs outside the scope of reasonable environmental controls and mitigation measures	▪ Unexpected finds such as heritage, threatened species, contamination ▪ Sediment or site water travelling beyond site boundary despite required ERSED controls being in place due to unforeseen extreme weather events

All incidents, including 'pollution incidents', will be managed in accordance with:

- All relevant legislation including the POEO Act 1997 (NSW)
- The RMS 'Environmental Incident Classification and Reporting Procedure', 'RMS Incident Report', or any other procedures as nominated by TFNSW.

TFNSW will be notified if any incidents require notification or reporting to any statutory authority, as required by the relevant legislation, as well as when the notification or reporting actually occurs.

8.2.1 Incident response

Should an environmental incident occur, works in that area will cease immediately and the site supervisor will be notified. The site supervisor will report the incident to the Environmental Manager, regardless of how big or small the incident may be. If safe to do so, control measures will be implemented to reduce environmental impacts.

The Environmental Manager will liaise with Senior Management and the Project Manager to begin an investigation as soon as initial remediation works are underway. The investigation will be commensurate to the severity of the incident, and in accordance with the RMS Environmental Incident Classification and Reporting Procedure.

Collaboration and clear communication with TfNSW will be ensured by our robust procedures. The Environmental Manager will notify the TfNSW Environmental Manager of the incident verbally or via email as soon as possible and will submit an environmental incident report form within three days.

Ventia's emphasis on continuous improvement ensures we learn from incidents and build those learnings into our approach going forwards. We also benefit from lessons-learned from the other contracts Ventia delivers - both in the roads space and in other industries.

Once all investigation is completed, a lessons-learned report will be submitted to TfNSW. The report will summarise the incident events, contributing factors and root causes.

The below Figure 9.1 is the Environmental Incident response workflow process.

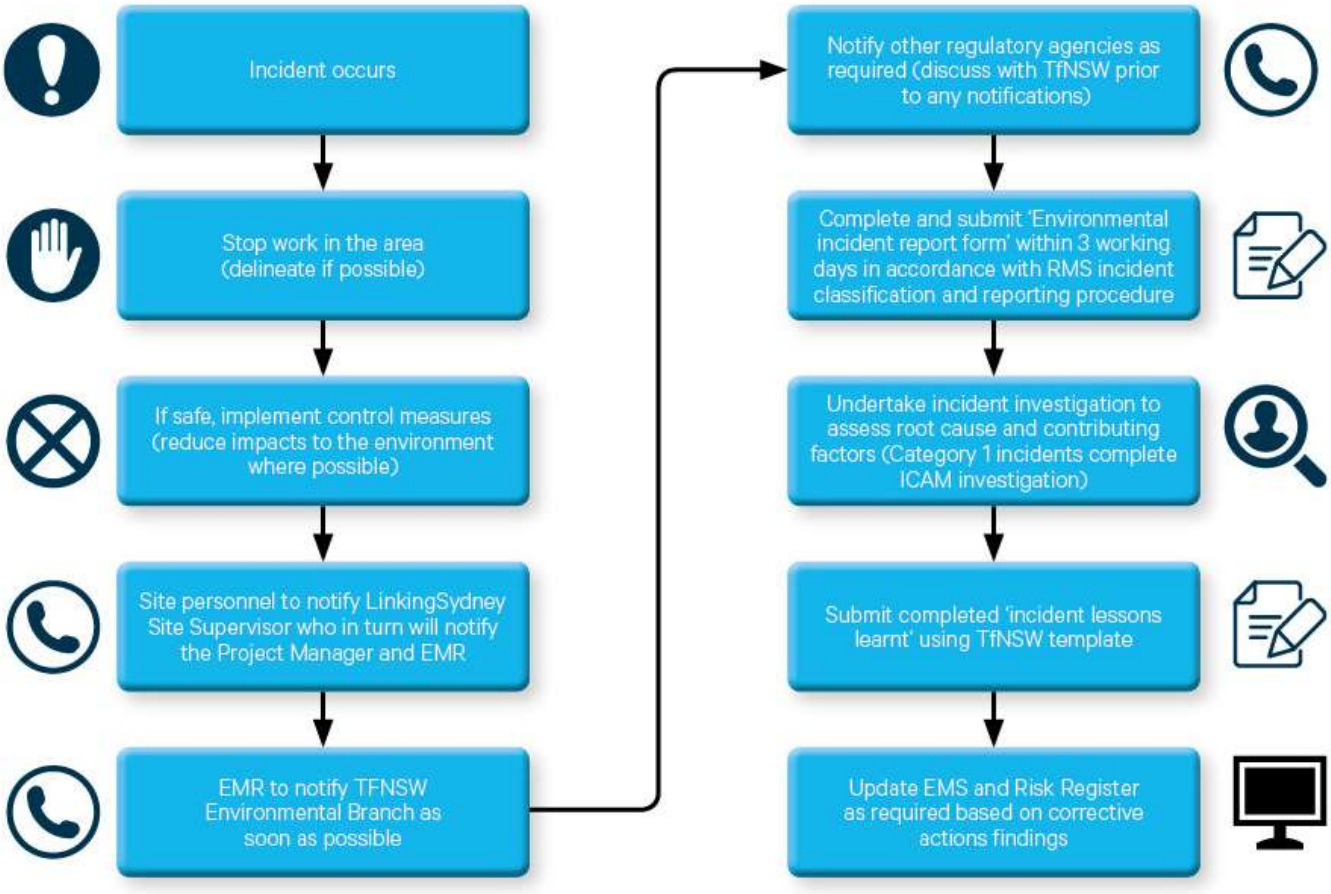


Figure 8.1 Environmental Incident response workflow

8.2.2 Spill response

All works will be carried out to minimise the possibility of pollution by spills of potential contaminants. This will be done by ensuring the requirements of G36SRAP Clause 9.7.1 are implemented on all work sites, storing fuels and chemicals appropriately and within bunds, and maintaining plant and equipment appropriately.

Our spill response procedure will detail how spills will be managed and remediated. Adequate numbers of spill kits will be provided at all work sites, with personnel made aware of their locations and trained in their use. Spill drills will be regularly undertaken to ensure workers are proficient in dealing with spills.

8.2.3 Site shutdown

Site shutdowns is a period when construction works temporarily cease or operate at a reduced capacity to normal operation. This can include long weekends, holiday periods and forecasts periods of wet weather.

It is important to have appropriate site shutdown procedures to ensure environmental management is continued throughout any site shutdown periods, and environmental risks corresponding with any planned reduction in operational capacity are adequately mitigated. Ventia will develop a site shutdown checklist and process prior to mobilisation in accordance with the requirements of G36SRAP.

The site shutdown process will be implemented when any shutdown period will be greater than three days, or inclement weather is expected. Thresholds for site shutdown for wet weather will be detailed in the site-specific CEMP.

CEMPs will detail site specific requirements for individual projects per G36SRAP Clause 9.2.2 and 9.2.3.

9. QUALITY CONTROL PROCESSES

9.1 Performance evaluation and quality control

9.1.1 Environmental audits

Ventia will conduct audits throughout the contract lifecycle to verify that Work Under the Contract is compliant with G36SRAP Specification.

Regular internal audits, including environmental audits will be scheduled to ensure the effectiveness of the internal management system.

The Quality and Assurance Manager will prepare and maintain an annual risk-based audit program focused on areas identified as having the highest levels of risk. This is described in detail in the Quality Management Plan including an indicative audit schedule.

The following Environmental audits will be included on the annual audit schedule at a minimum:

- BEMP Audit
- Internal environmental systems audit
- Projects under the contract which will be in construction for greater than 12 months

Audits will be conducted in accordance with AS/NZS 19011 – Guidelines for Auditing Management Systems.

9.1.2 Roles and responsibilities for audits

All Ventia auditors must have formal qualifications as an internal or lead auditor, as dictated by the audit type, and be impartial to the work audited to ensure objectivity.

In addition to formal qualifications, it is expected that persons conducting audits and inspections have a demonstrated understanding of the nature and scope of the process being checked. Quality, HSE and functional leads have the responsibility of ensuring auditors assigned have the competency and skills. Critical and operational process inspections do not require auditor qualifications.

The Lead Auditor will formally document the results in an audit report. Copies of each audit report will be submitted to TfNSW and their Authorised Representative within five (5) days of its completion. Records of audits and any nonconformances and opportunities for improvement and subsequent corrective and preventive actions will be captured, managed and maintained in BEAMS.

TfNSW may conduct a BEMP or CEMP audit at any time. The scope of the audit will be advised with at least five days' notice. If surveillance or inspections have indicated that environmental controls are not in place or properly maintained appropriately, a BEMP or CEMP compliance audit may be conducted with 24 hours' notice provided to Ventia.

Ventia will provide necessary access to information as requested by TfNSW and ensure necessary resources are available including site personnel to facilitate the audit.

9.1.3 Non-conformance, corrective and preventative action

Non-conformance information will be provided in a timely manner with appropriate transparency to TfNSW. The non-conformance report and CAPA report will be in a format to be agreed to with TfNSW.

All Ventia team members, supply chain partners and client have the authority and responsibility to report any non-conformity at any stage. Potential sources of environmental nonconformances include, but are not limited to:

- Breaches of REF safeguards
- Non-compliance with CEMP requirements
- Environmental incidents resulting from negligence or insufficient environmental controls
- Undertaking works without relevant and appropriate environmental approvals or permits
- Regulatory breaches

A Non-conformity Report must be submitted to TfNSW within two business days of detection. Notification to TfNSW will be via InEight Team Binder with an attached report identifying the NCR.

Ventia will investigate the nonconformance by analysing relevant processes, work procedures and records to determine cause and whether it exists elsewhere or is likely to recur or potentially occur in another process. We will determine the extent of the action that need to be taken based on the potential effect of the nonconformity. We will implement any needed CAPAs based on this review. All CAPA reports will be entered in BEAMS and will be submitted to TfNSW within five (5) business days of becoming aware of the nonconformance.

NCRs and CAPAs will be reported internally via management meetings. Trend analysis of non-conformances will form part of management review to identify high-risk areas and opportunities for improvement.

Actions will be assigned to nominated team members with the responsibility to complete the action by a specified date. The responsibility for these actions and associated timeframes will be determined by the Quality and Assurance Manager and recorded/monitored via BEAMS reports.

Overdue actions associated with the NCR will be closely monitored and reported on a weekly basis to the Ventia management team.

Steps will be taken to ensure the Corrective Action has been implemented effectively, this may include re-inspecting or re-testing the item(s). Verification records will show that the proposed actions have been undertaken and (where relevant) have proven successful. BEAMS will be updated with all verification and approved documentation for future reference and auditing purposes.

A Rectification Notice will be submitted to TfNSW once we consider the NCR rectified. TfNSW may respond with a Notice of Disagreement within 10 business days, and the Notice of Disagreement will be tabled at the next Management Review Group meeting.

9.1.4 Assurance Demerit Thresholds

If the requirements set out in 01.07.03.06 Schedule 05 Assurance Framework are not met, we will have Assurance Demerits deducted (score at full services commencement is 100) and may face commercial consequences (i.e. TfNSW taking away work and possibly terminating the SRAP Contract). Each time a demerit event occurs, TfNSW will deduct Assurance Demerits from Ventia's score, from which there could be consequences as a result. An Assurance Demerit will be removed from the Assurance Score 6-months after the later of Rectification Notice or resolution of any Notice of Disagreement.

9.2 Selection, management and monitoring of subcontractors

9.2.1 Supplier/subcontractor evaluation

Subcontractors will be assessed for their safety, environment, sustainability, quality and commercial capabilities. Subcontractor Management procedure sets out how Ventia selects subcontractors. Subcontractors and product suppliers will be evaluated and selected against the criteria in Purchasing procedure and subcontractor pre-qualification questionnaire which includes environmental and sustainability criteria in line with the G36 SRAPC requirements. If necessary, they will be able to work under our own certified systems to ensure quality standards are maintained.

9.2.2 Supplier/subcontractor engagement

A list of all approved suppliers/subcontractors and their details will be maintained in the SAP management system. Procurement team members will regularly review this list to ensure it is current.

As part of contractor engagement, relevant documentation will be provided to all subcontractors with the expectation that they comply with documented requirements through a signed agreement. Ventia's standard contract documents will be used to create Subcontractor Service Agreements and a register of these agreements is maintained to capture the:

- Type of service and/or product subcontracted
- Subcontract Agreement expiration dates.

Subcontractors will be required to submit company and individual compliance information in Sentry utilising the Subcontractor Self-service Portal (SSP). Once approved, subcontractors will be issued with a copy of the Contractor Information Pack and any additional risk-related documentation relevant to their works (i.e. risk registers and management plans). A structured induction program will be held for all contractors to communicate requirements see section 9.3.1 Induction.

9.2.3 Supplier/subcontractor monitoring

The level of subcontractor monitoring will be determined by the level of risk associated with each subcontractor. The Procurement Manager will designate the appropriate managerial responsibility for management of subcontractors within their area of control, thus providing a single point of contact to the subcontractor.

Methods of monitoring/routine supervision may include:

- Site inspections
- Review of plans/procedures
- Environmental audits
- Regular meetings
- Management reviews
- Review of reporting documentation.

Concerns or issues raised by Ventia or TfNSW will be jointly addressed with the subcontractor or supplier

Meeting minutes will be taken and distributed by the chairperson (a nominated Ventia person) and a copy of the minutes of meeting will be retained on the subcontractor's file.

Ventia will conduct subcontractor performance reviews at the end of each delivery of work to ensure they are delivering services that meet the SRAP requirements. Their performance will also be monitored and reported through audits. Issues identified at service delivery level will be escalated to the Contract Manager.

9.2.4 Unsatisfactory performance

Where it has been identified that a subcontractor has performed a minor breach:

- Works may be stopped, and the breach addressed prior to re-commencement
- An NCR will be issued to the subcontractor
- Breach will be addressed as part of the Performance Review.

Where a subcontractor is deemed to have performed a major breach, the Project Manager may, depending on the severity of the problem/breach, reserve the right to have the subcontractor's preferred status revoked, and another subcontractor will be sourced.

Revoked subcontractors may re-apply for re-qualification. Under such circumstances, the same procedure for qualification of new subcontractors will apply for re-qualification.

9.3 Competence, training and awareness

We will ensure every person working in the SRAPC has the appropriate induction, education, training skills and experience. Ventia will maintain a compliance matrix identifying mandatory competencies required for each defined role. This compliance matrix will be maintained in VisRes and will be monitored by the Workforce Health and Safety Manager.

VisRes will be used to store all necessary evidence that a person or company has fulfilled the requirements to lawfully provide a service. Such proof includes licences, insurance certificates, certificates of educational achievement, site inductions and/or any other requirements deemed necessary. During the engagement process, all Ventia subcontractors must provide details and copies of each relevant document or proof of entitlement held by the organisation and each of its employees.

VisRes also provides our staff with the ability to check the credentials of any individual working on the SRAP Contract at any given time through a QR code on the back of workers' ID card. VisRes will send automatic reminders to subcontractors before licences are due to expire. This allows the SRAP Contract team to take appropriate action before licences and certificates expire.

Line Managers will monitor the effectiveness of the training and level of competency through on-the-job supervision and/or assessments, i.e. performance development reviews or subcontractor evaluations.

Specific environmental awareness training (internal and external) will be provided to individuals or roles with a responsibility for environmental management. This training will aim to achieve the level of awareness and competence appropriate to their assigned tasks.

In accordance with clause 8.2.2 of G36SRAPC, the following environmental induction and training requirements have been considered:

- Minimum level of training, experience and/or qualifications required for all staff is detailed in Table 4-1 of this plan
- Identification of existing skills and training needs for staff and subcontractors including gap analysis and a plan to close the gaps will be managed by a staff member’s line manager or supervisor
- Routine environmental training and awareness sessions would be developed and delivered in accordance with Table 4-2 of this plan
- New recruits and personnel with changed roles or responsibilities will receive additional training if required, as identified by the staff member’s line manager/supervisor
- Activity specific training will be performed in accordance with Table 4-2 of this plan
- All training and awareness records will be stored in VisRes
- A training matrix and register of environmental training will be available in VisRes

9.3.1 Induction

All Ventia staff and subcontractors will complete the Ventia induction through the online portal, VisTEP. The Ventia induction details:

- An overview of Ventia and the SRAP Contract
- Ventia values
- Network specific WHS and environmental hazards, controls and minimum requirements
- Community and stakeholder engagement requirements.

The Environmental section of the induction will provide an overview of requirements related to noise, air quality, water quality, waste management, effluent control, contaminated land management and spill management.

9.4 Planning and risk management

Ventia will identify and review all legal, contractual and other requirements for the industry and region. We will ensure that environmental assessment and approval requirements are given due consideration in the planning of works undertaken as part of SRAPC.

9.4.1 Risk management

Ventia is committed to ensuring that environmental risks are identified at the project commencement stage. All relevant environmental risks are identified, assessed and suitable controls are established to mitigate the risks.

An environmental risk register has been prepared to include risks established during the RfT stage of the contract, included in the Ventia HSE risk register. It has been drafted based on our previous experience and knowledge of the network. This provisional risk matrix will be reviewed, updated and expanded as required during the environmental risk workshop, detailed in section 9.4.2, prior to commencing work under the contract.

The Risk Register will be used as a guiding document for the preparation of site-specific/operational risk registers.

The Risk Register will be considered a live document and will run for the duration of the Contract. Further Risk Register reviews will be undertaken following incidents/events, workplace changes, inspections, audits, legal changes etc. These reviews can be conducted as part of the WH&S Committee and Management meetings and in consultation with the relevant stakeholders.

9.4.2 Environmental risk assessment workshop

An environmental risk assessment workshop (ERAW), in collaboration with TfNSW, will be conducted prior to the work under the contract commencing, with the objective to:

- Identify and address key environmental risks associated with the Work Under the contract; and
- Optimise and expedite the production of the BEMP and associated submissions to TfNSW

The workshop will be held early in the development of the BEMP and no later than 21 days prior to submission of the BEMP.

The workshop will include the following participants at a minimum:

- TfNSW Sydney Region Environment Manager
- Ventia Environmental Management Representative and Environmental Lead
- Key Construction staff (Supervisors, engineers).
- The Workshop will include the following scope at a minimum:
- Overview of the Contract Scope of works, design and construction processes and subcontractor management
- Overview of the processes in the BEMP in particular the management/preparation of EAs and CEMPs
- Group review of key environmental impacts, risks, constraints and opportunities
- Development of corresponding risk mitigation strategies
- Group review of environmentally high-risk activities requiring EWMS
- Summary of agreed actions, responsibilities and timeframes.

A draft agenda will be provided at least five (5) working days before the workshop to the Principal for review and endorsement. Following the workshop Ventia will provide minutes of the meeting to the Principal.

9.5 Reporting and review

9.5.1 Monthly reporting requirements

The EMR or delegate will generate, as part of the monthly reporting, an environmental section within the overall monthly report to TfNSW. The following key areas will be included in the report in accordance with G36SRAP Clause 8.9.1.2:

- A summary of key construction works completed in the period
- Environmental complaints/enquiries and remedial actions
- Summary of environmental incidents, nonconformities, inspections and audits for the activities and projects in the period
- Close out actions and corrective actions in response to Category 1 incidents or red traffic light environmental inspections in the period
- A copy of the Waste and Materials Register and the Waste and Beneficial Reuse report for the period
- Pesticide application records for the period
- Forecast for upcoming construction activities within at least on month period
- Forecast for upcoming EAs (including Step 2 Memos and REFs for at least a three-month period).

9.5.2 Waste reporting

A waste and materials data collection program will be implemented for the duration of work under the contract, bringing focused innovation to TfNSW.

The program will track waste and materials beneficially used, recycled or disposed of on-or-off site. This will include works undertaken by Ventia, and any works undertaken by contractors on behalf of Ventia. The waste and materials tracking register will capture the following, at a minimum:

- Type of waste - waste classification as per the waste and materials definitions included in section 8.10.1 of G36 SRAPC.
- Quantities
- Source and location of waste
- Method and location where waste was beneficially reused, recycled or disposed of
- Waste transporter's license and company name
- Cross reference of records such as s143 forms and transport and disposal receipts/dockets.

This information will be captured by all internal and supply chain resources using one of our mobile apps at the end of each work activity or shift.

Figure 9-1 illustrates our standalone waste app used by supply chain partners to easily capture the waste data we require.

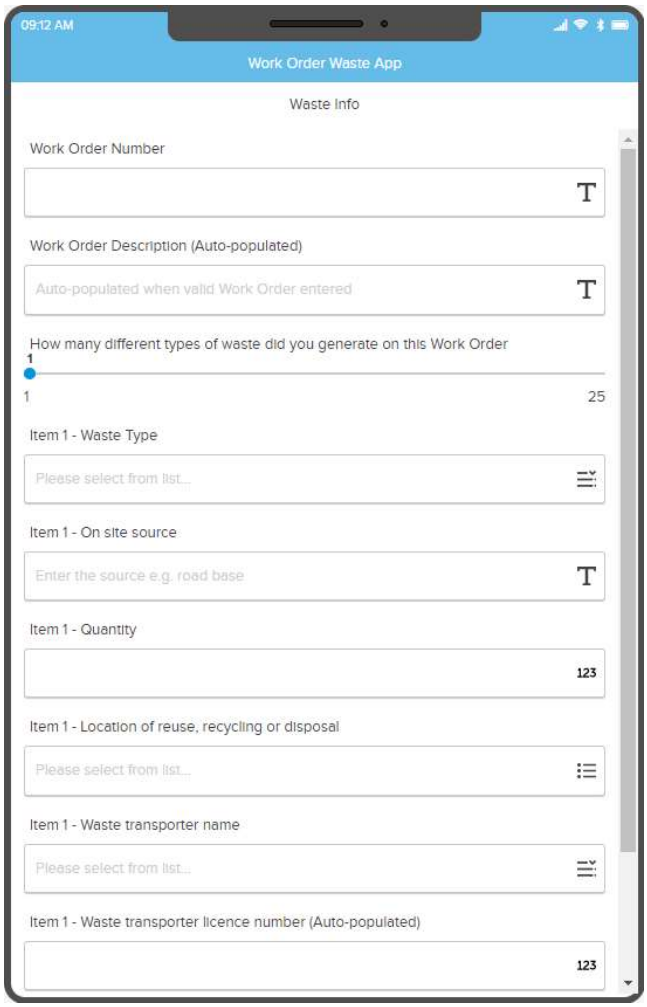


Figure 9-1 Ventia's standalone waste app

The data will be automatically processed to produce an output identical to the waste and materials register.

Compliance activities are aided by robust planning, setting an expectation of what waste we expect to generate, background location data capture that verifies the waste end point, and real-time capture of all dockets and forms.

TfNSW will be able to view the waste dashboards and extract the required reporting from within our GIS enabled SAP web apps using self-service data tools.

Figure 9-2 illustrates a simple dashboard showing cumulative material purchased and recycled. The desired dashboard content will be workshopped with TfNSW during transition.

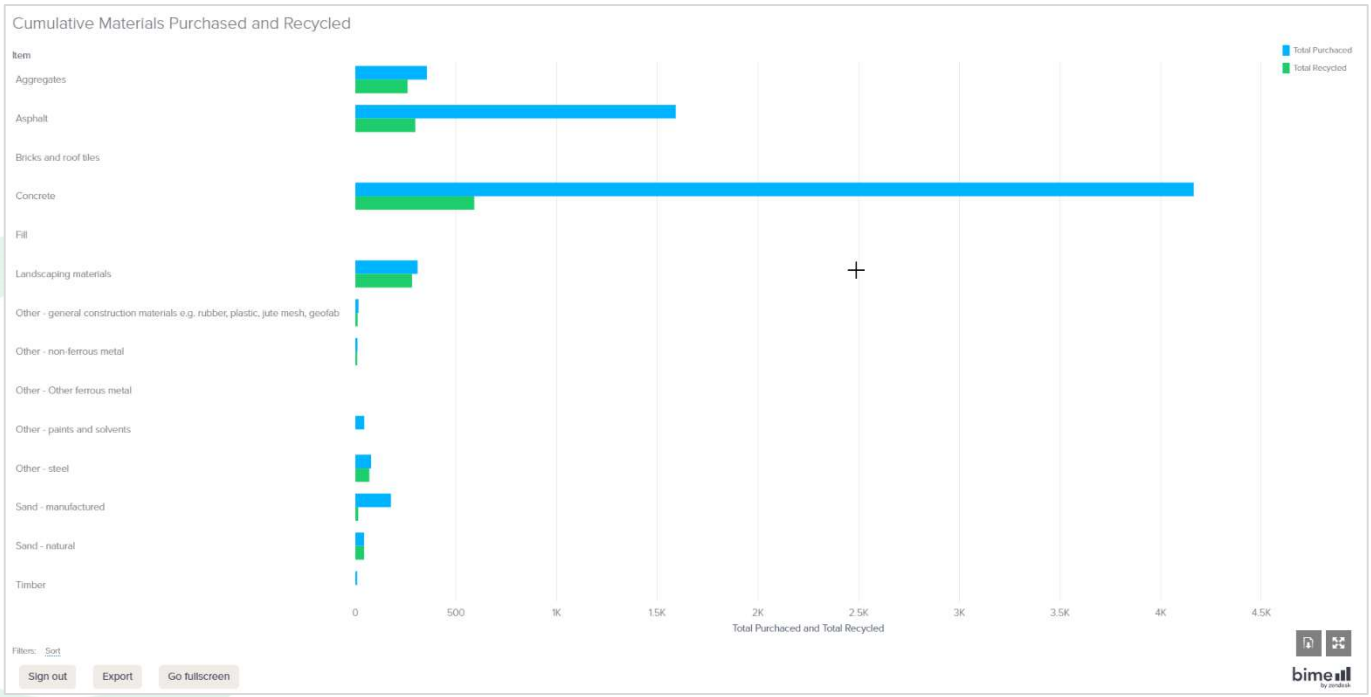


Figure 9-2 Simplified dashboard showing cumulative material data

9.5.3 Clean air data management tool

Records will be maintained of diesel plant and equipment used throughout the contract to demonstrate conformity with the relevant USEPA, EU or equivalent emissions standards, bringing focused innovation to TfNSW.

Figure 9-3 illustrates how we will capture the non-road diesel plant and equipment used on every work order, or at the end of a shift for projects.

The data is captured as part of our overall work order flow for maintenance, or through a standalone app for projects.

Larger plant items expected to be used for the entire duration are captured on our Work Order Prestart using a similar app workflow.

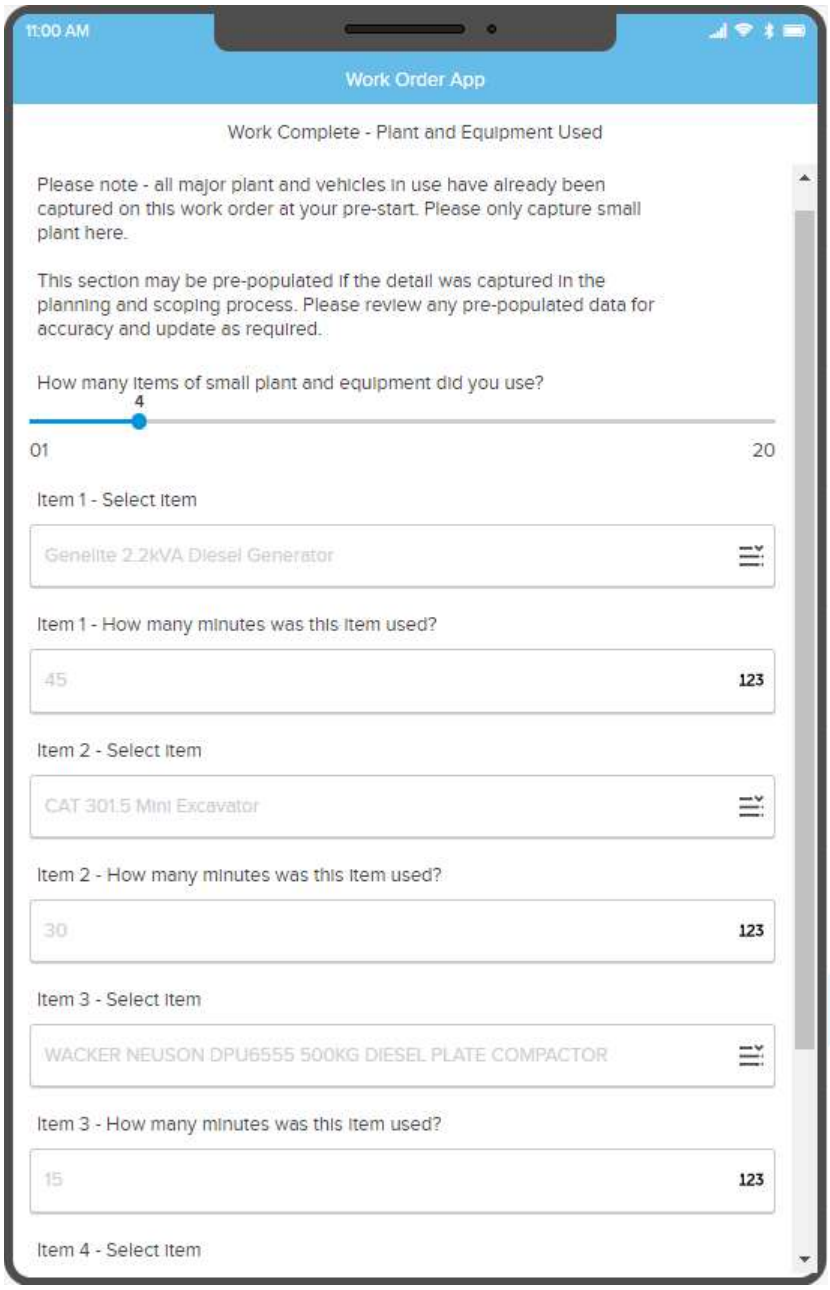


Figure 9-3 Clean air data management tool

Each item and its use will be associated with a work order, and the relevant asset information (including year of manufacturer, power, emissions) of each item will be maintained in our system

This ensures that the required reporting can be generated daily, with real time dashboards available to the Environmental team and TfNSW.

A report can be generated that directly mimics the GREP clean air management tool.

9.5.4 Records

All records will be captured in accordance with RMSQ Annexure Q/E and Annexure G36SRAPC/A in our SAP-based Asset and Work management tools. Records are accessible via the client portal, providing TfNSW with additional visibility.

Figure 9-4 illustrates an app developed for one of our Client's specific representatives to validate the compliance of our driven network inspections.

The web-based app was created to make the data required to complete their activities as easy to view and extract as possible.

The screenshot also shows our self-service reporting functionality, where the client can select their preferred reporting template, specify a start and end date, and download the relevant data.

The data is refreshed every 60 seconds. A similar app will be created for TfNSW to access environmental data.

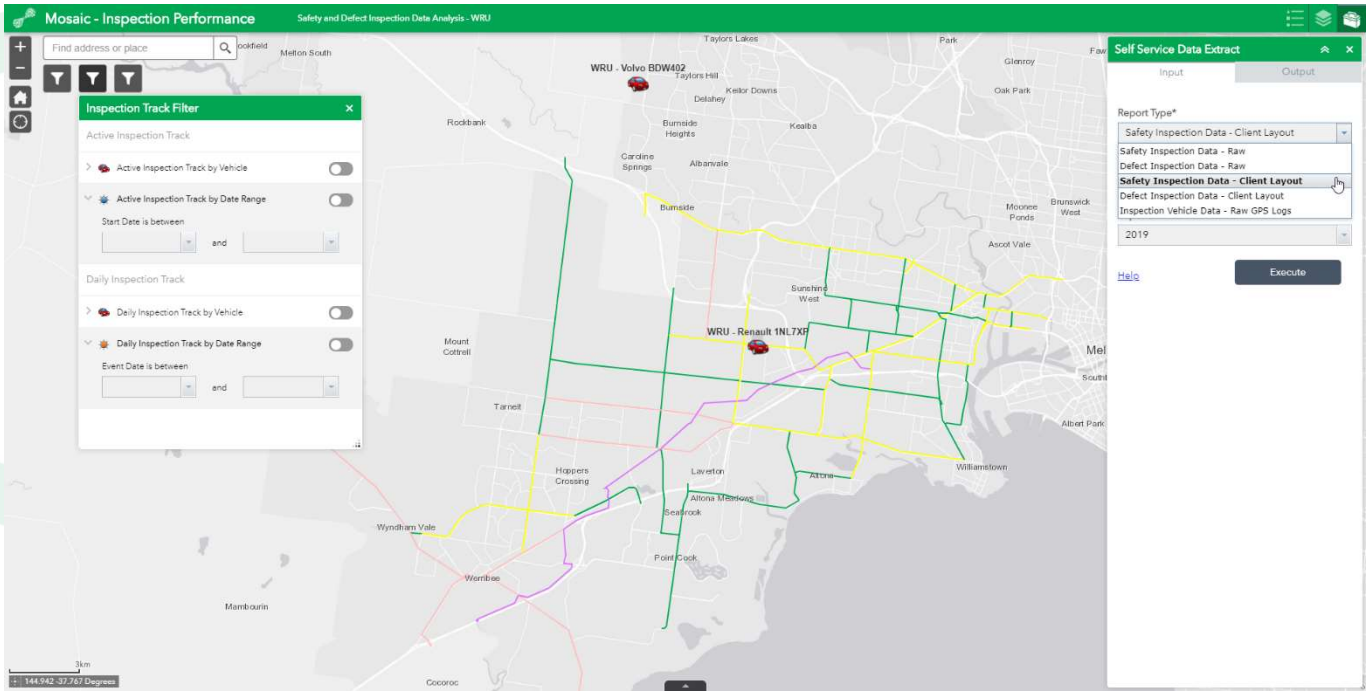


Figure 9-4 Example of one of our apps built to aid the client in verifying our performance, highlighting the self-service data extract functionality

9.5.5 Management review

Management reviews will be conducted to identify opportunities for continual improvements of the environmental management processes and practices and to ensure that the EMS and BEMP remain relevant to the Work Under the Contract.

A series of inputs will be to be considered when undertaking the management review of the QMS includes but not limited to:

- The outcomes of audits, both internal and external (e.g. process audits, workplace inspections, subcontractor and supplier audits, operational systems audits, WorkSafe audits, Bureau Veritas audits, compliance with audit schedules, etc.
- Customer feedback, (e.g. complaints, commendations, health of relationship survey results, customer satisfaction reports, etc.)
- Process performance and product conformity, (e.g. NCR/CAPA trends, monthly statistics reports and KPIs)
- The status of Corrective and Preventive Actions, (e.g. customer complaints database review, incident reports, notices from regulatory authorities, CAPAs and Better Way)
- The status of Non-conformance Reports
- Follow up actions from previous management reviews
- Risks and opportunities
- Key processes
- Innovation initiatives

- Changes that could affect the quality management system, including legislation, expectations of stakeholders, products and activities, organisation structure, technology and science, market preferences, reporting and communication and feedback (particularly from employees including SHEQ Committee)
- Recommendations for improvement.

The outputs for the review include any decisions and actions related to:

- Improvement of the effectiveness of the CMS and its processes
- Improvement of product related to customer requirements
- Resource needs.

Management review minutes will be taken, identifying decisions made and actions required related to amendments to the QMS, associated policies, procedures, forms, registers, processes and other elements relevant to support continual improvement. A record of the management review meeting and resultant actions must be minuted and distributed to all concerned parties. Actions from the management review must be assigned and managed in BEAMS.

9.5.6 Environmental Management System review

Annual reviews of the EMS will be conducted to assess its implementation and effectiveness, project performance and whether existing objectives and targets are still appropriate.

9.5.7 Business Environmental Management Plan (BEMP) review

The BEMP is the single overarching Business- specific Environmental Management Plan. The effectiveness of the BEMP will be reviewed at a bi-annual workshop to assess its effectiveness and proper implementation. This review process will identify opportunities for continual improvement to ensure the EMS and BEMP remain relevant to the Work Under the contract.

Participants will include:

- The Principal (including the Sydney Region Environment Manager)
- Ventia EMR
- Ventia Environmental Lead
- Any key construction staff.

Invites will be provided at least two weeks prior to the workshop and will include a group review of the key elements described in G36SRAP Clause 8.11.1. Meetings will be documented with minutes. The EMR will be responsible for managing and implementing actions taken from the review.

Attachment C Operational Compliance Table

CoA	Requirement	Development phase	Responsibility	Evidence and comments
A32	A Pre-Operation Compliance Report must be prepared and submitted to the Secretary for information no later than one month before the commencement of operation or within another timeframe agreed with the Secretary. The Pre-Operation Compliance Report must include: (a) details of how the terms of this approval that must be addressed before the commencement of operation have been complied with; and (b) the commencement date for operation.	Pre operation	TfNSW	The Pre-Operation Compliance Report was submitted to DPIE on 14 October 2021. Refer to Table 1-1 of The Northern Road, Pre-Operation Compliance Report, Stage 4,5,6 (TfNSW, October 2021)
A33	Operation must not commence unti the Pre-Operation Compliance Report has been submitted to the Secretary.	Pre operation	TfNSW	The Pre-Operation Compliance Report was submitted to DPIE on 14 October 2021. Refer to Table 1-1 of The Northern Road, Pre-Operation Compliance Report, Stage 4,5,6 (TfNSW, October 2021)
A37	The Environmental Audit must be carried out within 12 months of works commencing and annually thereafter during the delivery of the CSSI, and within 12 months of the commencement of Operations and then as required by the Secretary.	At all times	TfNSW	Environmental audits have been carried out in acordance with this condition. Refer to Independent Environmental Audit The Northern Road Stage 4 (SNC-Lavalin Atkins, Sepember 2021) & Independent Environmental Audit The Northern Road Stages 5 and 6 (SNC-Lavalin Atkins, Sepember 2021)
A38	The Proponent must submit a copy of the Environmental Audit Report to the Secretary with a response to any recommendations contained in the audit report within six (6) weeks of completing the audit, or within another timeframe agreed with the Secretary.	At all times	TfNSW	Environmental audits have been submitted in accordance with this condition. Refer to Independent Environmental Audit The Northern Road Stage 4 (SNC-Lavalin Atkins, Sepember 2021) & Independent Environmental Audit The Northern Road Stages 5 and 6 (SNC-Lavalin Atkins, Sepember 2021)
B05	The Community Communication Strategy, as approved by the Secretary, must be implemented for the duration of the works and for 12 months following the completion of Construction.	At all times	TfNSW	The Community Communication Strategy will be implemented and managed by TfNSW for the 12 months following completion of Construction. This will be managed by TfNSW due to the 12 month defect period that is in place once construction has been completed.
B06	A Complaints Management System must be prepared and submitted to the Secretary for information prior to the commencement of any works in respect of the CSSI and be implemented and must be maintained for the duration of works and for a minimum for 12 months following completion of construction of the CSSI. during the 12 month warranty	At all times	TfNSW	The Complaints Managemenr System would be maintained by TfNSW for a minimum of 12 months following completion of construction. This will be managed by TfNSW due to the 12 month defect period that is in place once construction has been completed.
B07	The Complaints Management System must include a Complaints Register to be maintained recording information on all complaints received about the CSSI during the carrying out of any works associated with the CSSI and for a minimum of 12 months following the completion of Construction. The Complaints Register must record the: (a) number of complaints recevied; (b) number of people affected in relation to a complaints; and (c) nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without medication.	At all times	TfNSW	The Complaints Managemenr System would be maintained by TfNSW for a minimum of 12 months following completion of construction. This will be managed by TfNSW due to the 12 month defect period that is in place once construction has been completed.
B08	The complaints register must be provided to the Secretary upon request, within the timeframe stated in the request.	At all times	TfNSW	The Complaints Managemenr System would be maintained by TfNSW for a minimum of 12 months following completion of construction. This will be managed by TfNSW due to the 12 month defect period that is in place once construction has been completed.
D01	An Operational Management Plan (OEMP) must be prepared in accordance with the Department's Guideline for the Preparation of Environmental Management Plans to detail how the performance outcomes, commitments and mitigation measures made and identified in the documents listed in Condition A1 will be implemented and achieved during Operation. This condition (Condition D1) does not apply if Condition D2 of this approval applies.	Pre operation	TfNSW	This condition is not applicable because Transport for NSW (TfNSW) propose to use an Environmental Management System (EMS).

D02	An OEMP is not required for the CSSI if the Proponent has an Environmental Management System (EMS) or equivalent as agreed with the Secretary, and can demonstrate, to the written satisfaction of the Secretary, that through the EMS: (a) the performance outcomes, commitments and mitigation measures, made and identified in the documents listed in Condition A1, and these conditions of approval can be achieved; (b) issues identified through ongoing risk analysis can be managed; and (c) procedures are in place for rectifying any non-compliance with this approval identified during compliance auditing, incident management or any other time during operation.	Pre operation	TfNSW / Ventia	Transport for NSW proposes to utlise the EMS that is being prepared by Ventia, the new maintenance contractor for Western Sydney. The EMS is currently in development. The BEMP is a key overarching document of the Ventia EMS and will be complemented with supporting documents including sub-plans, procedures and minimum standards as listed in the BEMP sections 3.31 to 3.3.12 Supporting documents will be prepared at mobilisation stage for key areas which have particular relevance to SRAPC. The sub-plans will provide assurance of our commitment to manage these in accordance with Clause 9 of G36SRAP specification. (a) Section 4.3 of the BEMP addresses the requirements for performance outcomes. Ventia's objectives have been developed to go beyond compliance to align with TfNSW stewardship principles and support TfNSW objectives for the QA Specification G36SRAP as outlined in Table 4.3 of the BEMP document. In accordance with QA Specification G36SRAP Ventia will prepare monthly environment reports . This report tracks all objectives and reviews and reports on performance to check whether further improvements should be considered. Section 7 of the BEMP outlines the development and implementation of mitigation measures. Key elements include the following; • Understanding environmental risks and what mitigation measures can be implemented. • The risk register will be used as a guiding document for the preparation of site-specific / operational risk registers. • Specific management plans and procedures will be developed as part of the BEMP and in accordance with the QA Specification G36SRAP. (b) This requirement will be achieved by implementing the BEMP, as outlined in Section 7 of the BEMP and in the TfNSW QA Specification G36SRAP. A summary of how the risks will be managed is below; • Surveillance officers will undertake inspections of the operational area and identify maintenance issues. • Specific management plans and procedures will be developed as part of the BEMP and in accordance with the environmental aspects covered in the QA Specification G36SRAP. • Auditing will be undertaken of the BEMP and internal environmental systems. (c) This requirement will be achieved through Section 9 of the BEMP . TfNSW will undertake risk based inspections on activities and audits on Ventia's systems to ensure they are meeting requirements. Environmental non-conformance and associated corrective actions will be identified via: • Environmental inspections • System audits • Incidents
D03	The OEMP or EMS or equivalent as agreed with the Secretary, must be submitted to the Secretary for information no later than one (1) month before the commencement of operation unless another timeframe is agreed with the Secretary.	Pre operation	TfNSW	As discussed at the meeting on 11 October 2021, TfNSW requests an extension to submit the completed EMS by August 2022. During the transition time between opening The Northern Road and Ventia's EMS becoming available all maintenance required on The Northern Road would be undertaken either by: - the construction contractor under the CEMP as part of the 12 months defects period or - Ventia utlising the BEMP as described above.
D04	Where an OEMP is required, the Proponent must include the following OEMP Sub-plans in the OEMP: Table 5: OEMP Sub-Plan Consultation Requirements	Pre operation	TfNSW / Ventia	This condition is not applicable because Transport for NSW (TfNSW) propose to use an Environmental Management System (EMS).
D05	Each of the OEMP Sub-plans must include the information set out in Condition D2 of this approval.	Pre operation	TfNSW / Ventia	This condition is not applicable because Transport for NSW (TfNSW) propose to use an Environmental Management System (EMS).
D06	The OEMP Sub-plans must be developed in consultation with relevant government agencies as identified in Condition D4. Where an agency(ies) request(s) is not included in an OEMP sub-plan, the Proponent must provide to the Secretary justification as to why. Details of all information requested by an agency to be included in an OEMP Sub-plan as a result of consultation, including copies of all correspondence from those agencies, must be provided with the relevant OEMP Sub-Plan.	Pre operation	TfNSW / Ventia	This condition is not applicable because Transport for NSW (TfNSW) propose to use an Environmental Management System (EMS).
D07	The CEMP Sub-plans must be submitted to the Secretary as part of the OEMP.	Pre operation	TfNSW	This condition is not applicable because Transport for NSW (TfNSW) propose to use an Environmental Management System (EMS).
D08	The OEMP or EMS or equivalent as agreed with the Secretary, as submitted to the Secretary and amended from time to time, must be implemented for the duration of operation and the OEMP or EMS must be made publicly available prior to the commencement of operation.	Operation	TfNSW	Should the Secretary grant an extension of time for the submission of the Ventia EMS, TfNSW propose to make the BEMP (which is the primary supporting document) publicly available on the project website .

E07	Flood information including flood reports, models and geographic information system outputs, and work as executed information from a registered surveyor certifying finished ground levels and the dimensions and finished levels of all structures within the flood prone land, must be provided to the relevant Council and the SES. The relevant Council and the SES must be notified in writing that the information is available no later than one month following the completion of Construction. Information requested by the relevant Council or the SES must be provided no later than six months following the completion of Construction or within another timeframe agreed with the relevant Council and the SES.	Post construction	TfNSW	Flood information (as described in Condition E07) is currently available to TNR 4 and TNR6. Flood information for TNR 5 is pending finalisation of construction. In accordance with Condition E07 TfNSW will notify the local councils (Penrith City Council and Liverpool City Council) and SES by mid-December 2021 that the information outlined in Condition E07 is available.
E38	All operational noise mitigation measures identified in Condition E36 must be implemented prior to operation,	Pre operation	TfNSW	In accordance with Condition E38, it has been established that 75 properties were eligible for at property noise treatment. Of the 75 properties, 21 have either not accepted noise treatment offered or the properties were determined to be untreatable. 45 of the 54 properties proposed for treatment have been completed. The remaining 9 properties are yet to be completed due to Covid 19 restrictions which have restricted the Contractor and Inspector access to the properties. These noise mitigation measures are anticipated to be completed by February 2022. Operational noise monitoring will continue during operation.
E43	After completion of the works, condition surveys of all buildings and structures for which pre-Construction condition surveys were undertaken in accordance with Condition E42 of this approval must be undertaken by a suitably qualified person. The results of the surveys must be documented in a Building Condition Survey Report for each building surveyed. Copies of Building Condition Survey Reports must be provided to the landowners of the buildings surveyed and, if agreed by the landowner, the relevant Council within three weeks of completing the surveys, and no later than three (3) months following the completion of works.	Pre operation	TfNSW	In accordance with Condition E43 all stages of The Northern Road (4, 5 & 6) currently have contractors engaged to undertake condition surveys of all buildings for which pre-Construction condition surveys were undertaken. It is anticipated that these condition surveys will be completed by January 2022.
E44	Any damage caused to property as a result of the CSSI must be rectified or the landowner compensated, within a reasonable timeframe, with the costs borne by the Proponent. Note: This condition is not intended to limit any claims that the landowner may have against the Proponent.	Pre operation	TfNSW / construction contractor	Condition E44 has not been triggered. Refer to Independent Environmental Audit The Northern Road Stage 4 (SNC-Lavalin Atkins, September 2021) & Independent Environmental Audit The Northern Road Stages 5 and 6 (SNC-Lavalin Atkins, September 2021).
E48	A copy of the Site Audit Statement and the associated Site Audit Report must be submitted to the Secretary and the relevant Council for information no later than one (1) month before the commencement of Operation.	Pre operation	TfNSW	The Site Audit Statement and the associated Site Audit Report have been submitted to the Secretary. Refer to Table 2-1 of The Northern Road, Pre-Operation Compliance Report, Stage 4,5,6 (TfNSW, October 2021)
E56	If damage to roads occurs as a result of the Construction of CSSI, the Proponent must rectify the damage so as to restore the road to at least the condition it was in pre-works, unless otherwise agreed by the relevant Councils.	Pre operation	Construction contractor	Post construction road dilapidation inspections have been completed for TNR 4 with any works required now complete. TNR 5 did not require post construction road dilapidation reports as all local roads and infrastructure subject to pre-construction dilapidation reports are included within the CSSI. Asset handover with the Local Council for TNR 6 are substantively complete, with only landscape assets still requiring handover (to be completed at the end of the 12 months maintenance period).
E59	Operational signage must be provided along the project alignment to inform motorists of services and council and community assets within the vicinity of the CSSI including Luddenham village, community facilities and tourist areas in accordance with the Guide: Signposting (RTA July 2007) and Tourist Signposting Guide (RMS and Destination NSW 2012).	Pre operation	Construction contractor	An Independent Environmental Audit for TNR 4 was undertaken in September 2021 by SNS Lavlin. The Audit findings identified that Condition E59 was in compliance. Operational signage was installed in key locations such as Luddenham Town Centre. An Independent Environmental Audit for TNR 5 & 6 was undertaken in August 2021 by SNS Lavlin. The Audit findings identified that Condition E59 was in compliance. Operation signage installed includes directional signage to Warragamba Dam, Luddenham and Wallacia.

E59A	Within 12 months of the commencement of operation of the CSSI, or within another timeframe agreed to by the Secretary, the Proponent must prepare an Adams Road Traffic Performance Report to confirm the operational traffic impacts of the project on Adams Road and the effectiveness of traffic management measures in reducing traffic and maintaining property access. The review must be carried out in consultation with the Relevant Councils, and include: (a) an updated traffic analysis, including traffic modelling if required, on Adams Road; and (b) mitigation measures to manage any actual or predicted traffic performance and property access impacts along Adams Road. The Adams Road Traffic Performance Report(s) must be submitted to the Secretary and Relevant Council(s) for information within 60 days of its completion or as otherwise agreed by the Secretary and made publicly available. The Proponent is responsible for the implementation of the identified measures under Condition E59A(b). Note: Identified mitigation measures may need to be further assessed under the Environmental Planning and Assessment Act, 1979. Works will need to meet relevant design standards and be subject to independent road safety audits.	Operation	TfNSW	The Adams Road Traffic Performance Report was submitted to DPIE on 23 September 2021.

Relevant EIS mitigation measures	Requirement	Development phase	Responsibility	Evidence and comments
SWC - 2	A water quality monitoring program would be developed during detailed design which would outline the pre-construction baseline water quality monitoring to be undertaken, as well as the ongoing construction and operational water quality monitoring requirements. The program would be updated once the construction and operational phase water quality monitoring parameters have been determined (based on the results of the baseline water quality monitoring). The program would include specific monitoring locations, frequency, parameters, and relevant procedures to be implemented. This would include a procedure to be followed in the event that monitoring results during construction or operation indicate an exceedance of the specified criteria, including any stop works requirements, relevant non-conformance, corrective and preventative actions, reporting and review procedures. This would include a requirement to review the effectiveness of control measures and identify any potential additional controls or revised work procedures or management measures that may need to be implemented. It is noted that any sample locations or access requirements within the DEOH site would be determined in consultation with DoD.	Construction / operation	TfNSW / GHD	A water quality monitoring program was developed and delivered by GHD in accordance with Condition of Approval C9. The plan was implemented before and during construction and will continue to be implemented during operation for 12 months following commencement of operations.
UD - 1	The urban design and landscape concept developed for the project would be adopted during detailed design. This would include design treatments for: • location and identification of existing vegetation and proposed landscaped areas, including species to be used • built elements including retaining walls and Adams Road Bridge • design' treatments for stormwater quality measures and infrastructure • pedestrian and cyclist elements including footpath location, paving types and pedestrian crossings • fixtures such as seating, lighting, fencing and signs • details of the staging of landscape works taking account of related environmental controls such as erosion and sedimentation controls and drainage • procedures for monitoring and maintaining landscaped or rehabilitated areas.	Detailed design / construction / operation	TfNSW	Construction of the urban design components of the project have been completed. The maintenance of landscaped areas will be undertaken according to Section 3 .3 of the BEMP. Portions of the landscaping will be undertaken by council. TfNSW also will continue to maintain landscaping under the 12 month defects maintanance period for TNR 4 and for TNR 5 & 6 this maintenance period will be for 12 - 24 months as agreed with Penrith Council.

SE - 3	Mitigation measures specific to construction noise and vibration can be found in Section 7.2 of the EIS for this project. Section 7.2 states the following; NV5 Within 12 months of the commencement of operation of the project an operational noise review would be undertaken. This would include; * Monitoring to compare actual noise performance of the project against predicted noise performance (noise criteria). * Background noise monitoring along the alignment with concurrent traffic counts at multiple locations. * A post operation noise model would be developed to include all as - built construction documentation. Final noise wall heights, accurate road survey data and revised receiver locations / types. * The model would be validated against new background noise and traffic data. * Noise predictions using the at opening 2021 traffic data would be undertaken using the validated post operation noise model. * An assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of all feasible and reasonable mitigation measures. * Identification of any additional feasible and reasonable measures that would be implemented with the objective of meeting the criteria in the NSW Road Noise Policy (DECCW, 2011), when these measures would be implemented and how their effectiveness would be measures and reported.	Operation	TfNSW	A noise and vibration monitoring plan was developed in accordance with Condition of Approval C9. A post operation validation noise model was completed by Jacobs / Waves Consulting for TNR 4 and TNR6. TNR 5 is still being scoped.