

Melbourne Metro Rail Project

PREPARED FOR RAIL PROJECTS VICTORIA

MMR-AJM-PWAA-RP-NN-005022
MAIN WORKS (RAIL INFRASTRUCTURE
& RAIL SYSTEMS) ENVIRONMENTAL
AUDIT SUMMARY REPORT 2019

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Glossary

TERM / ABBREVIATION	DESCRIPTION
AQMP	Air Quality Management Plan
AQIA	Air Quality Impact Assessment
AJM JV	Aurecon Jacobs Mott MacDonald Joint Venture
BDP	Business Disruption Plan
BSGC	Business Support Guidelines for Construction
CEMP	Construction Environmental Management Plan
CHMP	Cultural Heritage Management Plan
CNVMP	Construction Noise and Vibration Management Plan
CSEMF	Community and Stakeholder Engagement Management Framework
CSEMP	Community and Stakeholder Engagement Management Plan
CYP	Cross Yarra Partnership
DoT	Department of Transport
EES	Environment Effects Statement
EMF	Environmental Management Framework
EMS	Environmental Management System
EPRs	Environmental Performance Requirements
HMP	Heritage Management Plan
HCMTs	High Capacity Metro Trains
IEA	Independent Environmental Auditor
ISO 14001:2015	AS/NZS ISO 14001:2015 <i>Environmental management systems — Requirements with guidance for use</i>
MMRA	Melbourne Metro Rail Authority
MTIA	Major Transport Infrastructure Authority
MTP or Project	Metro Tunnel Project
OEMP	Operational Environmental Management Plan
PIO	Where in the course of the audit work, an opportunity has been identified to improve a process or procedure.
RIA	Rail Infrastructure Alliance
RIMG	Residential Impact Mitigation Guidelines
RPV	Rail Projects Victoria
RSA	Rail Systems Alliance
SEIP	Site Environmental Implementation Plan
SEP	Site Environmental Plan

TERM / ABBREVIATION	DESCRIPTION
SEPP	State Environmental Protection Policy
SWMP	Surface Water Management Plan
TPZ	Tree Protection Zone
TMP	Traffic Management Plan
UDMP	Urban Design Management Plan
UDS	Urban Design Strategy
VAGO	Victorian Auditor-General's Office
VAGO Early Works Audit Report	Victorian Auditor-General's Office (6 June 2019) <i>Melbourne Metro Tunnel Project – Phase 1: Early Works</i>
WMS	Work Method Statement
WSUD	Water Sensitive Urban Design

1 Executive Summary

The Metro Tunnel Project (MTP) is currently under construction and will create a new end-to-end rail line from Sunbury in the west to Cranbourne/Pakenham in the south-east, with high capacity trains and five new underground stations. The first works package, the MTP Early Works, which included relocation of services and site preparation works prior to major construction (Main Works) commencing, has been completed.

The Victorian Auditor-General's Office (VAGO) undertook an audit of the Early Works Package and published its report *Melbourne Metro Tunnel Project – Phase 1: Early Works* on 6 June 2019 (VAGO Early Works Audit Report). A key recommendation of the VAGO Early Works Audit Report, regarding its assessment of environmental strategies and risk mitigation, was to develop summaries of the Project's Independent Environmental Auditor (IEA) reports and publish such summaries on the MTP official website. The Project's Environmental Management Framework (EMF) requires an IEA to undertake environmental audits of compliance with the EMF.

This report has been developed to meet the above recommendation of the VAGO Early Works Audit Report and provide the wider public with information of the Project's environmental performance during the Main Works. This report covers alliance package works during the period from commencement of Main Works until the end of 2019. While there are two work packages being delivered as alliances on the MTP, the Rail Infrastructure and Rail Systems Packages, as the Rail Systems works relevant to the EMF had not progressed by the end of 2019. Audits were only conducted for the Rail Infrastructure Package during the period relevant to this report. The auditing program within the scope of this report identified that, in general, the works were undertaken in accordance with the requirements of the EMF, relevant Environmental Performance Requirements (EPRs) and MTP Incorporated Document.

The auditing process is designed to lead to continual improvement during projects - this is key to AS/NZS ISO 14001:2015 *Environmental management systems — Requirements with guidance for use* (ISO 14001:2015) and best practice environmental management. As such, observations, areas for improvement and non-conformances were identified. These were typically addressed in a timely manner by the Delivery Partner and closed during the subsequent audits.

Introduction

2.1 Purpose

Rail Projects Victoria (RPV) engaged Aurecon Jacobs Mott MacDonald Joint Venture (AJM JV) to prepare a summary report of the IEA audit reports for the MTP Main Works from commencement of Main Works, until the end of 2019. This report relates to the Rail Infrastructure & Systems Packages for the Project and summarises findings from the IEA audits undertaken in the same time period.

This request follows a recommendation outlined in the VAGO Early Works Audit Report. That report assessed the environmental strategies and risk mitigation and recommended that the Department of Transport (DoT) publish summaries of key findings and recommended actions from past and future IEA reports produced for the MTP on the Project's official website. The purpose of this audit summary report is to meet the above recommendation of the VAGO Early Works Audit Report and provide the wider public with information of MTP's Rail & Systems Packages environmental performance during the Main Works Package (to end of 2019).

2.2 Project Background

2.2.1 THE METRO TUNNEL PROJECT

The Victorian Government is building the MTP to connect the Sunbury line to the Cranbourne and Pakenham lines through the construction of new twin nine-kilometre rail tunnels and five new underground stations. MTP is transforming Melbourne's rail network into an international-style metro system, boosting the capacity of the rail network to keep pace with Melbourne's growing population and rail patronage.

MTP will provide the foundation for expanding Melbourne's public transport network, helping to ensure Melbourne remains one of the world's most liveable cities now and into the future. MTP will also stimulate significant urban renewal, opening up opportunities for new housing, commercial development and jobs in and around the CBD, whilst improving train travel to and from the suburbs.

The infrastructure required for construction of MTP includes:

- Twin nine-kilometre rail tunnels from Kensington to South Yarra, connecting the Sunbury and Cranbourne/Pakenham railway lines through the CBD.
- Rail tunnel portals (entrances/ exits) at Kensington and South Yarra.
- New underground stations at Arden, Parkville (under Grattan Street), State Library (at the northern end of Swanston Street), Town Hall (at the southern end of Swanston Street), and Anzac (under the Domain interchange on St Kilda Road. State Library and Town Hall stations will feature direct interchange with the existing Melbourne Central and Flinders Street Stations respectively.
- Train/ tram interchange between Anzac Station and the Domain Interchange.
- High Capacity Signalling to maximise the efficiency of the new fleet of High Capacity Metro Trains (HCMTs) that will run along the Sunbury, Cranbourne/Pakenham lines and the Metro Tunnel in the future.

Some project elements nomenclature (e.g. station names) have changed during the delivery of the Project and audit findings may reflect superseded nomenclature, with the updated name is provided in brackets.

2.2.2 MTP WORK PACKAGES

MTP is being managed on behalf of the Victorian Government by RPV, formerly known as the Melbourne Metro Rail Authority. RPV forms part of the Major Transport Infrastructure Authority (MTIA), which is responsible for facilitating the development and delivery of the biggest transport infrastructure program in Victorian history. Figure 0-1 shows a broad schematic plan for the principal components of MTP.

Construction of MTP is being delivered by RPV in partnerships with contracted Delivery Partners; through four separate works packages with different delivery partner(s) for each works package described in Table 0-1. This report relates only to the Main Works: Rail Infrastructure Works Package.

TABLE 0-1: MTP WORKS PACKAGES

PACKAGE	DESCRIPTION
Early Works	The Early Works Package including three sub-packages of works, each respectively was delivered by a Managing Contractor, Yarra Trams and Utility Service Providers.
Main Works	The Tunnels and Stations Works Package, being delivered by Cross Yarra Partnership (CYP).
	The Rail Infrastructure Works Package associated with the Eastern and Western Tunnel Entrances and the western turnback, being delivered by the Rail Infrastructure Alliance (RIA).
	The Rail Systems Works Package for High Capacity Signalling, rail systems integration and commissioning, being delivered by the Rail Systems Alliance (RSA).

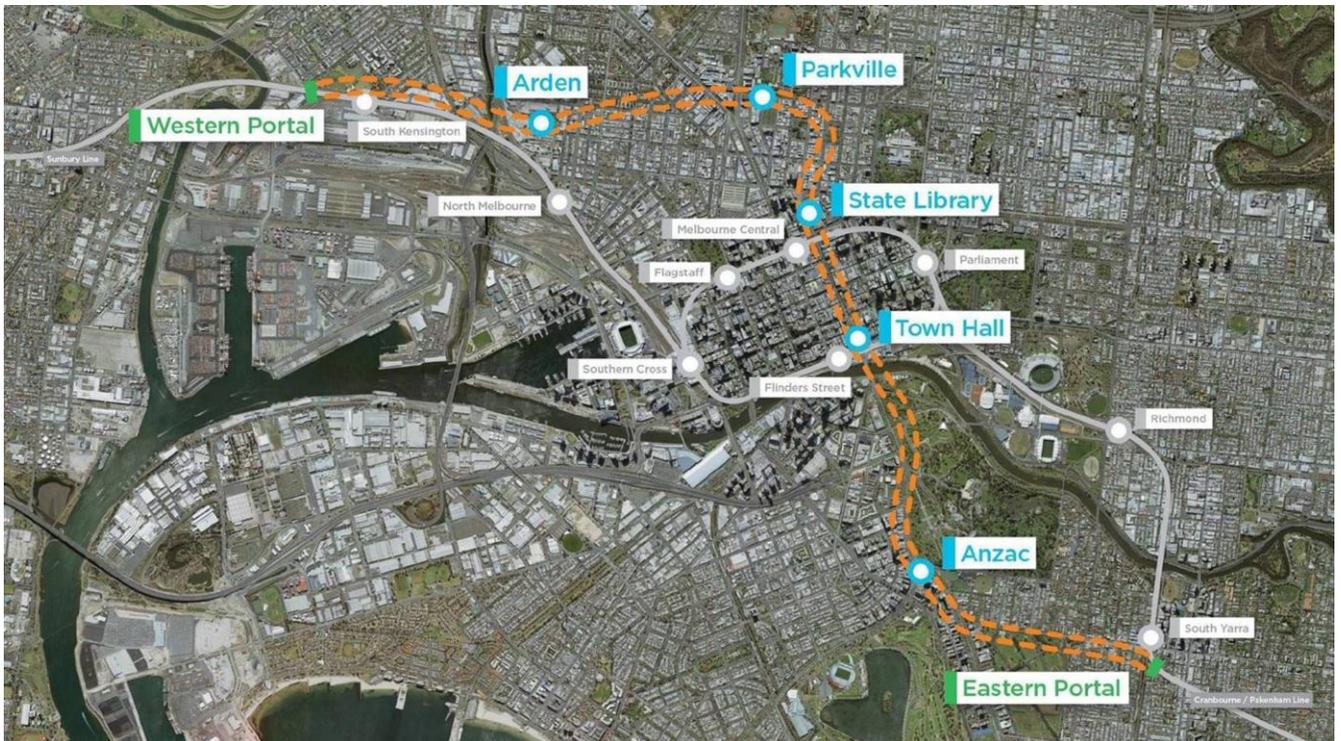


FIGURE 0-1 MTP SCHEMATIC PLAN

2.3 Scope

This report summarises environmental audits conducted as part of the MTP Main Works being delivered under the Rail Infrastructure Works Package. The report summarises the IEA reports undertaken from pre-commencement of works until the end of 2019, provided in Table 0-2.

The report covers all works for the Rail Infrastructure Works Packages of MTP conducted under the Planning Scheme Amendment (GC82) and associated Incorporated Document approved and published in the Government Gazette on 26 June 2018 and the associated Melbourne Metro EMF.

Subsequent summary audit reporting (including activities under the Rail Systems Work Package) will be completed on an annual basis.

TABLE 0-2: IEA AUDIT REPORTS IN SCOPE

PACKAGE	SCOPE	RELEVANT IEA REPORTS IN SCOPE
GC82 - Rail Infrastructure Works, being delivered by Rail Infrastructure Alliance (RIA)	Publish key findings for IEA Audit reports from commencement of RIA works until December 2019.	KPMG Audit Reports: Q4 2018, Q1 2019, Q2 2019, Q3 2019, Q4 2019
GC82 - Rail Systems Works, being delivered by Rail Systems Alliance (RSA)	Works have not commenced under GC82	RSA has progressed design work for works under GC82, which is relevant to selected EPRs. However, no RSA works were audited during the period relevant to this report.

The following Packages are excluded from this report and will be covered in separate reports:

- Tunnels and Stations Works Package, being delivered by CYP (report in development).
- The Rail Systems Works Package for High Capacity Signalling, rail systems integration and commissioning, being delivered by the RSA, which no works had commenced during the timeframe specified within this report (findings will be included in future additions of this report, combined with RIA findings).

Environmental Management

3.1 Environmental Governance Framework

An Environment Effects Statement (EES) has been prepared for the MTP and, following the statutory EES process, an Incorporated Document was approved by the Minister for Planning, containing compliance obligations which must be achieved by the Delivery Partners.

Each Delivery Partner is required to:

- Comply with the requirements of the Incorporated Document under the Planning Scheme Amendment (GC82) which was approved and published in the Government Gazette on 26 June 2018.
- Comply with the Environmental Management Framework (EMF that has been approved by the Minister for Planning and is published on the MTP website. Among other things, the EMF includes the Environmental Performance Requirements (EPRs), the Residential Impact Mitigation Guidelines (RIMG) and the Business Support Guidelines for Construction (BSGC).
- Comply with the EPRs, which includes a requirement to prepare plans to document the approach to compliance (noting RIA and RSA will have different plans).
- Develop, implement and maintain a project-specific Environmental Management System (EMS) that meets the requirements of ISO14001:2015 Environmental Management Systems, Construction Environmental Management Plan (CEMP) and Site Environmental Implementation Plans (SEIPs) for the design and construction phases, where applicable.
- Develop a Community and Stakeholder Engagement Management Plan (CSEMP) consistent with the RPV CSEMP.

The governance framework and relevant roles and responsibilities for MTP are set out in the EMF and are included in Section 3 of this Summary Report.

The governance framework for MTP is presented in Figure 0-1.

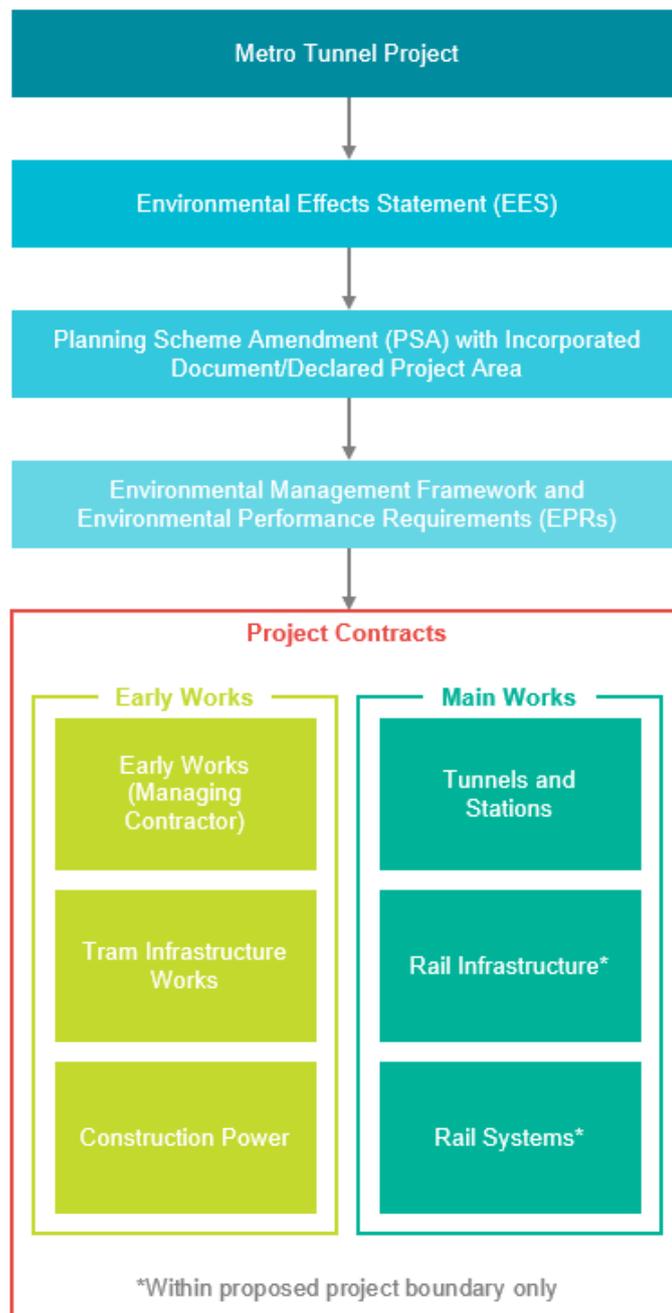


FIGURE 0-1 GOVERNANCE FRAMEWORK

3.1.1 ENVIRONMENTAL MANAGEMENT FRAMEWORK

The Incorporated Document describes the requirements of the EMF. The main elements of the EMF for the design and construction phase are:

- Applicable legislative requirements and approvals.
- EPRs, which address matters set out in the Incorporated Document and identified through the EES.
- The RIMG and the BSGC.

- A CEMP, together with subordinate document including SEIPs, EMS and other plans identified in the Incorporated Document and EMF.

The EMF documentation is summarised in Figure 0-2.

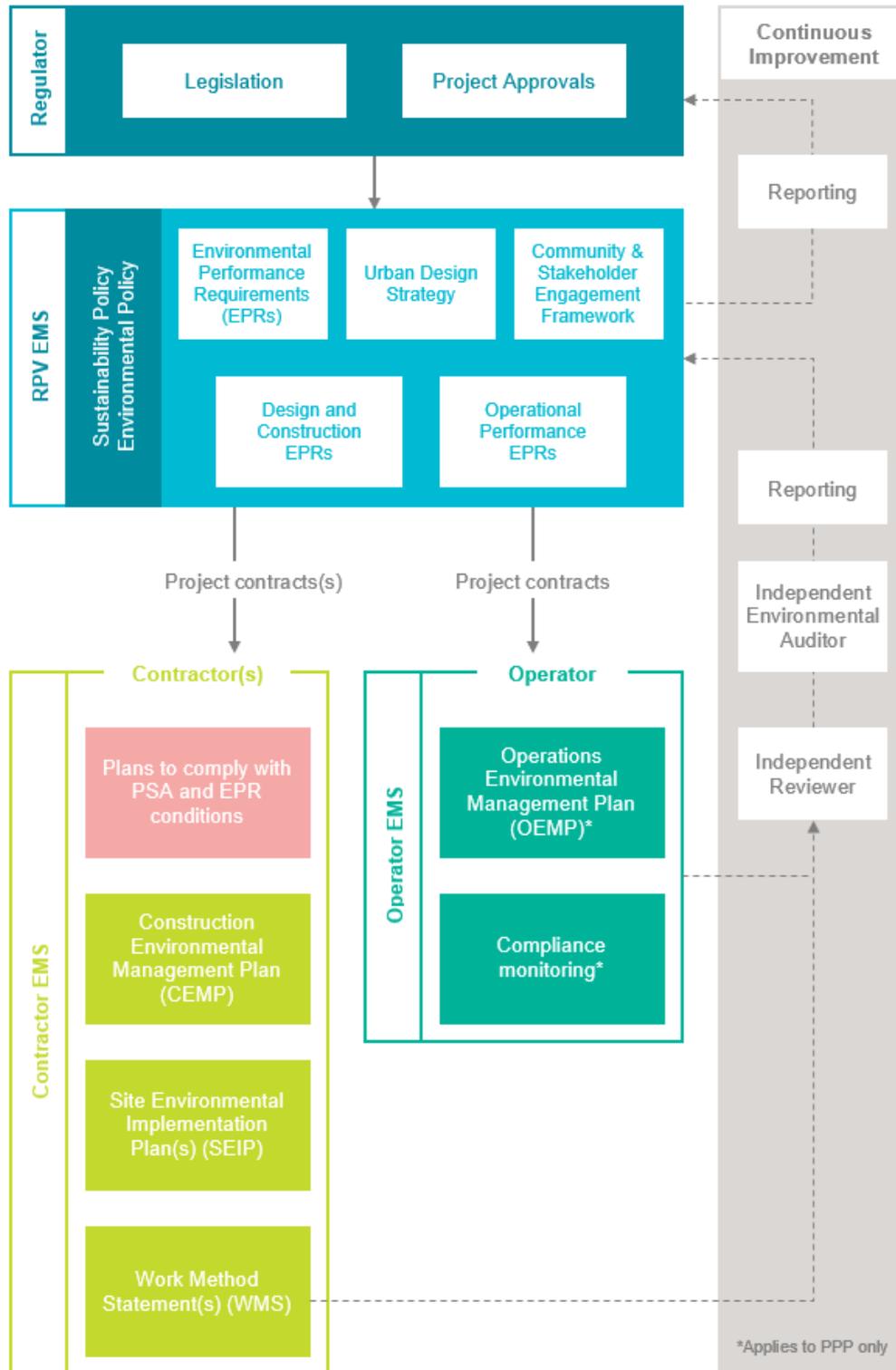


FIGURE 0-2 ENVIRONMENTAL MANAGEMENT FRAMEWORK

The EMF requires that the Delivery Partners develop and implement an EMS certified to ISO 14001:2015 and consistent with relevant legislation, policy and guidelines and RPV's Environmental Policy.

The EMF provides the governance framework to manage environmental aspects identified through the EES process, including the Minister for Planning's assessment, for the design, construction and operational phases of the MTP.

3.1.2 ENVIRONMENTAL PERFORMANCE REQUIREMENTS

EPRs have been developed through the EES and associated consultation processes, and to reflect the Minister for Planning's assessment of the EES and the requirements of the Incorporated Document.

MTP is required to be delivered in accordance with approved EPRs that define the project-wide environmental outcomes that must be achieved during design, construction and operation of MTP. This performance-based approach allows for a delivery model with sufficient flexibility to encourage innovation by the private sector to determine how any recommended EPRs would be achieved.

The EES presented a risk-based assessment of environmental effects of the MTP, in accordance with the EES Scoping Requirements. Potential mitigation measures were typically included in the EES as examples of how an environmental effect could be mitigated and to illustrate how an EPR could be implemented. However, the EES generally did not mandate or commit to a particular mitigation or management outcome. In the same manner, the EPRs do not typically mandate or require a particular mitigation or management solution. Instead, the EPRs are implemented by applying an assessment of the nature and extent of the relevant environmental effects, and the most practicable means of mitigating and managing those effects. This method is used so that the management and mitigation measures implemented are proportional to the effect they are designed to address and achieve the outcome prescribed by the EPR.

The Incorporated Document requires that the MTP is constructed and operated in accordance with the EPRs approved by the Minister for Planning. Each Delivery Partner is to comply with the EPRs and prepare necessary plans prior to commencement of their scope of work to document the approach to compliance with each EPR.

3.1.3 ASSOCIATED MANAGEMENT PLANS

RPV together with the Delivery Partners (as relevant) prepared plans to comply with the approval requirements in the Incorporated Document. RPV and the Delivery Partners developed and implemented these management plans and programs in accordance with the processes detailed in the EMF.

3.2 Roles and Responsibilities

3.2.1 RAIL PROJECTS VICTORA

RPV, on behalf of the Victorian Government, is responsible for delivering MTP in line with the requirements and objectives of DoT and the Victorian Government. RPV forms part of the MTIA, which is responsible for facilitating the development and delivery of the biggest transport infrastructure program in Victorian history.

The key roles and responsibilities of RPV for the MTP are set out in the EMF and include:

- Obtain applicable principal statutory approvals including the Planning Scheme Amendment (PSA), Cultural Heritage Management Plan (CHMP) and some heritage permits, where it is more appropriate for RPV to seek these consents.
- Establish the EMF, including the RIMG and the BSGC for approval by the Minister for Planning as required by the Incorporated Document.
- Establish the Urban Design Strategy (UDS) and the CSEMF for approval by the Minister for Planning, as required by the Incorporated Document and EPRs.

- Develop and implement the RPV EMS, in accordance with ISO 14001:2015.
- Monitor compliance with the EPRs across all Project Contracts and comply with the EPRs applicable to RPV.
- Together with each Delivery Partner for each of the Project Contracts, develop and submit the requisite plans to comply with the Incorporated Document and the EMF.
- Review and approve contract documentation for each Project Contract in accordance with the EMF, including the CEMPs, SEIPs, Transport Management Plans, Business Disruption Plans (BDPs) and Construction Noise and Vibration Management Plans (CNVMP) as required by the Incorporated Document.
- Review the CSEMP for each Project Contract.
- Prior to commencement of work, verify that the Delivery Partner has complied with the relevant EPRs.
- Review the Delivery Partner's performance against the approved EPRs and take corrective action as necessary.
- Commission the Independent Environmental Auditor to determine Delivery Partner compliance with the EMF, EPRs and relevant Delivery Partner Management.

3.2.2 DELIVERY PARTNERS

Construction of MTP is being delivered by RPV on behalf of the Victorian Government in partnerships with contracted Delivery Partners. The key roles and responsibilities of each Delivery Partner for the MTP are set out in the EMF and the contractual obligations and include:

- Comply with the EMF (including the EPRs, RIMG, BSGC and CSEMF), legislative and approval requirements.
- Obtain any additional permits from regulatory authorities (other than the approvals that would be obtained by or jointly with RPV).
- Develop and implement a project specific EMS or apply their existing EMS to the specific activities for the MTP, that is certified to ISO 14001:2015.
- Prepare a CEMP, SEIPs and associated work method statements (WMS), and other plans required by the Incorporated Document, EPRs or Project Contracts.
- Develop a CSEMP consistent with RPV's CSEMF approved by the Minister for Planning in accordance with EPR SC3.
- Provide adequate resources to establish, implement, maintain and improve the CEMP, SEIPs and the EMS.
- Implement and maintain compliance with the EPRs.
- Undertake environmental audits to confirm compliance with the EMF, EPRs and plans required by the Incorporated Document.
- Prior to commencement of work, ensure that all sub-contractors have complied with the relevant EPRs, CEMP and plans required to comply with the EPRs and Incorporated Document, where relevant.
- Review of sub-contractor's performance against the EPRs and CEMP and take corrective action as necessary.

3.2.3 INDEPENDENT ENVIRONMENTAL AUDITOR

The IEA undertakes environmental audits of compliance with plans required to comply with the EPRs and Incorporated Document prior to implementation, as well as during project activities, to verify compliance with the EMF, EPRs, environmental management plans and approval requirements. This also includes investigations into trends in complaints, by topic or on a random basis.

The key roles and responsibilities of the IEA during the Main Works Packages, as specified in the EMF, are:

- Prior to commencement of work, verify that the Delivery Partner has complied with the relevant EPRs, the EMF and the Incorporated Document, by reviewing management plans required by the EPRs. .
- Conduct audits of the Delivery Partner's works to assess compliance with the CEMP, EMF, EPRs and plans required by the EPRs and Incorporated Document.
- Prepare audit reports containing the results of audits.
- Review complaints which may highlight instances of non-conformance with applicable EPRs.

Conduct of Audits

4.1 IEA Audit Requirements

RPV is responsible for engaging an IEA for each of the RIA and RSA contracts.

Table 0-1 presents the IEA's appointed by RPV. Given no works were completed for the Rail Systems Works Package during the scope of this report, there is no further commentary relevant to RSA.

TABLE 0-1 MAIN WORKS INDEPENDENT ENVIRONMENTAL AUDITORS

MAIN WORKS PACKAGE	DELIVERY PARTNER	IEA
Rail Infrastructure Works Package	Rail Infrastructure Alliance	KPMG
Rail Systems Works Package	Rail Systems Alliance	KPMG

Audits of each Delivery Partner's CEMP, sub-plans and SEIPs were required prior to works commencing to confirm compliance with ISO 14001:2015, the EMF, relevant EPRs and Incorporated Document. Site audits were scheduled on a quarterly basis through the delivery of the Main Works Package and considered:

- The timing of works.
- The nature of the works including consideration of the level of associated risk.
- Incident investigation outcomes.
- Complaints received, particularly if related to EPRs and indicate instances of non-conformances.
- Previous audit outcomes.
- Management review outcomes: upon the completion of each audit, an audit report detailing all the findings was submitted to RPV.

4.2 IEA Audit Methodology

4.2.1 AUDIT OVERVIEW

The MTP EMF outlines the IEA responsibilities, including:

- Prior to commencement of work, verify that the contractor has complied with the relevant EPRs, the EMF and the Incorporated Document.
- Conduct audits of the contractor's works to assess compliance with the CEMP, EMF, EPRs and plans required by the EPRs and Incorporated Document.
- Prepare a six-monthly report summarising the Contractor's compliance with the EMF and provide to RPV and the Delivery Partner.
- Prepare audit reports containing the results of audits.

- Review complaints which may highlight instances of non-conformance with applicable EPRs.

4.2.2 AUDIT PROGRAM

Audits of the Delivery Partner's CEMP, sub-plans and SEIPs involved a review of each document to assess compliance with ISO 14001:2015, the EMF, relevant EPRs and Incorporated Document. During site inspections, compliance was assessed through observation of project activities, interviews and review of relevant environmental records.

The IEA carried out both pre-commencement (desktop audits - prior to commencement of works) and implementation audits (during construction) within the audit summary period. The audit schedule was developed so that the EPRs considered in each audit would be relevant to the construction activities at that time. Prior to each audit, key environmental aspects were identified in consultation with RPV, the Delivery Partner and RIA. The key environmental aspects were decided based on these discussions, taking into consideration previous findings and any relevant stakeholder engagement.

These key environmental aspects formed the scope for each environmental audit and broadly covered the documentation listed in Section 4.2.1.1 and the works listed in Section 4.2.1.2 and 4.2.2.3. During the course of the audit program KPMG followed up the status of findings of the previous reports until each finding was satisfied and closed.

4.2.2.1 Documentation

The MTP EMF required RIA to produce the following management plans and environmental documentation:

- CEMP and associated sub plans
- SEIP
- Air Quality Management Plan
- Ecology Management Plan
- Heritage Management Plan
- Surface Water Management Plan
- Spoil Management Plan
- Monitoring Management Plan
- Construction Noise & Vibration Management Plan
- Health and Safety Management Plan
- Tree Management Plan
- Traffic Management Plans
- Urban Design Management Plan
- Urban Ecology Management Plan
- Sustainability Management Plan
- BDP

- CSEMP
- Ground Movement Management Plan
- EMS Manual
- Other documentation (as required).

4.2.2.2 Works

The RIA works under GC82 are being undertaken in three key construction precincts: Western (Tunnel Entrance) Portal, Eastern (Tunnel Entrance) Portal and Western Turnback. Key activities being carried out by RIA under the Rail Infrastructure & Systems Package, include:

- Construction of concrete structures including approach, decline and cut and cover
- Structural steel works
- Services works; including power and drainage
- Road construction
- Landscaping
- Traffic management
- Cut and cover tunnelling
- Combined services route installation and relocation
- Signalling equipment installation
- overheard wiring works
- Track works
- Construction of a third station platform West Footscray platform.

4.2.2.3 Complaints

Complaints are addressed during the course of the IEA Audits through auditing EPR SC4 Communications and Stakeholder Relations and how the delivery partner is implementing the complaints management process. Findings against this process may result in non-conformance if complaints are not being appropriately managed. Where there are no specific IEA findings against under the CEMP, complaints are being managed in accordance with the relevant plans.

4.2.3 AUDIT CLASSIFICATIONS

The IEA (KPMG) used different audit classifications during the relevant period that were attributable to the type of audit being carried out.

- Pre-commencement audits were documentation-based desktop audits, testing plans, sub-plans and other relevant documentation against selected EPRs. A compliance-based classification was agreed as the most suitable means of rating the findings.
- Implementation Audits were initially agreed to be based on risk levels to consider the relative potential impacts of non-compliances.

However, after initial Implementation Audits had been completed, it was decided that audit findings would be better suited as a compliance-based classification, which also better aligned to the purpose of the audits. This also allowed for consistency with the pre-commencement desktop audits and a direct comparison of findings.

TABLE 0-2 AUDIT CLASSIFICATIONS

FINDING	DESCRIPTION
Complies (C)	The response fully satisfies the requirement (being a requirement of a framework, standard or other guidance used to set the performance standard of the project).
Does Not Comply (DNC)	The response does not satisfy the requirement.
Partially complies (PC)	The response partially satisfies the requirement; is in progress to satisfy the requirement or is part of a demonstrated Sub-Plan or plan to satisfy the requirement.
Potential Improvement Opportunity (PIO)	Where in the course of the audit work, an opportunity has been identified to improve a process or procedure. A PIO is an opportunity to improve upon a process or procedure. It does not represent a non-compliance and therefore is not required to be addressed to achieve compliance. For this reason, there is no follow up required to close out PIOs.
Critical	Issue represents control weakness, which could cause or is causing severe disruption of the process or severe adverse effect on the ability to achieve activity / process / project objectives.
High	Issue represents a control weakness, which could have or is having major adverse effect on the ability to achieve activity / process / project objectives.
Moderate	Issue represents a control weakness, which could have or is having significant adverse effect on the ability to achieve activity / process / project objectives
Low	Issue represents a minor control weakness, with minimal but reportable impact on the ability to achieve activity / process / project objectives.

5 Completed Audits

5.1 Pre-commencement Audit Q4 2018

5.1.1 AUDIT SCOPE

The Pre-commencement Audit conducted in Q4 2018 reviewed the compliance of RIA's early works at the Eastern (Tunnel Entrance) Portal and Western (Tunnel Entrance) Portal against EPRs. This included confirmation that the RIA's management plans (including the CEMP and associated sub-management plans) complied with requirements.

EPRs reviewed within the scope of the Pre-commencement Audit Q4 2018 were:

- Environmental Management Framework: EMF1, EMF2, EMF3, EMF4
- Aquatic Ecology & River Health: AE1, AE2, AE3
- Aboriginal Cultural Heritage: AH1
- Air Quality: AQ1, AQ2, AQ3
- Arboriculture: AR1, AR4, AR5
- Business: B2, B3
- Contaminated Land and Spoil Management: C1, C2, C3, C4
- Historical Cultural Heritage: CH1, CH2, CH3, CH4, CH6, CH9, CH11, CH24
- Flora and Fauna- Terrestrial: FF1, FF2, FF3
- Ground Movement and Land Stability: GM2, GM4, GM5, GM6
- Groundwater: GW2
- Land Use and Planning: LU1, LU4
- Landscape and Visual: LV1, LV2, LV3, LV4
- Noise and Vibration: NV1, NV3, NV4, NV5, NV7, NV8, NV9, NV10, NV11, NV13, NV21
- Social and Community: SC2, SC4, SC6, SC10
- Surface Water: SW1, SW2
- Transport: T2, T3, T4, T5, T6, T7, T10

5.1.2 AUDIT FINDINGS

This section summarises the IEA findings relevant to the Q4 2018 IEA Report.

5.1.2.1 Does Not Comply

Finding – EPR AE1

During the December 2018 Early Works audit, RIA's CEMP made no mention of stormwater management during construction of the RIA Early Works, and the CEMP did not meet the requirements under EPR AE1. The purpose of EPR AE1 is to incorporate appropriate stormwater treatment measures.

RIA responded to the finding by incorporating appropriate controls into the Surface Water Management Plan (SWMP) and the finding was closed in June 2019.

Finding – EPR CH3

RIA's Construction Noise and Vibration Impact Assessments (CNVIAs) considered heritage buildings in accordance with the applicable vibration and ground movement EPRs. The purpose of EPR CH3 is to determine the risk to heritage places and the approach to rectify any damage caused to heritage places by the RIA Early Works.

No damage to heritage places occurred in the audit period; however, RIA had not detailed an approach to rectifying damage within their management plans, and therefore did not comply with EPR CH3. RIA developed a Heritage Management Plan (HMP) and included appropriate measures describing rectification of damage and the finding was closed in April 2019.

Finding – EPR T6

RIA's traffic management plans are required to incorporate relevant measures from RPV's Travel Demand Management Strategy. RIA's Traffic Management Plans (TMPs) were incomplete at the time of the December 2018 audit. Therefore, it could not be determined if this requirement was met and a finding was raised. It was determined that the RPV Traffic Demand Strategy did not apply to the scope of works at the time at either Portals, however an observation was noted to include this consideration within the TMPs.

RIA updated their TMPs to address these requirements and the finding was closed in April 2019.

Finding – EPR NV21

RIA's Construction Noise and Vibration Management Plan (CNVMP) did not address all the relevant requirements of Interface EPR NV21; this included: identification of alternative vibration guideline targets (if any) to protect existing structures, interface with the heritage management plan (HMP) and unavoidable works and ongoing IEA engagement.

To address the finding, RIA updated their plans to include appropriate controls in the CNVMP for the requirement of condition assessments; updated the CNVMP to reflect the unavoidable works requirements; and, provided appropriate measures to manage the interfaces on site, in the HMP. The finding was closed in April 2019.

5.1.2.2 Partially Complies

Finding – EPR EMF4

RIA's CSEMP did not reference the BSGC with regards to complaints management.

To address the finding, RIA updated the CSEMP and the appropriate references were made to these guidelines. The finding was closed in April 2019.

Finding – EPR AQ1

RIA's CSEMP did not include the necessary respite measures for air quality as required by EPR AQ1. The purpose of EPR AQ1 is to address the key risks to air quality and to develop an Air Quality Management Plan (AQMP) to identify control measures for managing and monitoring the air quality for each precinct.

RIA updated the CSEMP to include respite measures for air quality under unavoidable works and the finding was closed in April 2019.

Finding – EPR B2

RIA's BDP is required to be consistent with RPV's BSGC and the CSEMP under EPR B2. The RIA BDP was not completed at the time of the December 2018 audit and measures for managing potentially impacted businesses could not be assessed against the EPR B2 requirements. RIA addressed the finding by updating the BDP to reflect the requirement and the finding was closed in April 2019.

Finding – Heritage Management Plan

RIA's HMP was not provided at the time of the audit and RIA advised it was under development. As such it was unclear if the requirements of several EPRs had been addressed in the HMP. To address this finding the HMP was provided to the IEA for review and it was determined that the EPR requirements were satisfied and that appropriate controls were implemented. The finding was closed in April 2019.

Finding – EPR LV3

RIA's CEMP did not contain measures that are required under EPR LV3. This included lighting design standards to minimise light spillage during construction. However, the SEIPs outlined measures to mitigate the potential for adverse light spill.

To close this finding, appropriate controls were developed by RIA and documented in procedures within the AQMP. Additionally, these measures were recorded in different SEIPs. The finding was closed in April 2019.

Finding – EPR NV8

RIA's CNVMP did not contain the requirement under EPR NV8 to consult with Heritage Victoria in relation to potential impacts to heritage places and appropriate mitigation measures. RIA updated the CNVMP to include this requirement and the finding was closed in April 2019.

Finding – Traffic Management Plan

RIA's TMP for the Western (Tunnel Entrance) Portal site was under development and not provided at the time of the December 2018 audit. These EPRs outline how the transport network will be managed during the delivery of the RIA Project to maximise the safety of all modes of transport and its users. Compliance of these requirements for several EPRs could not be assessed. RIA provided the relevant TMP during the April 2019 audit that addressed the different EPR requirements and the finding was closed.

Finding – NV9 and NV10

There is a requirement under EPR NV9 and NV10 that building condition assessments be undertaken, along with consultation with the asset owner to establish vibration targets for impacted stakeholders. RIA was undertaking condition surveys at the time of the audit and therefore compliance could not be assessed. Following RIA's completion of the surveys, RIA undertook consultation with relevant stakeholders developed monitoring and management plans. The finding was closed in April 2019.

Finding – EPR SC4

RIA's CSEMP identified a mitigation strategy for the disruption to service utilities was to implement the Utility Services Management Plan. However, the Utility Services Management Plan was not provided at the time of the review as such it could not be determined if this requirement had been met. RIA updated the CSEMP to include the relevant controls and the finding was closed in April 2019.

Finding – EPR SC6

RIA's CSEMP identified a mitigation strategy for the proactive management associated with event organisers across the works was to implement a Special Events sub plan. However, the Special Events sub plan was not provided at the time of the review as such it could not be determined if this requirement had been met. RIA updated the CSEMP to include the relevant controls around "major events" and the finding was closed in April 2019.

Finding – EPR SW1

RIA provided no project documentation to demonstrate the control measures for the management and treatment of stormwater and overland flows under EPR SW1 during RIA Early Works and it could not be determined if said control measures were in place. It was noted that RIA provided evidence, by way of meeting minutes, with Melbourne Water that demonstrated flood modelling and Project design being undertaken in consultation with relevant stakeholders. This was to achieve stakeholder satisfaction with the integrated water management principles in the stormwater design. To address this finding, RIA updated the SWMP to include appropriate controls and the finding was closed in April 2019.

Finding – ERP T3

EPR T3 is in place to ensure that key parking issues have been identified for the project. It was unclear if the RIA TMP for the Eastern (Tunnel Entrance) Portal and Western (Tunnel Entrance) Portal had been prepared in consultation with and approved by the relevant road authority to manage parking in and around the construction zones. RIA demonstrated in the audit in April 2019 that consultation with relevant stakeholders had occurred within TMPs and the finding was closed.

Finding – Management Plans

RIA is required to develop and implement management plans under the project EMF. At the time of the December 2018 audit, RIA had several management plans listed that were not finalised.

All the relevant plans were finalised in the in April 2019 audit and the finding was closed.

5.1.2.3 Potential Improvement Opportunity

PIO – EPR AQ1

During the December 2018 audit, an inconsistent definition of sensitive receptors within the RIA AQMP was found. RIA adopted the POI and made changes to the AQMP.

PIO – EPR SC4

During the December 2018 Audit, no reference to the Property Conditions Survey procedure was included within RIA's CSEMP. RIA adopted the POI and made changes to the CSEMP.

5.2 Pre-commencement Audit Q1 2019

5.2.1 AUDIT SCOPE

This audit focused on the RIA GC82 RIA Stage 1 (Rail Works) of the Western Turnback Development Plan. EPRs reviewed within the scope of the Pre-commencement Audit Q1 2019 were:

- Environmental Management Framework: EMF1, EMF2, EMF3, EMF4
- Aquatic Ecology & River Health: AE1, AE7
- Aboriginal Cultural Heritage: AH1
- Air Quality: AQ3
- Arboriculture: AR1, AR2, AR4
- Business: B1, B2
- Contaminated Land and Spoil Management: C1
- Historical Cultural Heritage: CH1, CH2, CH8, CH10, CH22, CH23
- Greenhouse Gas: GHG1, GHG2
- Ground Movement and Land Stability: GM2, GM4
- Groundwater: GW1, GW2, GW3
- Land Use and Planning: LU1, LU2, LU4
- Landscape and Visual: LV1, LV2
- Noise and Vibration: NV3, NV16, NV17, NV18, NV20
- Social and Community: SC3, SC4, SC6, SC7, SC8, SC12
- Surface Water: SW2
- Transport: T7, T8, T9.

5.2.2 AUDIT FINDINGS

This section summarises the IEA findings relevant to the Q1 2019 IEA Report.

5.2.2.1 Does Not Comply

Finding – EPR GM4

EPR GM4 requires that pre-construction condition surveys are undertaken for assets and structures potentially affected by ground movement. RIA could not provide evidence that pre-construction condition surveys and a

database of condition information had been implemented at the time of the audit. Therefore, it could not be determined if the assessments would be completed prior to construction.

At the time of the audit RIA was in the process of undertaking assessments to establish construction boundaries and determine a list of properties, in accordance with the CSEMP. RIA provided appropriate evidence in July 2019 to confirm that the precondition surveys and third-party assessments had been completed, as required and the finding was closed.

5.2.2.2 Partially Complies

Finding – EPR T7

EPR T7 requires RIA to develop and submit Management Plans to RPV for approval in order to be operationalised. RIA had not provided two traffic management plans required under EPR T7 to RPV at the time of the audit.

In the July 2019 audit RIA had confirmed that these Management Plans had been provided to RPV and had the necessary approvals; and the finding was closed.

Finding – Management Plans

The project EMF requires RIA to develop and submit Management Plans to RPV for approval in order to be operationalised. During the course of the audit several management plans that were required under several EPRs had been submitted to RPV for review, however, they had not been approved for use.

During the July 2019 audit it was confirmed that RPV had approved all the plans identified and the finding was closed.

Finding – NV3 and NV16

RIA is required to develop CNVIAs that demonstrate modelling used to determine the appropriate mitigation controls to achieve compliance with several EPRs. RIA had prepared a CNMVP that outlined controls; however, a CNVIA for the Western Turnback was not provided at the time of the February 2019 audit.

Therefore, it could not be determined if the controls in the CNMVP had been informed by assessment and modelling by a suitably qualified acoustic and vibration consultant. The finding was closed in July 2019 when the CNVIA was provided to the IEA prior to the construction phase start date.

Finding – NV17 and NV20

The CNMVP requires documentation of the mitigation design strategies for operational noise and vibration impacts of the rolling stock. However, the RIA CNMVP does not reference the vibration targets for future rolling stock and hence it cannot be determined how it will be designed to meet the targets.

The operational noise from rolling stock will be assessed during operation. However, there is no documentation of the assessment process.

During the Q3 2019 audit, the IEA determined that the EPRs NV17 and NV20 are in relation to operational requirements and would be tested when relevant documentation became available and the finding was closed July 2019.

Finding – EPR AQ3

RIA had not completed an Air Quality Impact Assessment (AQIA) under the requirements of EPR AQ3 and therefore, the AQMP contained limited details to control the emission of smoke, dust, fumes and other pollution

into the atmosphere during construction and operation. The AQIA was not provided at the time of the audit. To address this finding, RIA provided the IEA with evidence to show that the AQIA was developed prior to construction and the finding was closed July 2019.

5.2.2.3 Potential Improvement Opportunity

PIO 1 – CNVMP

RIA CNVMP did not reference EPRs NV16, NV17, NV18 and NV20 in the compliance requirements table within the CNVMP. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

5.3 Implementation Audit Q2 2019

5.3.1 AUDIT SCOPE

This audit included testing for compliance against the RIA Early Works Plan and the relevant EPRs. Additionally, where an interface affecting relevant EPRs has been identified between RIA and the Tunnels and Stations package being delivered by CYP, the audit scope included testing that appropriate actions were undertaken by RIA to ensure that cumulative impacts were appropriately managed, coordination with CYP occurred and that compliance was achieved.

EPRs reviewed within the scope of the Q2 2019 audit were:

- Environmental Management Framework: EMF1, EMF2, EMF3, EMF4
- Aquatic Ecology & River Health: AE1, AE2, AE3
- Aboriginal Cultural Heritage: AH1
- Air Quality: AQ1, AQ2, AQ3
- Arboriculture: AR1, AR4, AR5
- Business: B2, B3
- Contaminated Land and Spoil Management: C1, C2, C3, C4
- Historical Cultural Heritage: CH1, CH2, CH3, CH4, CH6, CH9, CH11. CH24
- Flora and Fauna- Terrestrial: FF1, FF2, FF3
- Ground Movement and Land Stability: GM2, GM4, GM5, GM6
- Groundwater: GW2
- Land Use and Planning: LU1, LU4
- Landscape and Visual: LV1, LV2, LV3, LV4
- Noise and Vibration: NV1, NV3, NV4, NV5, NV7, NV8, NV9, NV10, NV11, NV13, NV21
- Social and Community: SC2, SC4, SC6, SC10
- Surface Water: SW1, SW2

- Transport: T2, T3, T4, T5, T6, T7, T10.

5.3.2 AUDIT FINDINGS

This section summarises the IEA findings relevant to the Q2 2019 IEA Report.

5.3.2.1 Critical

No findings raised as “Critical” during this audit.

5.3.2.2 High

No findings raised as “High” during this audit.

5.3.2.3 Moderate

Finding – Internal Audits

The EMF outlines internal audit requirements. During the April 2019 audit, RIA could not demonstrate that all these requirements had been achieved, however, RIA noted two internal audits had been planned for the future. The IEA also recognised that the RIA project works are covered by John Holland’s (JH) corporate EMS and that this system is subject to external certification audits. RIA proposed that the internal audit requirements were being met by the use of Activity Method Statements, however the IEA found the intention of the two documents are different and therefore the finding was still raised.

To address the finding RIA provided the IEA with the updated CEMP in the July 2019 audit to confirm that the plan included RIA’s current process with regards to conducting internal audits in line with EMS and the finding was closed.

Finding – EPR EM2

The project EMF outlines environmental performance monitoring requirements, including monthly environmental performance reports to be provided to RPV. During the April 2019 audit, the IEA raised a moderate finding in relation to insufficient reporting of environmental monitoring data.

The monitoring data provided to RPV did not provide assurance to RPV and stakeholders that construction activities were in compliance with the relevant EPRs for RIA Early Works. RIA updated the RPV monthly reporting process and report format, and the finding was closed in July 2019.

Finding – AQ2

EPR’s AQ1 requires that a plan for dust management and monitoring is developed to manage and monitor dust and other air emissions aligned to recognised standards, including appropriate siting of monitoring equipment. At the time of the audit, it was unclear how the location of the air quality monitor at the Eastern (Tunnel Entrance) Portal was representative of the site and adequate for monitoring compliance against AQ2. No supporting evidence of RIA’s determination for the siting was provided by completion of the audit. AQ2 was audited again in Q4 2019 and no further findings were raised by the IEA, therefore the finding is considered closed.

Finding – EPR SC4

The RIA CSEMP requires that proactive collaboration between the contractors (RIA and CYP) are to occur to ensure cumulative noise and air quality impacts are effectively managed and coordinated.

The Interface EPR Working Group involving RIA and CYP Environmental Managers was in place at the time of the audit, however, while this platform showed that communications were occurring between RIA and CYP, the IEA raised some issues in relation to the coordination and sharing of monitoring data, specifically in relation to timeliness and the coordination of monitor locations.

The IEA acknowledged that there had been on-going improvements in the communication between RIA and CYP, but that further improvements could be made to ensure that both parties comply.

To address this finding RIA provided the IEA with evidence to show that RIA and CYP continue to collaborate and effective communications take place as works continued. Evidence was also provided to show that RPV was involved in the facilitation of communications in order to remain compliant on site; and the finding was closed in July 2019.

5.3.2.4 Low

Finding – EPR LU4

EPR LU4 requires the development of the Urban Design Management Plan (UDMP); and the RIA UDMP includes a map of the construction hoarding to be implemented at the Eastern (Tunnel Entrance) Portal. However, during the site visit to the Eastern (Tunnel Entrance) Portal as part of the April 2019 audit, the hoarding was inspected and gaps in the hoarding were observed.

RIA provided the IEA with an updated UDMP to show the hoarding included within the plan was an approximate indication of where the hoarding will be located, and the finding was closed July 2019.

Finding – EPR EM2

In the CEMP and SEIP developed by RIA, reference is made to the development of Site Environmental Plans (SEPs) as part of managing environmental risks and implementing mitigation measures.

During a site visit as part of the audit, RIA advised that the SEPs had not and would not be created for the RIA Early Works, but controls would be incorporated into the SEIPs. The approach only applies to the RIA Early Works activity and not the RIA Main Works.

The change in approach was communicated and agreed to by RPV. However, the SEPs were still referenced as a control measure. During the July 2019 audit, RIA provided an updated CEMP and SEIPs to show reference to SEPs had been removed and the finding was closed.

Finding – EPR SW1 and AE1

RIA's CEMP did not list the SWMP as a management plan. The SWMP contains RIA's approach to process and controls to manage surface water. SWMP is a key Management Plan in addressing the requirements of Aquatic Ecology and Surface Water EPRs. RIA revised the CEMP and updated it to include the SWMP and the finding was closed in July 2019.

5.3.2.5 Potential Improvement Opportunity

PIO – ERP T3

RIA's TMPs did not include the controls in place to minimise impacts to users with special needs. RIA had considered users with special needs, including the change of, "No Stopping Zones" to "Parking Zones", to allow the public to load and unload, as required. However, it had not been documented in the TMPs. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – ERP T6

RIA's TMP did not reflect that RPV's Travel Demand Strategy was not applicable at the Portals during the April 2019 audit. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR NV10

RIA's CNVMP did not reflect the current vibration monitoring programs RIA had in place. The IEA noted that RIA should consider updating the CNVIA to reflect the above. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR NV21 and AQ3

Several vehicles during the site walkthroughs during the April 2019 audit were observed to be idling, increasing risk of construction noise, vibration and air quality impacts to nearby sensitive receptors.

The IEA advised RIA to consider reviewing the construction work practices and ensure that measures that had been put in place were being followed on site. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR NV3

RIA's CNVIA Document Control section was incomplete, and unclear if documents had been endorsed by the appropriate management personnel. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR EM2

RIA's CNVMP contained a "draft" watermark but was the "issued for use" version as Revision 00. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR SC4

RIA's Property Condition Surveys Procedure document control record was inconsistent in the "Revisions" section. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR AH1

RIA's HMP did not align with the controls observed during the site visit for the South Yarra Sidings Reserve area. The IEA recommended RIA update the HMP. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – Traffic Management Plans

RIA WTMPs had not been "issued for use". It was recommended that RIA provide the IEA with the "issued for use" WTMPs. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

5.4 Pre-commencement & Implementation Audit Q3 2019

5.4.1 AUDIT SCOPE

The audit scope was developed to cover:

- Implementation audits at the Eastern (Tunnel Entrance) Portal, Western (Tunnel Entrance) Portal, and the Western turnback to test compliance with relevant EPRs and to follow up on any outstanding findings in previous implementation and pre-commencement audits.
- A pre-commencement audit against the Eastern (Tunnel Entrance) Portal, Western (Tunnel Entrance) Portal and Western Turnback Stage 2 Development Plans for EPRs included in the new development plans, which had not previously been audited by KPMG.

EPRs reviewed within the scope of the Pre-Commencement Audit Q3 2019 were:

- Environmental Management Framework: EMF1, EMF2, EMF3, EMF4

- Aquatic Ecology & River Health: AE1, AE7
- Aboriginal Cultural Heritage: AH1
- Air Quality: AQ3
- Arboriculture: AR1, AR2, AR4
- Business: B1, B2
- Contaminated Land and Spoil Management: C1
- Historical Cultural Heritage: CH1, CH2, CH8, CH10, CH22, CH23
- Greenhouse Gas: GHG1, GHG2
- Ground Movement and Land Stability: GM2, GM4
- Groundwater: GW1, GW2, GW3
- Land Use and Planning: LU1, LU2, LU4
- Landscape and Visual: LV1, LV2
- Noise and Vibration: NV3, NV16, NV17, NV18, NV20
- Social and Community: SC3, SC4, SC6, SC7, SC8, SC12
- Surface Water: SW2
- Transport: T7, T8, T9.

5.4.2 AUDIT FINDINGS

This section summarises the IEA findings relevant to the Q3 2019 IEA Report. Certain findings were reported by KPMG in the audit report using the risk-based audit classifications, while others were reported using the compliance-based classifications (refer Section 4.2.3).

5.4.2.1 Critical

No findings raised as “Critical” during this audit.

5.4.2.2 High

No findings raised as “High” during this audit.

5.4.2.3 Moderate

Finding – AQ3

EPR AQ3 requires RIA to control air quality pollutants in accordance with the relevant State Environmental Protection Policy (SEPP) for air quality. RIA’s AQMP included requirements to measure air quality pollutants at the nearest sensitive receptors to the site and included the monitoring of both particulate material (PM) sizes PM₁₀ and PM_{2.5}. During the site visit to the Western Turnback as part of the July 2019 audit, RIA advised that only PM₁₀ was being recorded and monitored. RIA advised further that the current air quality monitor did not have the capability to monitor PM_{2.5}.

It was also noted that the monitoring station on-site had recorded air quality exceedances. In discussions with RIA, it was identified that the data was not being analysed or acted upon to ensure compliance with the SEPP.

Whilst exceedances may be attributable to weather conditions and other external activities, RIA's process to ascertain compliance with the SEPP by analysing the captured data, and determining the root causes of exceedances, was not evident at the time of the audit.

RIA provided evidence the relevant air quality monitoring data, including PM_{2.5}, was being measured in the November 2019 audit. In addition, evidence of RIA providing commentary when an exceedance was observed in the online system was sighted. The finding was closed in November 2019.

5.4.2.4 Low

Finding – Noise and vibration modelling

RIA is required to prepare site-specific noise and vibration controls within the SEIPs to comply with ERP NV3 and the controls are to be informed by modelling activities detailed in the CNVIA. During the audit, it could not be determined if the CNVIA at the Western Turnback reflected the potential change in works schedule and monitoring locations.

The IEA recognised that RIA had not received any noise complaints from sensitive receptors at the time and was satisfied that RIA's acoustic specialist provided sufficient evidence that separate modelling that was conducted for this occupation period and acted upon sufficiently. The finding was closed in November 2019.

Finding – ERP AE7

The EPR AE7 development plan response requires RIA to ensure any design with a potential impact to stormwater has necessary monitoring of certain water quality parameters. The monitoring of these parameters is to occur at the source and point of discharge at specified times. The IEA found that there was no monitoring of stormwater occurring at the site as required and SEPP during the audit.

During the subsequent audit the IEA found with regards to stormwater discharge point is low, and there is no requirement for stormwater discharge monitoring during construction. The finding was closed in November 2019.

Finding – EPR EMF2

RIA CEMP outlines that site-specific environmental controls being detailed in the SEIP, will be displayed onsite, where the relevant works are occurring. During a site visit to the Western Turnback as part of the audit, the IEA observed that SEIP documentation which includes the site-specific measures related to the Western Turnback construction site was not present on site.

During the November 2019 audit, RIA supplied evidence showing that the SEIP was displayed at the office and the finding was closed.

5.4.2.5 Does Not Comply

No findings raised as "Does Not Comply" during this audit.

5.4.2.6 Partially Compliant

Finding – EPR AE7

To address compliance with EPR AE7, RIA's Development Plan included the design of up to 600 cubic meters (m³) of storage for stormwater detention and implementation of water sensitive urban design (WSUD) measures in the design. During the July 2019 audit, it was noted that while the WSUD measures are included in the overall

design, however, it was unable to be determined if the design will include up to 600m³ of storage for stormwater detention. RIA advised the IEA that the detailed design was to be finalised in October 2019 as further consideration was being undertaken for nearby utilities that may be impacted by the inclusion of stormwater detention storage.

In the subsequent audit, RIA stated that 600m³ storage tank was not necessary for their needs, and the volume was downgraded in subsequent design iterations to a 100m³ water storage solution and the finding was closed.

5.4.2.7 Potential Improvement Opportunity

PIO – EPR SW2

RIA had not installed erosion and sediment control measures in all locations in accordance with their management plans. RIA adopted the POI and installed sediment controls in all relevant locations as required by the management plans.

PIO – EPR AQ1

RIA's AQMP did not reflect the completion of the air quality modelling. The IEA recommended that RIA consider updating the AQMP to reflect the existence and completion or update the AQMP to include the process to undertake air quality impact assessments. RIA adopted the POI, and updated the AQMP to include the relevant information.

PIO – Traffic Management Plans

RIA Worksite Traffic Management Plans (WTMPs) had not been "issued for use". It was recommended that RIA provide the IEA with the "issued for use" WTMPs. RIA adopted the POI and the WTMP was updated to the correct version.

PIO – Spoil Management Plan

RIA's spoil management plan was incomplete in relation to providing spoil volumes. The IEA suggested that this be updated if the information was available. RIA adopted the POI, and the spoil management plan was updated to include the relevant information.

PIO – EPR SW2

RIA's SWMP, reference to known flooding locations for the Western Turnback site in the SWMP were yet to be confirmed. RIA adopted the POI and the SWMP was updated to include the known flooding locations.

PIO – EPR AR4

Following an incident where works occurred within a Tree Protection Zone (TPZ), it was recommended that RIA consider having the Environmental Manager or, Arborist onsite for any future works within the proximity of TPZ's, to ensure appropriate controls are being implemented onsite. RIA process has been updated to where an arborist now attends works that are in close proximity to retained trees, where informed by Arborist assessment.

PIO – EPR GM1

At the time of the July 2019 audit for Eastern (Tunnel Entrance) Portal, the RIA documents relevant to EPR GM1, including the Ground Movement Management Plan and the Geotechnical Interpretive Report had not been "issued for use". The IEA recommended that RIA consider updating the documentation to be "issued for use". The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

5.5 Implementation Audit Q4 2019

5.5.1 AUDIT SCOPE

This audit was conducted as part of the regular implementation audit schedule outlined in the EMF and included a site visit to review the compliance of the following EPRs:

- Aquatic Ecology & River Health: AE2, AE3
- Air Quality: AQ2, AQ3
- Contaminated Land and Spoil Management: C2, C3
- Historical Cultural Heritage: CH22
- Greenhouse Gas: GHG1, GHG2
- Ground Movement and Land Stability: GM2, GM3
- Groundwater: GW3, GW4, GW5
- Noise and Vibration: NV1, NV4, NV6, NV7, NV8, NV9, NV11, NV16, NV21
- Social and Community: SC4
- Transport: T2, T3.

The audit scope also incorporated the investigation of any open previous findings to update their status and close where appropriate.

5.5.2 AUDIT FINDINGS

This section summarises the IEA findings relevant to the Q4 2019 IEA Report.

5.5.2.1 Does Not Comply

No findings raised as “Does Not Comply” during this audit.

5.5.2.2 Partially Complies

Finding – EPR AE2

RIA’s CEMP, SEIP and SWMP outlined measures for the storage and handling of hazardous chemicals, including the provision of spill kits and personnel trained in their use. During a site inspection as part of the November 2019 audit, the IEA did not observe any spill kits in a key external location.

It was determined RIA had not managed the risk associated with AE2. RIA resolved this finding by placing additional spill kits near the bulk chemical container located at the Western (Tunnel Entrance) Portal and also delivering a spill kit toolbox talk to educate site staff.

Finding – EPR EM2

RIA and the IEA had agreed that references to SEPs would be removed from SEIPs (as per a previous audit finding) as they were deemed not to be needed. However, references to SEPs were still included in the SEIP at the time of the audit.

During the Q1 2020 audit, RIA provided the IEA with the updated SEIPs where references to the SEPs had been removed and the finding was closed.

Finding – EPR T3

RIA TMPs are required to include a green travel strategy to encourage construction workers to travel to and from worksites by means other than private vehicle. RIA TMPs did not include a Green Travel Strategy at the time of the audit.

During the Q1 2020 audit, RIA provided the IEA with the Green Travel Strategy and the finding was closed.

5.5.2.3 Potential Improvement Opportunity

PIO – Monitoring

RIA's noise and vibration monitoring data to monitor compliance against relevant EPRs, did not include information on the reason for exceedances. The IEA therefore raised a potential improvement opportunity for RIA to investigate possible ways to make the commentary provided by the Environment Team more accessible and visible within the outputs of the monitoring systems. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR AE2 and AE3

RIA's spill kits and waste bins looked extremely similar and were placed next to each other in multiple locations across the site. Due to the confusion between the two several spill kits contained other waste material. The IEA therefore raised a potential improvement opportunity to consider ways to more easily distinguish between the spill kits and waste bins. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

PIO – EPR AE2 and AE3

RIA's SEIPs did not reflect the works that were happening on site at the time. A potential improvement opportunity was therefore raised for RIA to update the Eastern (Tunnel Entrance) Portal SEIP map to reflect the missing features. The IEA does not require RIA to close-out PIOs, and therefore no follow-up was required.

6 Conclusions

The auditing programme identified that, in general, the Rail Infrastructure Package being delivered by RIA and summarised within this report was undertaken in accordance with the requirements of EMF, relevant EPRs and Incorporated Document.

The Rail Infrastructure Package is a complex construction program in a constrained urban environment, and therefore a number of findings were expected, particularly within earlier reports. The auditing process is designed to lead to continual improvement during projects - this is key to implementing best practice ISO14001 environmental management systems.

A greater number of non-compliance findings were identified during the pre-commencement audits than during the implementation audits. This trend was expected as identifying and addressing potential environmental risks was key to ensuring the project was ready for works to commence. Findings identified by the IEA, were typically addressed by RIA in a timely manner with the associated level of environmental risk. This highlights the project's overall improvements in compliance and the continued commitment to the continual improvement principle.

This summary report relates to the Main Works Package of the MTP RIA Works Package until the end of 2019, only. Further summaries of key findings and recommended actions from future IEA reports produced for the remaining works packages of the MTP will be prepared and published on the project's official [website](#).



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