

WEST GATE TUNNEL PROJECT

Independent Reviewer and Environmental Auditor
Report for Submission to the Minister for Planning –
March 2018 to August 2018



PROJECT

West Gate Tunnel Project

Audit Report for Minister of Planning

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EXECUTIVE SUMMARY

Introduction and Overview

This report summarises the Independent Reviewer and Environmental Auditor (IREA) audit findings from the first six months of construction of the Westgate Tunnel Project (the Project) in Melbourne, Victoria.

Construction on the Project has been underway since March 2018 with activities concentrated on the West Gate Freeway, northern portal, North Yarra Main Sewer (NYMS) diversion, site establishment and other utility service works. The Project is progressing well and there are no significant or material risks to the environment.

The IREA has been jointly appointed by West Gate Tunnel Authority (WGTA) and Transurban WGT Co Pty (Project Co) to provide independent oversight of design engineering, construction, program and environmental performance of the Project. The IREA undertakes audits and surveillance of Project activities to assess whether conformance with Project requirements are being achieved. This includes the Environmental Performance Requirements (EPRs) issued by the Minister for Planning in December 2017.

Conduct of Audits

This report covers the period from March 2018 to August 2018 and therefore considers audits of the Environmental Management Strategy (the Strategy), the Construction Environmental Management Plan (CEMP), and Worksite Environmental Management Plans (WEMPs). The report also considers findings from the management plan review, design review and construction surveillance processes.

The IREA is required to provide a six monthly “audit report” to the Minister for Planning which must be made available to the public (this report). The audits considered in this report are identified under the Project’s EPRs (specifically EMP3) required by the Project’s Planning Scheme Amendment (PSA) (GC93) and the Project Agreement between the State of Victoria (represented by WGTA) and Project Co.

To meet the requirements of EPR EMP3, the IREA has audited Project Co (responsible for delivering the Project and future operator of the road) to determine conformance with the Strategy. Similarly, the IREA has audited the CPB John Holland Joint Venture (D&C Subcontractor) to determine conformance with the CEMP, EPRs and WEMPs. Prior to starting construction, the IREA (and the WGTA) also reviewed the Strategy and approved the CEMP (and associated subplans). The WEMPs are approved by Project Co.

The IREA determines the scope of the audits, which changes based on which Project issues, activities and environmental risks are considered to be significant at the time of audit. Considerations may include:

- Establishment, development and implementation of the CEMP and associated management system and tools.
- Completion of baseline environmental monitoring, focussing on groundwater, noise, vibration, surface water and air.
- Environmental risks relating to current construction activities.
- Concerns of the community.
- Compliance status of EPRs

In scoping and conducting the audit, the IREA reviews a sample of environmental requirements (and evidence of compliance) over the auditing period. In the first six month period 102 of the 117 EPRs were either audited or checked by the IREA. Of the remaining 15 EPRs, five EPRs relate to operational requirements and a further ten EPRs are not relevant to the current design or construction process and have been scheduled for future audits.

The environmental requirements audited and checked over the last six months by the IREA are summarised below and shown in Appendix A.

Findings

General

The D&C Subcontractor is seen to be making progress on establishing environmental management systems and processes. The Project is compliant with the Strategy and generally compliant with the EPRs, with exception of CHP1, SWP11 and SWP12. Further work is required to document and record EPRs and (monitoring) outcomes. Recording performance - particularly with respect to demonstrating conformance with Project environmental requirements - will be the focus of the IREA's future auditing program, as will establishing and implementing a system to manage timely close out of IREA audit findings.

Environmental Management Strategy

- Project Co are compliant with the Strategy¹. They have put effort into meeting the requirements of the Strategy and have found to have been compliant with their obligations.
- A number of minor observations were noted including:
 - Documentation does not adequately reflect current processes in place, despite evidence that Project Co are meeting their requirements e.g. relating to risk management.
 - Project Co's expectations of the D&C Subcontractor in regards to reporting environmental performance and their intended response to this information is not documented in their internal management documentation. Project Co has not specified the type, level of detail and frequency of reporting of environmental performance data required to demonstrate conformance with regulatory approvals. Similarly, Project Co have not documented the necessary actions required to check conformance.

Environmental Performance Requirements

- The majority of EPRs audited during the reporting period were compliant. The IREA has either formally audited or checked 102 of the 117 EPRs over the last six month period (refer Section 1.2 and Appendix A). A number of observations (some positive) and areas for improvement were made.
- As of the end of this reporting period (August 2018), the Project is not compliant with three (3) EPRs which relate to:
 - implementation of the Cultural Heritage Management Plan (CHMP) (CHP1)
 - flood levels and overland flow (SWP11 and SWP12).
- The non-conformance raised against the requirements of CHP1 relates primarily to administrative and procedural issues associated with documentation of inductions and development of the CHMP Induction Manual. The D&C Subcontractor is undertaking cultural heritage awareness training, particularly in the high-risk areas around Kororoit Creek, and staff generally understand their obligations. This finding does not represent a material risk to environmental management or the environment.
- The non-conformances raised against the requirements of SWP11 and SWP12 represent a potential risk to the environment. The demonstrated increased flood risk has not been adequately addressed. Current modelling shows a localised increase in flood risk (SWP11) and a loss of floodplain storage capacity (SW12) at the northern portal site. Insufficient documentation was provided to determine whether this model itself had been developed to the satisfaction of Melbourne Water, nor whether sufficient consultation has been undertaken with the relevant drainage authority (City of Maribyrnong).
- The Project has addressed EPRs relating to air quality. It should be noted that the sixth air quality monitoring station was installed in October 2018 (post dating completion of the audit). The absence of this air quality monitoring station does not represent a non-conformance with the EPRs, as this relates to establishment of an air quality baseline (for operation) and only needs to be installed at some time "during" construction. No major construction activities (that may give rise to air quality impacts) are currently occurring near to the sixth monitoring station.

¹ The D&C Subcontractor's obligations under the EMS do not need to be audited during the EMS audit. These requirements are transferred into the CEMP and therefore audited quarterly.

- The Project is generally compliant with EPRs relating to noise (noting that it is not necessarily compliant with the internal CEMP noise and vibration management plan). Progress has been made in installing continuous noise monitoring equipment at various locations around the project e.g. northern portal area.
- EPRs audited during the June 2018 period were assessed in relation to the associated CEMP subplan, which described how the EPRs will be met. A non-conformance with the subplan does not necessarily result in a non-conformance with the CEMP (refer to comment on air quality above for an example).
- A number of other audit findings were raised (i.e. areas for improvement and observations) relating to the establishment of management system documentation, and do not represent a material risk to environmental management.

Refer to Appendix A for a summary of the EPRs audited over the last six months and how this relates to the status of the Project.

Construction Environmental Management Plan

- Initial (June 2018) CEMP audit findings indicated the processes and procedures for environmental management were in early stages of development and implementation. More recent CEMP audit findings (August 2018) show progress in environmental management arrangements, including internal processes for tracking conformance. This is evidenced by the decrease in the number of non-conformances raised between audits, from ten in June, to zero in August. Examples of improvement made in environmental management include the development of environmental compliance tracking systems and use of online systems to manage procurement, training and noise data.
- CEMP audit findings for June 2018, including non-conformances, largely related to establishment of management system procedures and processes. Key issues relating to this audit included:
 - Processes for tracking conformance with Project environment requirements.
 - Noise – A number of non-conformances were raised against the requirements of the Construction Noise and Vibration Management Plan (CNVMP) relating to noise impact assessments and monitoring. Noise impact assessments are undertaken for selected construction activities and supported by validation noise monitoring during construction, however there is a lack of consistency in the way this is presented in construction procedures. This needs to be addressed, both to provide better transparency but also to guide effective noise management and reporting. The assessment, monitoring and management process need to be more clearly articulated in the CNVMP. This is an area for improvement, relating primarily to documentation, and does not represent a non-conformance with the noise EPRs.
- CEMP audit findings for August 2018, include zero non-conformances against the CEMP Plan (not including the EPRs). Remaining findings (observations and areas for improvement) largely related to establishment of procedures and processes. Key issues relating to this audit include:
 - Design packages do not contain sufficient detail to demonstrate integration of environment (EPRs) into design e.g. providing information on options considered. There is evidence to confirm that this is undertaken in practice but further justification is required.
 - The Communications and Community Engagement Plan (CCEP) and Business Improvement Plan (BIP) do not currently reflect engagement practices being delivered by the D&C Subcontractor, and consequently require updating. Further clarification in the CCEP is needed in relation to what constitutes an “affected” stakeholder and additional analyses undertaken on complaints received by the public (by category).
- The minor audit findings against the environmental management requirements included in management plans related mainly to administrative and procedural issues, and do not represent a risk to environmental management for the scope of works being undertaken.

Worksite Environment Management Plans

- The construction activities audited during the reporting period were generally of low environmental risk. They reflect localised issues which can be addressed and closed out by taking immediate on-site action.
- A number of non-conformances were raised against WEMPs:

- Five non-conformances were raised against control measures relating to contaminated land management, including adequacy of bunding, signage and delineation of materials.
- Four non-conformances were raised against implementation of sediment and erosion controls, either against the inadequacy of controls on site or the inconsistency between the details shown on the WEMPs and the controls implemented on site.
- Four non-conformances were raised against implementation of noise monitoring, either against the inadequacy of monitoring procedures and data collection or the generic nature of monitoring details included in the WEMP.

Conclusions

Project Co are currently meeting their obligations under the Strategy. There were several minor observations made around documentation of processes and specifying reporting requirements with the D&C Subcontractor, whilst no non-conformances were raised with the Project Co during the Strategy audit.

In the first six-month period 102 of the 117 EPRs were either audited or checked by the IREA. Of the remaining 15 EPRs, five EPRs relate to operational requirements and a further ten EPRs are not relevant to the current design or construction process and have been scheduled for future audits.

The D&C Subcontractor is seen to be making progress on establishing environmental management systems and processes. The Project is compliant with the Strategy and generally compliant with the EPRs, with exception to CHP1, SWP11 and SWP12. Further work is required to document and record environmental management requirements and (monitoring) outcomes. Documenting environmental performance, particularly with respect to demonstrating conformance with Project environmental requirements, will be the focus of the IREA's future auditing program. As will establishing and implementing a system to manage timely close out of IREA audit findings.

The findings arising from the last six months of auditing by the IREA have not identified any significant or material risks to the environment. The audit findings do not represent a material risk to the environment (based on the early stages of construction).

GLOSSARY OF TERMS & ABBREVIATIONS

BIP	Business Improvement Plan
CPBJH	Design and Construction Contractor
CEMP	Construction Environmental Management Plan
CD	Certified Design
CHMP	Cultural Heritage Management Plan
EES	Environment Effects Statement
EMF	Environmental Management Framework
EMS	Environmental Management Strategy
EPR	Environmental Performance Requirements
GHG	Greenhouse Gas
IREA	Independent Reviewer and Environmental Auditor
JASANZ	Joint Accreditation System of Australia and New Zealand
NYMS	North Yarra Main Sewer
PPP	Public Private Partnership
PSA	Planning Scheme Amendment
PSR	Project Scope & Requirements (Project Agreement or Contract)
TBM	Tunnel boring machine
WGTA	West Gate Tunnel Authority
WEMP	Worksite Environment Management Plan
WGTP	West Gate Tunnel Project

1 INTRODUCTION

1.1 Purpose of this report

This report summarises the Independent Reviewer and Environmental Auditor (IREA) audit findings from the first six months of construction of the Westgate Tunnel Project (the Project) in Melbourne, Victoria.

Construction on the Project has been underway since March 2018 with activities concentrated on the West Gate Freeway, northern portal, North Yarra Main Sewer (NYMS) diversion, site establishment and other utility service works. The Project is progressing well and there are no significant or material risks to the environment.

The IREA has been jointly appointed by West Gate Tunnel Authority (WGTA) and Transurban WGT Co Pty (Project Co) to provide independent oversight of design engineering, construction, program and environmental performance of the Project. The IREA undertakes audits, review of documentation and site surveillance of Project activities to assess whether conformance with Project requirements are being achieved. This includes the Environmental Performance Requirements (EPRs) issued by the Minister for Planning in December 2017.

During the reporting period the IREA has audited Project Co (responsible for delivering the Project and future operator of the road) to determine conformance with Strategy. Similarly, the IREA has audited the CPB John Holland Joint Venture (D&C Subcontractor) to determine conformance with the Construction Environmental Management Plan (CEMP), EPRs and Worksite Environment Management Plans (WEMPs). Prior to starting construction, the IREA reviewed the Environmental Management System (the Strategy) and approved the CEMP (and associated subplans). The WEMPs are approved by Project Co. The audits considered in this report are identified under the Project's EPRs (specifically EMP3) required by the Project's Planning Scheme Amendment (PSA) (GC93) and the Project Agreement between the State of Victoria (represented by (WGTA) and Project Co.

The IREA is required to provide a six monthly "audit report" for submission to the Minister for Planning which must be made available to the public (this report).

1.2 Project Background

1.2.1 West Gate Tunnel Project

On 11 December 2017, the Victorian State Government (the State), as part of a Public Private Partnership (PPP), entered into contracts with Project Co for the construction and operation of the Project.

Project Co is responsible for the design, partial financing, construction, tolling, operation and maintenance of the Project. Project Co has ultimate responsibility to the State for delivering the Project to the requirements in the contract and for ensuring the D&C Subcontractor fulfils their obligations including the EPRs.

The D&C Subcontractor has been contracted to complete the detailed design and construction of the Project.

The WGTA is an administrative office established within the Department of Economic Development, Jobs, Transport and Resources (DEDJTR) to manage the delivery of the Project in accordance with the contracts on behalf of the State Government. The Project has three components:

- West Gate Freeway – upgrade and widening works between the M80 Ring Road interchange and Princes Freeway to the southern portals of the tunnels, including connections to Grieve Parade, Millers Road, Williamstown Road, Hyde Street and the West Gate Bridge
- Twin tunnels – two tunnels, one inbound and one outbound, under Yarraville catering for three lanes between the southern and northern portals and connecting to the new bridge over the Maribyrnong River. The outbound tunnel would be approximately 4.0 kilometres long and the inbound tunnel would be approximately 2.8 kilometres long. A tunnel ventilation structure would be located at each exit portal
- Port, CityLink and city connections – connects from the northern tunnel portal to the central city and includes the Maribyrnong River crossing, connections to the Port of Melbourne, elevated roads along Footscray Road, and connections to CityLink and the north west of the central city. Connections are also

provided to both sides of the Port of Melbourne via MacKenzie Road and Appleton Dock Road. A widened Wurundjeri Way is connected to Dynon Road.

Early (preparatory) works started in December 2017 in preparation for construction. This included for instance, low environmental impact works such as completion of environmental surveys and investigations required prior to construction start. The Project started full construction in March 2018 on approval of the CEMP. Since then, construction work sites have been established at the southern inbound and northern portal sites to prepare for tunnelling (likely to start in early 2019). Works to divert the NYMS commenced in August 2018. Additional site clearance and preparation activities are occurring across the Project area to clear the way for construction along the West Gate Freeway and along Footscray Road.

A publicly accessible Project Information Centre located on Whitehall Street in Yarraville (known as the Pivot site) has been open to the public. This Project Information Centre includes interactive displays, printed information packs and is staffed during the day by members of the D&C Subcontractor Communications Team.

1.2.2 Planning and Environment Approvals

The Project was declared 'public works' under the *Environment Effects Act 1978* in December 2015, requiring the preparation of an Environment Effects Statement (EES) to inform the Minister for Planning's assessment of the environmental effects of the Project. The EES was publicly exhibited in late May 2017 and public hearings undertaken between mid-August and late September 2017. The Minister for Planning publicly released his Assessment on 27 November 2017 to complete the EES process – concluding that the Project would deliver substantial transport and related benefits.

Three key (primary) approvals have been granted for the Project under Victorian legislation, including:

- Planning Scheme Amendment (PSA) and Incorporated Document issued by the Victorian Minister for Planning requires the project to be constructed and operated according to the Ministers requirements. The Minister approved the project under PSA GC65 on 7th December 2017. This PSA was revoked by Parliament on 7th March 2018 and remade with PSA GC93 on 8th March 2018. The PSA has been incorporated into six separate local Planning Schemes: Brimbank, Hobsons Bay, Maribyrnong, (City of) Melbourne, Port of Melbourne and Wyndham.
- Works Approval issued by the Victorian Environment Protection Authority for design and construction of the tunnel ventilation structures .
- Cultural Heritage Management Plan (CHMP) issued by Aboriginal Victoria for works potentially affecting known and potential areas Aboriginal Cultural Heritage Significance

These approvals include a range of obligations and conditions, including the PSA which requires the Project to be carried out in accordance with the approved "*West Gate Tunnel Project Environmental Performance Requirements, December 2017*". The EPRs define the project-wide environmental outcomes that must be achieved during design, construction and operation of the Project (refer Appendix A for a summary list of these EPRs and the Project website for a full version - <http://westgatetunnelproject.vic.gov.au/keyapprovals/>).

The Environmental Management EPRs set out the following requirements:

- EPR EMP1 requires the preparation of an Environmental Management Strategy (the Strategy) to provide an overarching framework to address environmental requirements including relevant environmental laws, key approvals, approval conditions and the EPRs.
- EPR EMP2 requires the preparation and implementation of a CEMP, Worksite Environmental Management Plan (WEMP), Operational Environmental Management Plan (OEMP) and other plans as required by the EPRs in accordance with the Strategy.
- EPR EMP3 requires the appointment of an Independent Reviewer and Environmental Auditor (the IREA) to ensure compliance with the Strategy and EPRs and conduct 6-monthly compliance audits of the approved Strategy, CEMP and WEMPs. The WGTA must forward the audit reports to the Minister for Planning and other approval agencies as appropriate.

The EPRs set standards for the Project and are put in place to mitigate any adverse local effects of the Project on people and the environment. The EPRs have been incorporated into the Project Agreement between the State and Project Co, and are included in the subcontract between Project Co and the D&C Subcontractor.

The relationship between the various Project parties and key planning and environment documents, including the Strategy, are summarised in Figure 1 below. This diagram shows the role of the Minister for Planning and other regulatory authorities in issuing approvals for the Project whilst continuing their role as regulator (blue boxes). These requirements, which include regulatory approvals and EPRs, are then incorporated into a series of Project Agreements (contracts) between WGTA (representing the State of Victoria), Project Co and the D&C Subcontractor. Project Co delegate the direct responsibility for delivering these environmental requirements to the D&C Subcontractor via the Strategy.

The Strategy lists the Project environmental requirements and minimum requirements for both Project Co and the D&C Subcontractor. In the case of the D&C Subcontractor, this includes the requirements to develop environmental documentation such as a CEMP which outlines how environmental requirements will be met during design and construction; and WEMPs, which are used on the construction site as a practical guide to manage environmental issues. The D&C Subcontractor is also required to maintain an Environmental Management System that complies with the international standard ISO14001 Environmental Management Systems. This requires the D&C Subcontractor to develop and maintain various management systems, procedures and processes that facilitate continual improvements in environmental management.

The responsibility of WGTA, Project Co and the D&C Subcontractor for delivery of the environmental management framework is summarised in Figure 2. The figure also shows how environmental requirements are incorporated into design and construction documentation. Project Co is responsible for the preparation and implementation of the Strategy in accordance with EPR EMP1. The obligation for the preparation and implementation of the CEMP (including subplans), WEMP and any other project plans required to achieve the EPRs is the responsibility of the D&C Subcontractor. Design and construction documentation is prepared by the D&C Subcontractor in accordance with relevant environmental requirements and EPRs.

Construction on the Project commenced in March 2018 following the approval of the Strategy by the IREA and the Minister for Planning and the CEMP (and subplans) by the IREA and WGTA. Further information on the Strategy, CEMP, WEMP and the audit and review processes is provided in the following sections.

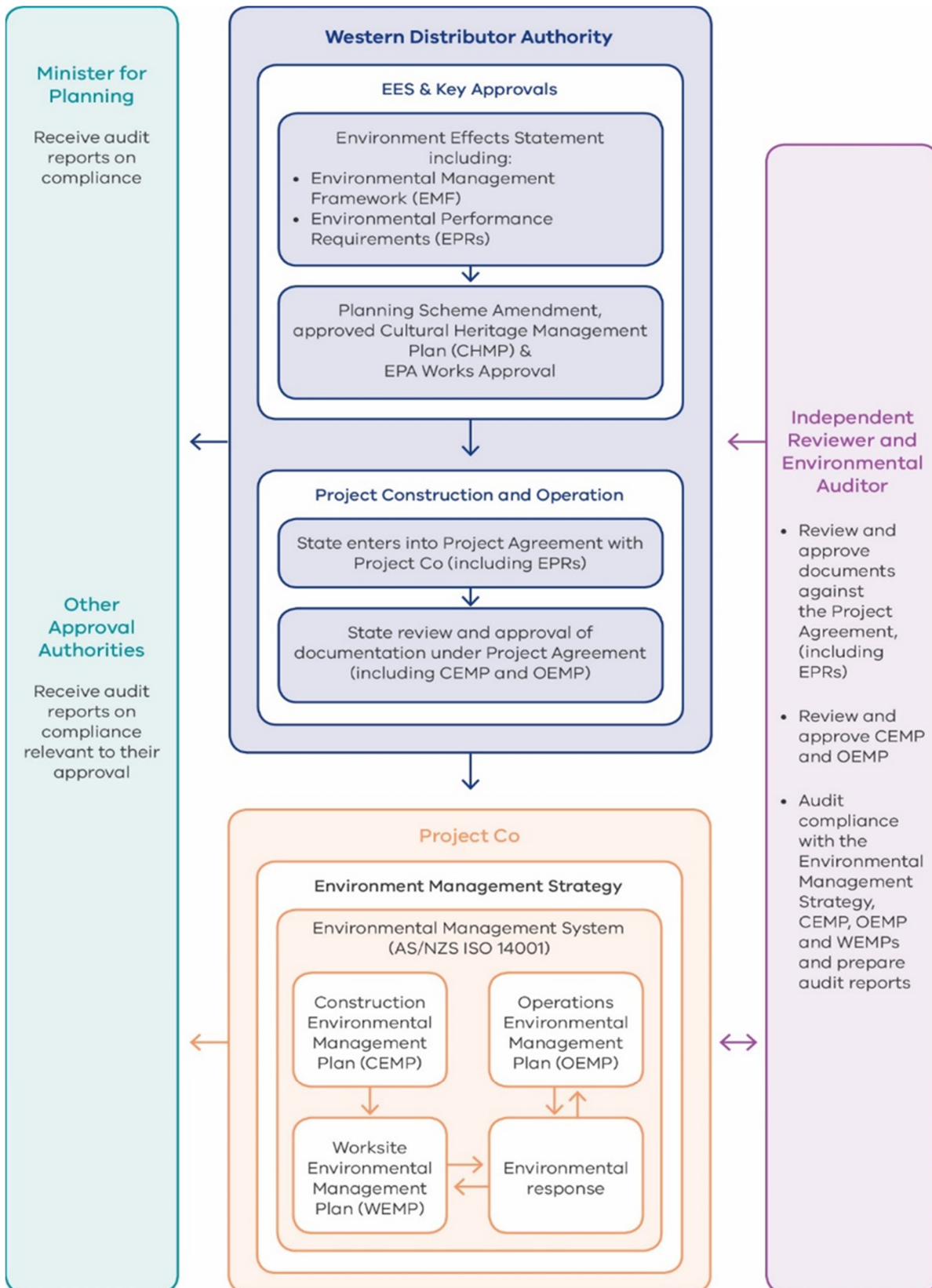


Figure 1 - Governance Framework for the Project (taken from Strategy 2018). (Note: Western Distributer Authority is now known as the West Gate Tunnel Authority (WGTA).)

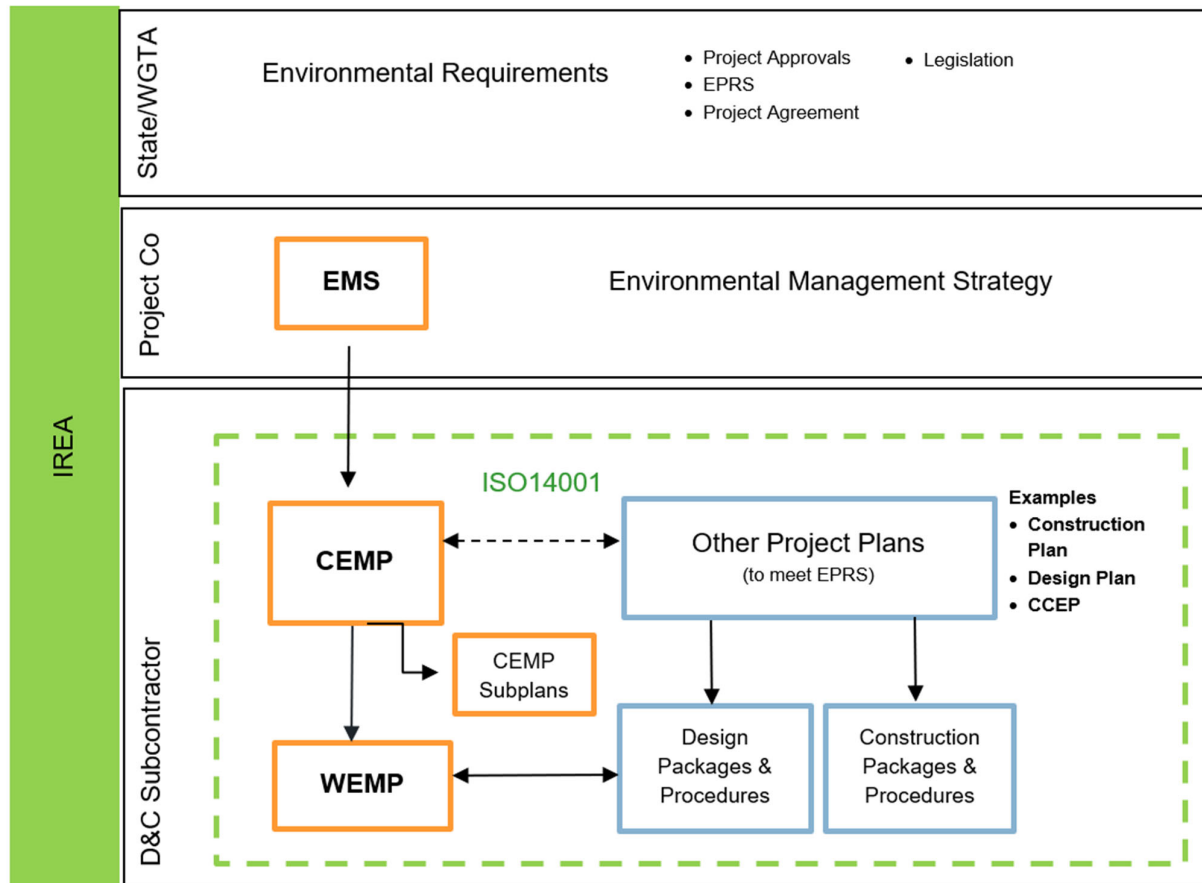


Figure 2 - Relationship between environmental management framework and project design and construction documentation

1.2.3 Environmental Management Strategy

The Strategy provides an overarching framework to address all environmental requirements and manage environmental outcomes for the Project. Project Co is responsible for ensuring compliance with the Strategy which sets out the framework for delivering and complying with the EPRs, CEMP and other environmental requirements.

The Strategy was developed in early 2018, finalised on 31 January 2018, and approved by the Minister for Planning on 20 February 2018 (under PSA GC65). It was prepared in consultation with councils and other key stakeholders and reviewed by the IREA. PSA GC65 was revoked by the Parliament of Victoria on 7 March 2018, a new PSA (PSA GC93) was approved by the Minister for Planning, including re-approval of the Strategy by the Minister for Planning on 8 March 2018 in exactly the same form.

The Strategy outlines the Project's overall Environmental Management System, including responsibilities shared by the WGTA, Project Co and the D&C Subcontractor. The Strategy is consistent with the Australian Standard for Environmental Management Systems (AS/NZ ISO 14001), which includes, but is not limited to project legal requirements, environmental management documents, roles and responsibilities, communication requirements, reporting, auditing, and processes for evaluating compliance. It is designed to provide an overarching framework to address the EPRs, which are largely delegated to the D&C Subcontractor to deliver (via the CEMP and Design Management Plans).

1.2.4 Construction Environmental Management Plan

The D&C Subcontractor's CEMP and subplans were developed in March 2018 and approved by the IREA and WGTA for implementation. The CEMP outlines how the D&C Subcontractor will achieve the environmental requirements for the construction phase of the Project. This includes requirements outlined under the legislation (including permits and approvals), the project EPRs, and requirements set out under the

Project Agreement. The CEMP includes control measures for implementation during construction in order to manage, minimise or avoid environmental impacts in carrying out construction activities. The following subplans have also been developed to manage environmental risk associated with D&C Subcontractor activities and to address the requirements of EPRs:

- Air Quality Management Plan
- Water Management Plan
- Groundwater Management Plan
- Ground Movement Management Plan
- Flora and Fauna Management Plan
- Construction Noise and Vibration Management Plan
- Heritage Management Plan
- Soil and Spoil Management Plan
- Energy Management Plan
- Hazardous Substances Management Plan
- Lighting Management Plan
- Waste Management Plan.

These sub plans do not address the entire scope of all EPRs for the Project. The CEMP makes reference to a suite of other management plans which are required to demonstrate how these and other EPRs will be complied with e.g. Design Management Plan, Construction Management Plan, Communications and Community Engagement Plan (CCEP). The CEMP (and auditing process) is the main framework document used to audit conformance with the project EPRs (noting it delegates these requirements to other parts of the D&C Subcontractor Management Systems).

1.2.5 Worksite Environmental Management Plans

The D&C Subcontractor's WEMPs are prepared in order to manage discrete construction stages or work packages (by type) that may have an adverse impact on the environment. The WEMPs are subsidiary to the CEMP and are implemented at specific worksites to minimise potential impacts of construction activities on the environment and community. Each WEMP will include a map showing the location and scope of works to be managed and include environmental management measures (controls) required to be implemented. The WEMPs are for use by site personnel, consultants and subcontractors, and a copy of the relevant WEMP is to be displayed at each site compound. Some EPRs require engagement with regulators (including Councils) where it is considered appropriate e.g. when Council land is affected.

1.3 Role of the IREA

The IREA was jointly appointed by WGTA and Project Co on 30 May 2017 to provide independent oversight of design engineering, construction, and environmental performance of the Project. The IREA undertakes audits and surveillance of Project activities to assess whether compliance with WGTA contract documents is being achieved. This includes EPR EMP3 which requires the IREA to complete environmental audits of conformance with the approved Strategy (six-monthly), CEMP (quarterly) and WEMPs (monthly).

The IREA started work on the Project in late 2017, through review of design and construction packages associated with 'early works' (limited to low impact investigations and site set up), site surveillance of early works and reviews of draft environmental management documentation.

Following Financial Close and the issuing of key approvals, the IREA and WGTA approved the CEMP (including subplans) prior to construction starting in March 2018. The IREA and WGTA are also responsible for reviewing subsequent revisions of the CEMP and subplans.

Now that construction has commenced, the IREA is responsible for undertaking a number of activities, described in the following sections.

1.3.1 Regular Site Inspections / Surveillance

The IREA undertakes regular inspections of the construction site (at least daily). IREA representatives are based on site in each of the three construction zones – tunnels, east and west. The surveillance process is not the same as a formal audit as it may only address (in one inspection) part of an EPR. This information is made available to the D&C Subcontractor and summarised in weekly and monthly reports by the IREA. This surveillance assists the IREA in identifying key issues and risks which is used to inform future surveillance and auditing effort. These inspections are designated by “CS” in Appendix A, which summarises the activities that the IREA have undertaken over the last six months in relation to checking compliance with the EPRs. This shows that whilst not every EPR is formally ‘audited’ by the IREA every day, it is subject to regular surveillance.

1.3.2 Design and Construction Documentation Review

The IREA review all design and construction packages (designated “DR” and “CR” in Appendix A). This includes but is not limited to reviews of documents such as design drawings, technical information packages, design packages (outlining the basis of design), construction packages, and construction procedures. These documents are reviewed by one, or more representatives of the IREA considered a specialist in their field e.g. hydrogeologist, bridge engineer, ecologist. The IREA reviews these documents against all Project environmental requirements. These reviews are sent to all Project parties for consideration and action (by the D&C Subcontractor). The IREA is required to certify design packages which means that these are not signed off until the environmental requirements are addressed. Construction packages are reviewed by the IREA and checked for compliance on site during site surveillance (refer Section 1.3.1). The outcomes of these reviews do not represent a formal audit but can provide (in part or in full) inputs into the quarterly CEMP audit which is the formal mechanism for auditing and reporting on EPR conformance.

1.3.3 Management Plan Review

The IREA is responsible for reviewing and/or approving management plans and documentation (designated ‘MP’ in Appendix A). In approving the CEMP and subplans required prior to construction start (in March 2018), the IREA has checked compliance with the EPR linked to these CEMP subplans. Though not a formal audit, these reviews are documented in the EPR compliance table in Appendix A as they go some way to demonstrating conformance. The IREA has also reviewed a number of other plans that do not necessarily need to be included in the CEMP but remain a requirement of the EPR, such as the Communications and Community Engagement Plan (CCEP). The review process for these plans is similar to the process used for design and construction packages, whereby the IREA’s comments are documented and the D&C Subcontractor is obliged to address these in subsequent revisions of the plan before it is issued for use.

1.3.4 Audit

EPR EMP3 requires formal auditing of the Strategy, the CEMP and WEMPs (refer Section 2 for further detail on the conduct and scope of auditing). Audits of the CEMP and EPRs are undertaken every quarter (identified under the ‘Audit’ columns in Appendix A). The IREA’s indicative schedule for auditing EPRs is included in Appendix A. Through this program all applicable EPRs are audited at least once over a twelve month period via the quarterly CEMP audits.

1.3.5 Ministers Report

The IREA in its role as independent auditor is responsible for preparing a summary audit report which WGTA must forward to the Minister for Planning during construction and other approval authorities as appropriate. This audit report draws from audits undertaken over a six month period, in this case the first six months of construction March 2018 – August 2018. The formal audits described in this Ministers Report have been undertaken by the lead IREA Environment Auditor, Elizabeth Hurst and Assistant Environment Auditors, Camilla Freestone and Mahsa Najjari. The Lead Auditor was supported by a team of specialists listed in Appendix B.

1.4 Report Structure

This report is divided into the following sections:

- Section 2: Conduct of Audits – details the scope of the IREA’s audit activities undertaken prior to, during and after the audit.
- Section 3 & 4: Audit Findings and Conclusion – provides the IREA’s findings from the audit and conclusions on the D&C Subcontractor’s conformance with the requirements of the Strategy, CEMP and WEMPs.
- Appendices: - Appendix A – Auditing Scope.
 - Appendix B – IREA Specialist Team
 - Appendix C - Limitations

2 CONDUCT OF AUDITS

2.1 Audit Objectives

The objective of the audits summarised in this report is to assess conformance with the current Strategy, the CEMP and the WEMPs based on the requirement of EPR EMP3. This includes conformance with the primary approvals (refer section 1.2.2 above). The objective of these audits is to sample compliance with requirements over the period of March to August 2018.

2.1 IREA Auditing Process

Figure 3 below details the key steps of the IREA environmental auditing process.

2.2 Audit Scope

The IREA determines the scope of these audits, which changes based on which Project issues, activities and environmental risks are considered to be significant at the time of audit. Considerations may include:

- Establishment, development and implementation of the CEMP and associated management system and tools.
- Completion of baseline environmental monitoring, focussing on groundwater, noise, vibration, surface water and air.
- Environmental risks relating to current construction activities.
- Concerns of the community.
- Compliance status of EPRs

The IREA reviews a sample of environmental requirements (and evidence of compliance) over the auditing period. It is not feasible or necessary to fully audit all requirements in a six-month period (there are thousands of requirements e.g. legislation, EPRs, contract, CEMP, subplans). For example, the IREA excludes requirements, such as blasting (an EPR requirement), which are not part of the current scope of work. Alternatively, the June 2018 CEMP audit focussed on the requirements of the CEMP and subplans considered highly relevant to the commencement of construction and not specifically on each EPR.

It should be noted that whilst all environmental requirements are not formally audited over a six month period, the IREA is required to “check” compliance with environmental requirements through activities such as formal review of documentation and inspection of the construction site (refer Section 1.3). This means that a much larger set of requirements relevant to the project period will be checked by the IREA for compliance during this period.

In the first six month period 102 of the 117 EPRs were either audited or checked by the IREA. Of the remaining 15 EPRs, five EPRs relate to operational requirements and a further ten EPRs are not relevant to the current design or construction process and have been scheduled for future audits.

The environmental requirements audited and checked over the last six months by the IREA is summarised in Appendix A.

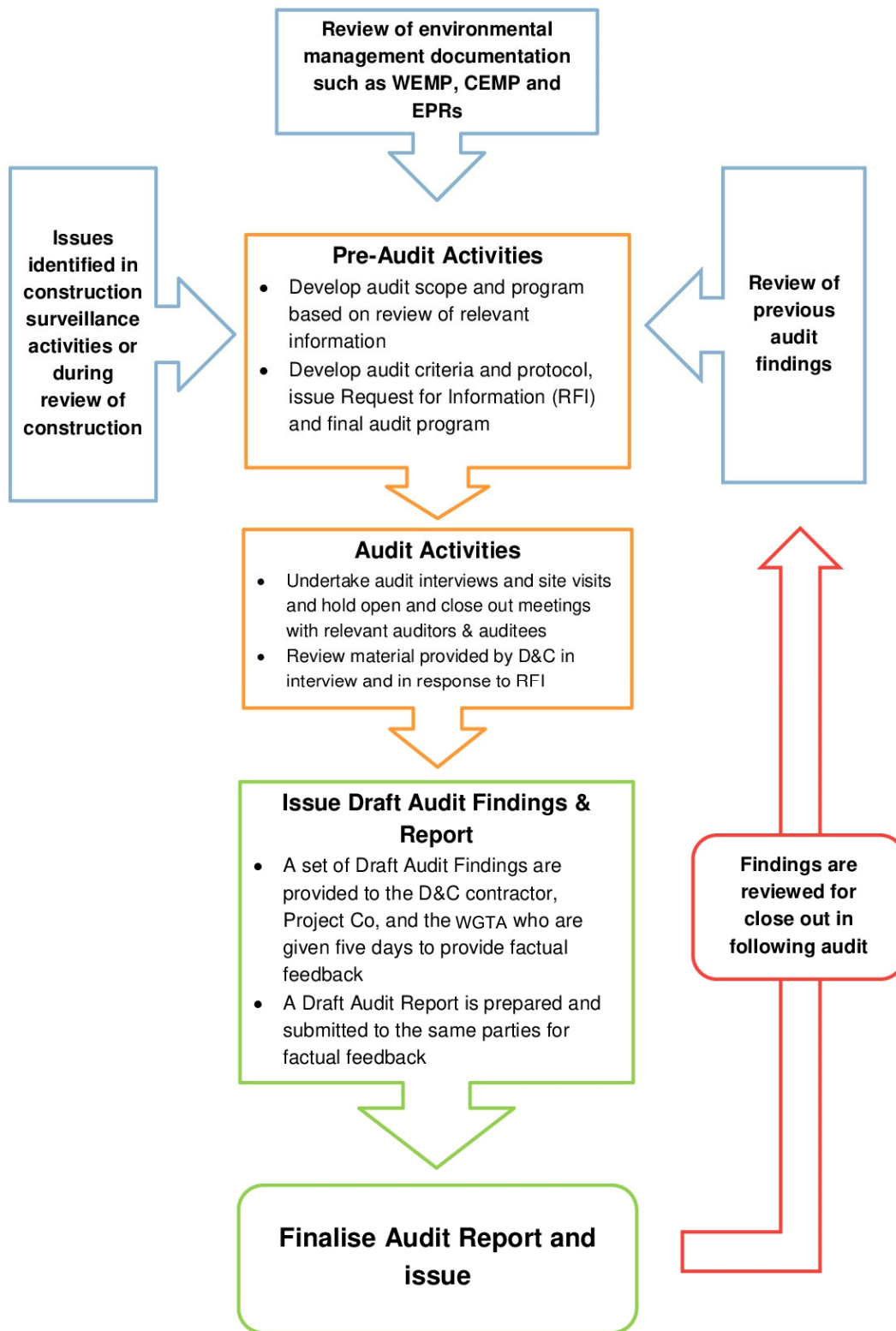


Figure 3 - Overview of environmental audit process

A summary of the scope of the audits conducted by the IREA is provided in Table 1 below.

Table 1 – Summary of Audits Conducted During Reporting Period

Audit Type	Date	Scope
Strategy Audit	August 2018	<ul style="list-style-type: none"> Strategy (revision 6) dated 31 January 2018 and the legislation, approvals, consents, guidelines and standards relevant to its implementation.
CEMP Audit	June 2018 & August 2018	<ul style="list-style-type: none"> CEMP (revision 6) dated 28 March 2018 and relevant documentation including relevant CPBJH management plans and subplans such as the Design Management Plan and the Construction Communications and Community Engagement Plan. A selection of EPRs relevant to the current stage of design and construction (as defined in Appendix A)
WEMP Audit	March 2018 – Tunnels & Portals Zone	<ul style="list-style-type: none"> Site audit of piling guide wall installation and site establishment at North Portal and Pivot Site.
	April 2018 – Tunnels & Portals Zone	<ul style="list-style-type: none"> Site audit of piling work associated with TBM launch box cut and high voltage building
	May 2018 – West Zone and Tunnels & Portals Zone	<ul style="list-style-type: none"> Site audit of Williamstown Road area (Temp Ramp W1) and tunnel site investigations on Westgate Freeway. Site audit of site set-up at pivot, piling work and HV building construction at North Portal.
	June 2018 – West Zone	<ul style="list-style-type: none"> Site audit of clearing at West Gate Freeway (inbound) around Fogarty Avenue, Williamstown and Grieves Parade compound.
	July 2018 – West Zone and Tunnels & Portals Zone	<ul style="list-style-type: none"> Site audit of clearing and grubbing, sediment and erosion controls, CHMP implementation at Williamstown Road and Grieves Parade site compound and Geelong Road M80 Audit of sediment and erosion controls, water / groundwater management, waste / slurry management, review of noise data at North portal and pivot site.
	August 2018 – East Zone	<ul style="list-style-type: none"> Audit of sediment and erosion controls, waste management, soil and spoil management, vegetation clearance, CHMP at the Main East Compound on Footscray Road and the shared user path on Footscray Road.

The IREA's view on conformance was informed by interviews with staff from the D&C Subcontractor and review of relevant systems, tools and documentation developed and implemented.

2.2.1 Design and Construction Activities – March to August 2018

Overall design for the Project is approximately fifty percent complete based on the issue of Certified Design (CD) packages.

Following approval of the Project CEMP in March 2018 the main focus of construction activities has been within the tunnel portal and West Gate Freeway areas, with only minor works in the east. Key activities include:

- West
 - Millers Road retaining walls, civils and bridge structure
 - Retaining walls and noise walls (including temporary noise walls) and service relocation along West Gate Freeway
 - Williamstown Road temporary off-ramp.
- Tunnels and Portals

- Piling at North Portal in preparation for the bulk excavation associated with the tunnel boring machine (TBM) launch structure
- Piling and excavation associated with the North Yarra Main Sewer (NYMS) diversion
- Ongoing site establishment at the Pivot site in preparation for construction of the spoil handling area
- East
 - Site establishment and demolition

2.3 Audit Findings Classification

Audit findings are classified in each audit according to the following definitions which are aligned to classifications provided by AS/NZS ISO14001: 2015; the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) and audit classifications utilised on previous high-profile Victorian infrastructure projects. The definitions of 'conformance', 'non-conformance', 'area for improvement', 'observation', and 'not applicable' are provided below.

Conformance

There is suitable evidence to confirm that actions have been undertaken, prepared and/or implemented in full conformance with the requirements of the auditable element.

Non-conformance

An instance, event or occurrence that has not-fulfilled a requirement that has been specified in the Strategy, CEMP, WEMP, EPRs, legislation and approval conditions. A situation, which would, on the basis of available objective evidence raise significant doubt as the effectiveness of environmental management.

(Note 1: A non-conformance may be an individual non-conformance or a number of minor but related audit findings, which when considered in total are judged to constitute a non-conformance)

Area for Improvement

A deficiency in the implementation of the Strategy, CEMP, WEMPs, or associated documentation judged to be a risk to the environment, or to environmental management, without constituting an overall failure in the area concerned.

Observation

An audit finding which may relate to an incidental or isolated system discrepancy, which does not compromise the effectiveness of environmental management, or constitute an actual or potential environmental risk.

Not Applicable

The auditable element falls outside the scope of the audit, e.g. work relevant to the element being audited has not yet commenced.

As further explanation to these definitions, it's worth noting that the nature of each finding varies.

Some findings may be administrative in nature compared with a clear breach of a non-negotiable environmental requirement. An example of an administrative finding might include the requirement for the D&C Subcontractor to use a particular system to record incidents, where this is defined in the CEMP. However, if the D&C Subcontractor has upgraded this system and replaced it with an alternative, this means the CEMP is now out of date and does not reflect current practices. The D&C Subcontractor in this case may not be conforming with the original CEMP, but it does not necessarily mean that incidents are not being reported. This requirement is likely to be modified in the next version of the CEMP. Alternatively, if the D&C Subcontractor was found to have caused an incident resulting in a discharge to the river, this would be viewed as an environmental non-conformance.

Similarly, some findings are localised (rather than systemic) in nature. For example, a non-conformance raised against a WEMP may reflect an immediate issue at a particular worksite, which can be addressed and closed out by taking immediate on-site action.

3 SIX-MONTHLY AUDIT FINDINGS

The key findings arising from the IREA's first six months of auditing are included in the sub-sections below.

- Section 3.1 summarises audit findings of the Strategy
- Section 3.2 outlines findings of formal auditing and checking of EPRs
- Section 3.3 describes audit findings against the CEMP and subplans
- Section 3.4 provides findings of the WEMP audits



Photo 1 – Piling works on Whitehall Street – North (Source: WGTA)

3.1 Environmental Management Strategy

Audits of the Strategy are conducted 6-monthly, with one conducted during the reporting period. No non-conformances were raised against Project Co during the Strategy audit.

Project Co are compliant with the Strategy. A number of minor observations were made including:

- documentation does not adequately reflect current processes in place, despite evidence that Project Co are meeting their requirements e.g. relating to risk management, and
- Project Co's expectations of the D&C Subcontractor in regards to reporting environmental performance and their intended response to this information is not documented in their internal management documentation. Project Co has not specified the type, level of detail and frequency of reporting of environmental performance data required to demonstrate conformance with regulatory approvals. Similarly, Project Co have not documented the necessary actions required to check conformance.

3.2 Environmental Performance Requirements

The majority of EPRs formally audited during the reporting period were considered compliant, with the exception of two non-conformances against surface EPRs (SWP11 and SWP12) and one against cultural heritage EPRs (CHP1). A number of observations (some positive) and areas for improvement have also been made. Details of these findings are discussed in more detail below.

3.2.1 Environmental Management

All four environmental management EPRs were audited during the reporting period. No non-conformances were raised, and one area for improvement was identified against EMP4 regarding categorisation of complaints within the complaints management system. For example, the system does not allow for complaints to be classified in what are considered to be likely complaint categories, such as 'lighting' or 'tree removal'.

Refer also to findings on the CEMP from the June audit (Section 3.3).

3.2.2 Air Quality

No air quality EPRs were formally audited during this reporting period. However general compliance with the air quality EPRs was checked during management plan review, review of design and construction packages, and through site surveillance. Air quality monitoring data has been recorded for the monitoring stations which are installed, with summary reports published on the Project website.

Air quality EPRs AQP1-4, and 6 will be formally audited in November 2018. AQP 5 and 7 are operational EPRs and will not be audited during this phase of the Project.

Refer also to findings on the Air Quality Management Plan from the June audit (Section 3.3.5).

3.2.3 Business

Three business EPRs were audited during the reporting period, namely BP1, 3 and 5. No non-conformances were raised, and two areas for improvement were identified against EPRs BP3 and BP5.

Whilst the D&C Subcontractor was able to demonstrate consultation on screening had been undertaken with impacted stakeholders, they were unable to provide sufficient evidence to demonstrate whether BP3 had been addressed in full. This included with respect to consultation documentation referring to fencing (rather than screening) and evidence of consultation with council was not always provided.

The D&C Subcontractor has an approved Business Involvement Plan (BP5), however this document needs to be updated, including with respect to, the stakeholder list, engagement process with affected businesses, details on document hierarchy, process for seeking feedback from affected businesses, and the organisational chart, roles and responsibilities.

3.2.4 Cultural Heritage

One cultural heritage EPR was audited during the reporting period, namely CHP1. One non-conformance was raised. This non-conformance relates primarily to administrative and procedural issues associated with documentation of inductions and development of the CHMP Induction Manual. The Induction Manual does not incorporate all requirements from the CHMP, including management conditions of the CHMP. The D&C Subcontractor is undertaking cultural heritage awareness training, particularly in the high-risk areas around Kororoit Creek, and staff generally understand their obligations. This does not represent a material risk to environmental management or the environment.

Refer also to findings on the Heritage Management Plan from the June audit (Section 3.3.6).

3.2.5 Contaminated Soil and Spoil Management

One contaminated soil and spoil management EPR was audited during this reporting period, namely CSP2. No non-conformances were raised. One area for improvement was identified in relation to the adequacy of spoil management documentation. Specifically, the relationship between construction documentation and sampling, analysis, and contamination reporting has not been defined or documented. This needs to be documented in the Soil and Spoil Management Plan.

Refer also to findings on the Soil and Spoil Management Plan from the June audit (Section 3.3.3).

3.2.6 Ecology

Two ecology EPRs were audited during the reporting period, namely EP1 and EP2. No non-conformances or areas for improvement were identified. The D&C Subcontractor has made progress regarding minimisation of vegetation removal and disturbance, and implementation of vegetation protection measures. One observation was made against EP1 regarding the need to include more detail on how EPRs are met and addressed within design documentation.

Refer also to findings on the CEMP (Section 3.3, refer Design Management Plan) and the Flora and Fauna Management Plan from the June audit (Section 3.3.8).

3.2.7 Greenhouse Gas Emissions

One greenhouse gas (GHG) EPR was audited during the reporting period, namely GGP2. No non-conformances were raised. One area for improvement was identified relating to limited progress made on elements of the baseline for GHG emissions, as well as poor or incomplete documentation. Furthermore, the IREA identified the need to better document a process for how GHG is being considered within the design process, and also include more detail on how EPRs are being met and addressed within design documentation itself.

3.2.8 Ground Movement

Four ground movement EPRs were audited during the reporting period, namely GMP1, 3, 4, and 5. No non-conformances were raised. Four areas for improvement were identified, one against each EPR. Overall, the D&C Subcontractor have made progress with respect to these EPRs, including development of a model, commencement of condition surveys, agreement on settlement criteria and commencement of pre-construction monitoring. Findings relating to ground movement EPRs primarily relate to development or documentation of procedures relating to ongoing management of ground movement, i.e. the process for ongoing update of the geotechnical model to incorporate findings from site investigations, and the process for management of real-time monitoring data. Consultation associated with ground movement EPRs has commenced, but requires further effort.

Refer also to findings on the Ground Movement Management Plan from the June audit (Section 3.3.7).

3.2.9 Groundwater

Three groundwater EPRs were audited during the reporting period, namely GWP1, 4 and 5. No non-conformances were raised. One area for improvement (GWP5) and two observations (GWP1 and 4) were identified. Overall, the D&C Subcontractor has made progress with respect to these EPRs. A predictive groundwater model has been developed and a monitoring program is being implemented. Other management actions being implemented, including securing Trade Waste Agreements, development of groundwater trigger level methodology, and installation of a recharge system. Findings relating to groundwater primarily relate to the status of management actions, including establishment of a database (including a map based geographic information system for instance) to manage monitoring data outputs.

Refer also to findings on the Groundwater Management Plan from the June audit (Section 3.3.2).

3.2.10 Land Use

Two land use EPRs were audited during the reporting period, namely LPP1 and LPP3. No non-conformances or areas for improvement were identified. The D&C Subcontractor has made progress regarding minimisation of the design footprint. One observation was made against LPP1 regarding the need to include more detail on how EPRs are met and addressed within design documentation.

Refer also to findings on the CEMP (Section 3.3, refer Design Management Plan).

3.2.11 Landscape and Visual

One landscape and visual EPR was audited during the reporting period, namely LVP3 which relates to light spillage. No findings were raised. The D&C Subcontractor has made progress regarding integration of light spillage into design packages and implementation of control measures from the Lighting Management Plan.

3.2.12 Noise and Vibration

Three noise and vibration EPRs were audited during the reporting period, namely NVP7, 8 and 18. No non-conformances were raised. Three areas for improvement were identified, one against each EPR. The D&C Subcontractor has made progress, including installation of real time noise monitoring equipment, however, further effort and input is required in a number of key areas. For example, with respect to NVP7:

- document noise and vibration modelling results and noise management levels for all required sensitive receptors, particularly prior to future higher impact works commencing e.g. in the East
- determination of how monitoring data will be used, communicated and correlated with construction activities
- documenting the process for managing real time noise monitoring data. The Construction Noise and Vibration Management Plan will need to be updated to address the above.

In relation to EPR NVP8 and NVP18, noise monitoring data is not consistently documented in accordance with the Construction Noise and Vibration Management Plan. Furthermore, the implementation of management actions, including in response to noise monitoring, is not consistently documented or communicated, and therefore conformance is more difficult to assess.

Refer to audit findings against the CEMP Construction Noise and Vibration Management Plan (refer Section 3.3.1).



Photo 2 – Temporary noise walls – West (Source: WGTA)

3.2.13 Social

Three social EPRs were audited during this reporting period, namely SP2-4. No non-conformances or areas for improvement were identified. Two observations were made, including one positive finding against SP4. The D&C Subcontractor has made progress regarding implementation of both the Workforce Development Plan and Local Industry Development Plan. Further the D&C Subcontractor has demonstrated successful achievement of their internal targets and evidence of conformance by sub-contractors.

3.2.14 Surface Water

Four surface water EPRs were audited during this reporting period, namely SWP4, 7, 11 and 12. Two non-conformances were raised, one against SWP11 and one SWP12, both representing a potential risk to the environment. Temporary works flood modelling provided by the D&C Subcontractor demonstrated an increase in afflux and therefore an increased flood risk, which has not been adequately addressed to date (SW11). Consultation for SW11 has commenced, but insufficient documentation was provided to determine whether the model had been developed to the satisfaction of Melbourne Water, or whether sufficient consultation has been undertaken with the relevant drainage authority (City of Maribyrnong).

Modelling also demonstrated a loss of floodplain storage capacity (SW12). Loss of flood storage capacity in the permanent works is addressed through the inclusion of a flood storage mitigation basin. Evidence of consultation (in the form of either approval or objection of the model and impacts) with the relevant drainage authority (in this instance Maribyrnong City Council) was not provided.

Refer also to findings on the Water Management Plan from the June audit (Section 3.3.4).

3.2.15 Transport

Three transport EPRs were audited during the reporting period, namely TP2, 3 and 7. No findings were raised. The D&C Subcontractor has made progress regarding establishing a monitoring network, implementation of control measures from the Transport Management Plan, and are an active participant in the Traffic Management Liaison Group.

3.2.16 Waste Management

The waste EPR was not formally audited during this reporting period. However general compliance with the waste management EPR was checked during management plan review, review of design and construction packages, and throughout site surveillance. The waste EPR will be formally audited in November 2018.

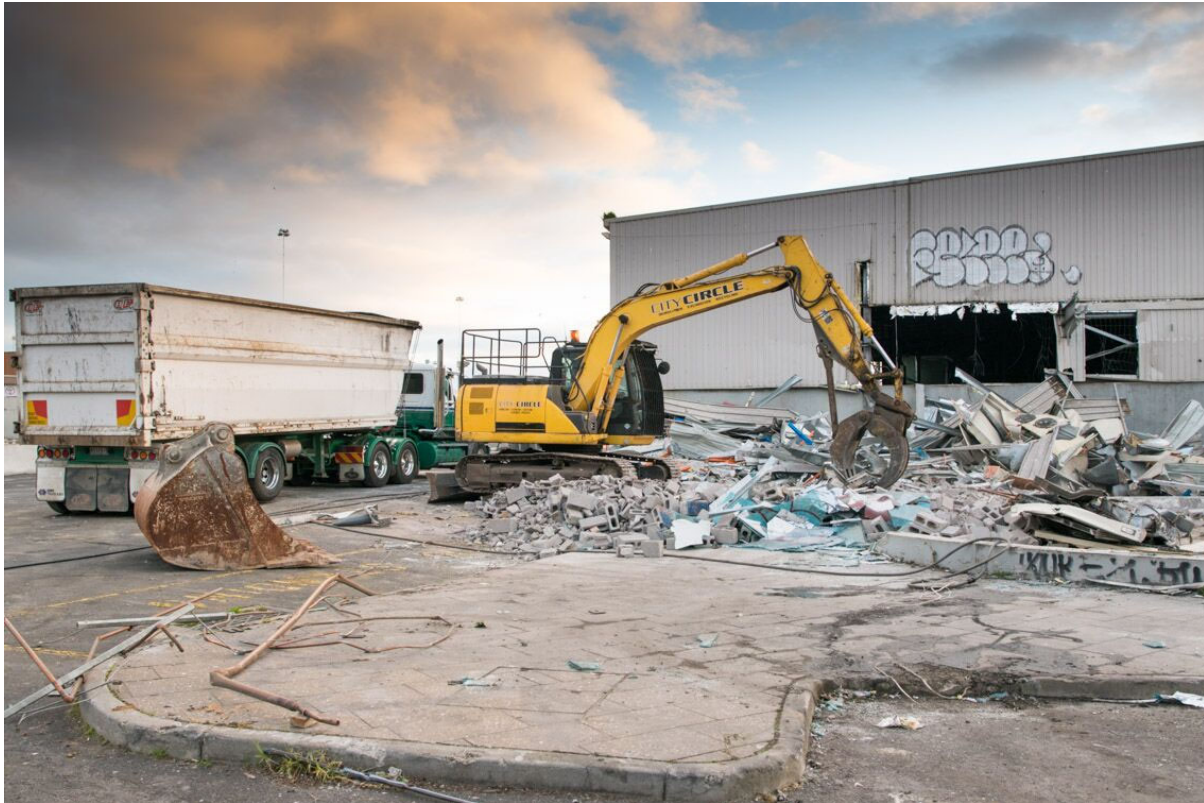


Photo 3 – Melbourne market demolition – East (Source: WGTA)

3.3 Construction Environmental Management Plan

CEMP audits are conducted on a quarterly basis, with two CEMP audits conducted during the reporting period. During the June 2018 audit all sections of the CEMP were audited in addition to selected sections of management subplans (refer Section 3.3.1 to Section 3.3.8). During the August 2018 the audit prioritised those areas of greater importance or higher risk. Section audited were: Section 3.6 Design Document, Element 6 Communication and Consultation, Element 8 Subcontractor Relationships and Element 12 Auditing, Review and Improvement. No subplans were audited in August.

Initial (June 2018) CEMP audit findings indicated the development of processes and procedures for environmental management were in early stages of development and implementation. More recent CEMP audit findings (August 2018) show progress in environmental management arrangements, including internal processes for tracking conformance. This is evidenced by the decrease in the number of non-conformances raised between audits, from ten in June, to zero non-conformances against the CEMP Plan in August.

Examples of improvement made in environmental management include the development of environmental compliance tracking systems, and establishment and use of online systems to manage procurement and training.

Remaining findings (areas for improvement and observations) largely related to establishment of procedures and processes. For example, it was found that design packages do not contain sufficient detail to demonstrate integration of environment (EPRs) into design e.g. providing information on options considered. There is evidence to confirm that this is undertaken in practice but further justification is required and the relevant management documentation needs to be updated to reflect this. Also, the Communications and Community Engagement Plan (CCEP) has not been updated to reflect current engagement practices by the D&C Subcontractor. It was found that further clarification is needed in relation to what constitutes an “affected” stakeholder and additional analyses undertaken on complaints received by the public (by category).

Findings raised against the subplans are discussed below.

3.3.1 Construction Noise and Vibration Management Plan

Six non-conformances were raised against the Construction Noise and Vibration Management Plan in June 2018. These related to integration of noise assessments and modelling into construction documentation, and full implementation of a monitoring program. For instance, whilst noise impact assessments are undertaken for selected construction activities and supported by validation noise monitoring during construction, there is a lack of consistency in the way this information is presented in construction procedures and monitoring reports, respectively. This needs to be addressed, both to provide better transparency but also to guide effective noise management and reporting. The assessment, monitoring and management process need to be more clearly articulated in the Noise and Vibration Management Plan. This is an area for improvement, relating primarily to documentation, and does not represent a non-conformance with the noise EPRs.

The D&C Subcontractor has made progress since June (as measured in the follow up audit in August), including more consistent inclusion of noise assessments within construction documentation, continuation of the baseline monitoring program, and commencement of real-time monitoring. However, the process for managing (i.e. using, reporting, analysing data) is not clearly defined or documented and the Construction Noise and Vibration Management Plan will need to be updated to address these issues.

Refer to Section 3.2.12 for findings relating to noise and vibration EPRs.

3.3.2 Groundwater Management Plan

No non-conformances were raised against the Groundwater Management Plan. A number of areas for improvement were identified which primarily related to the development and implementation of processes, systems and documentation. For example, finalisation and documentation of groundwater objectives, targets and trigger levels, and development of a methodology for groundwater monitoring and allocation of relevant responsibilities. The D&C Subcontractor has made progress with respect to implementation of the Groundwater Management Plan, however trigger levels and monitoring methodologies are yet to be finalised and this management plan will need to be updated to address these items.

Refer to Section 3.2.9 for findings relating to groundwater EPRs.

3.3.3 Soil and Spoil Management Plan

No non-conformances were raised against the Soil and Spoil Management Plan. A number of areas for improvement were identified including adequacy of documentation relating to soil and spoil management procedures and waste classification. For example, the relationship between construction documentation and sampling, analysis, and contamination reporting has not been defined or documented (refer also to Section 3.2.5).

Progress has been made, however some documentation is yet to be updated to address the original findings. For example, the material tracking register is yet to be updated.

3.3.4 Water Management Plan

Two non-conformances were raised against the Water Management Plan. One non-conformance was raised in relation to establishment of specific water quality objectives. The contractor had set water quality objectives in consultation with the EPA prior to the Plan being approved. However, the Plan required these objectives to be updated and agreed with the EPA in April 2018 after review of baseline water quality monitoring results (undertaken after approval of the original plan). Draft water quality objectives have since been developed, but are yet to be agreed with the EPA. This does not represent a non-conformance with the relevant EPR (SWP4).

The second non-conformance related to incorrect and insufficient installation of sediment and erosion controls at the Pivot Site, presenting a risk of offsite discharge. This has since been rectified and the finding closed.

An area for improvement was identified in relation to post-rainfall monitoring not being undertaken in accordance with the management plan and VicRoads Rain Event Monitoring Trigger. The management plan needs to be updated to close out this finding.

Refer to Section 3.2.14 for findings relating to surface water EPRs.

3.3.5 Air Quality Management Plan

Two non-conformances were raised against the Air Quality Management Plan. These findings related to primarily to the installation of the final (6th) monitoring station as stipulated under the management plan, specifically the location at Millers Road. This monitoring equipment was installed in October 2018. The absence of this air quality monitoring station does not represent a non-conformance with the EPRs, as this relates to establishment of an air quality baseline (for operation) and only needs to be installed at some time “during” construction. No major construction activities (that may give rise to air quality impacts) are currently occurring near to the sixth monitoring station.

Other minor findings related to absence of real-time continuous dust monitoring (evidence of use yet to be provided), and the environmental inspection checklist not adequately addressing issues relating to odour.

3.3.6 Heritage Management Plan

No non-conformances were raised against the Heritage Management Plan in June. A minor finding was made in relation to lack of evidence of an unexpected finds work instruction or procedure. A draft procedure has since been provided to the IREA.

Refer to Section 3.2.4 for findings relating to noise and vibration EPRs.

3.3.7 Ground Movement Management Plan

No non-conformances were raised against the Ground Movement Management Plan. An area for improvement was made against the progress of precondition surveys, as the D&C Subcontractor was unable to demonstrate that surveys had been undertaken at all relevant sites. This finding has subsequently been closed.

Refer to Section 3.2.8 for findings relating to ground movement EPRs.

3.3.8 Flora and Fauna Management Plan

One non-conformance was raised against the Flora and Fauna Management Plan relating to the requirement for the D&C Subcontractor agreeing a native vegetation removal approval process with the WGTA and Department of Environment Land Water and Planning (DELWP). This finding has subsequently been closed.

3.4 Worksite Environmental Management Plan

WEMP audits are conducted on a monthly basis, with six WEMP audits conducted during the reporting period. A total of seventeen non-conformances were identified during these audits, primarily relating to (1) spoil management (bundling, delineation and signage controls), and (2) WEMPs held on site not consistent with activities and controls on-site. Many of the findings raised are characteristic of a Project during the first six months of operation, reflecting the establishment and initial implementation of systems and processes. They reflect localised issues which can be addressed and closed out by taking immediate on-site action. The WEMP audit findings to date do not represent a material risk to the environment.

3.4.1 East Zone

Works in the East Zone during the reporting period have been minor and relatively low risk in nature, consisting of site establishment activities, including minor clearing, grubbing and topsoil removal, demolition of industrial buildings and warehouses.

Four non-conformances were raised during WEMP audits of the East Zone, two against inadequate bunding and delineation of spoil, against inadequate implementation of sediment and erosion controls; and one against lack of cultural heritage induction recorded or cultural heritage manual held on site.

Other areas for improvement included: WEMP held on site not consistent with activities and controls on-site, and requires more site specific information; and not all correct spoil management documentation held on-site.

3.4.2 Tunnels and Portals Zone

Works in the Tunnels and Portals Zone has focused on preparation for bulk excavation associated with the tunnel boring machine launch structure. Key activities have included site establishment for construction of the spoil handling area and piling for the launch structure. Piling and excavation for the NYMS diversion has also commenced.

Ten non-conformances were raised during WEMP audits of the Tunnel Zone, three against spoil management (i.e. adequacy of bunding, signage, delineation of materials and not all correct documentation held on-site); five against inconsistency of content on WEMPs held on-site (i.e. documentation not consistent with activities and controls on-site); one against inadequate implementation of sediment and erosion controls; and one against capture of noise monitoring data not being in accordance with the Construction Noise and Vibration Management Plan or with Australian Standards.

Other areas for improvement included: records of weekly environmental inspections not available, noise monitoring not conducted at the nearest sensitive receptor, documentation relating to water quality testing and discharge volumes incomplete, insufficient waste management controls on-site.



Photo 4 – Spoil management and site delineation – North (Source: WGTA)

3.4.3 West Zone

Works in the West Zone during the reporting period have focused on preparation for connections into the West Gate Freeway. Key activities have included site establishment (clearing, grubbing and top soil removal), installation of retaining walls along Millers Road and the West Gate Freeway, installation of temporary noise walls and removal of existing noise walls, service relocation, and construction of the Williamstown Road temporary off-ramp.

Three non-conformances were raised during WEMP audits of the West Zone, two against poor or inadequate implementation of sediment and erosion controls and one against implementation of noise monitoring, specifically capture of noise monitoring data not being in accordance with the Construction Noise and Vibration Management Plan or with Australian Standards.

Other areas for improvement included: inadequate or inappropriate signage and flagging in place for cultural heritage sites and protected vegetation; and WEMPs held on site not consistent with activities and controls on-site.

4 AUDIT CONCLUSIONS

Project Co are currently meeting their obligations under the Strategy. There were several minor observations made around documentation of processes and specifying reporting requirements with the D&C Subcontractor, whilst no non-conformances were raised with the Project Co during the Strategy audit.

In the first six-month period 102 of the 117 EPRs were either audited or checked by the IREA. Of the remaining 15 EPRs, five EPRs relate to operational requirements and a further ten EPRs are not relevant to the current design or construction process and have been scheduled for future audits.

The D&C Subcontractor is seen to be making progress on establishing environmental management systems and processes. The Project is compliant with the Strategy and generally compliant with the EPRs, with exception to CHP1, SWP11 and SWP12. Further work is required to document and record environmental management requirements and (monitoring) outcomes. Documenting environmental performance, particularly with respect to demonstrating conformance with Project environmental requirements, will be the focus of the IREA's future auditing program. As will establishing and implementing a system to manage timely close out of IREA audit findings.

The findings arising from the last six months of auditing by the IREA have not identified any significant or material risks to the environment.

The audit findings do not represent a material risk to the environment (based on the early stages of construction).

APPENDIX A – EPR AUDITING SCOPE

Phase: D = Design; PC = Pre-construction; C = Construction; PC = Pre-operation; O = Operation

Type of review and surveillance: MP = Management Plan; DP = Design Package; CR = Construction Documentation Review; CS = Construction Surveillance

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
ENVIRONMENTAL MANAGEMENT											
EMP1 Environmental Management Strategy	X					X			All	Construction Environmental Management Plan approved. Audited in August 2018.	Project Co (WGTA will publish the Strategy)
EMP2 Environmental Management Plans	X		X	X	X	X			All	Construction Environmental Management Plan approved. Partial audit in June 2018. Full audit in August 2018. Checked during review of construction package and through site surveillance.	D&C / Project CoProject Co
EMP3 Environmental Compliance						X			PC, C, O	Audited in August. Note – this relates to the appointment of IREA.	D&C / Project Co (WGTA to provide Minister for Planning with report make public)
EMP4 Complaints Management System	X				X	X			PC, C	Construction Environmental Management Plan approved. Partial audit in June 2018. Full audit in August 2018.	D&C
AIR QUALITY											
AQP1 Tunnel Ventilation System Design		X					X		D, C	Checked during review of design package. Relevant construction activities have not commenced.	D&C
AQP2 Zero Portal Emissions		X					X		D, O	Checked during review of design package. Relevant construction activities have not commenced.	D&C / Project Co
AQP3 In Tunnel Air Quality		X					X		D, O	Checked during review of design package. Relevant construction activities have not commenced.	D&C / Project Co
AQP4 Ambient Air Quality Monitoring	X			X	X		X		C, O	Air Quality Management Plan approved. Partially audited in June. Not relevant to design package. Not relevant to current construction packages or site surveillance.	D&C / Project Co
AQP5 In Tunnel Air Quality and Ventilation Structure Emissions Compliance									O	N/A - operational EPR	Project Co
AQP6 Air Quality During Construction	X		X	X	X		X		C	Air Quality Management Plan approved. Audited in June 2018. Checked during review of construction package and through site surveillance. Not relevant to design package.	D&C
AQP7 Roadside Air Quality Mitigation Strategy									O	N/A - operational EPR	WGTA
BUSINESS											

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
BP1 Damage or Impacts on Third Party Property and Infrastructure	X	X	X	X		X			D, C	Construction Communications and Community Engagement Plan approved. Audited in August 2018. Checked during review of design and construction packages and through site surveillance.	D&C
BP2 Access and Amenity for Business and Commercial Facilities		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance.	D&C
BP3 Screening		X	X	X		X			C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
BP4 Impacts on Operation of Community, Private Recreation and Council Facilities and Services		X	X	X			X		All	Checked during review of design and construction packages and through site surveillance.	D&C / Project Co
BP5 Business Involvement Plan	X		X	X		X			PC, C	Business Involvement Plan approved. Audited in August. Checked during design review and construction review and surveillance.	D&C
BP6 Utility Assets		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance.	D&C
BP7 Gas Utilities		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance.	D&C
BP8 Business Disruption		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance.	D&C
BP9 Business Acquisition Process		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance.	WGTA
CULTURAL HERITAGE											
CHP1 Cultural Heritage Management Plan	X	X	X	X	X	X			D, C	Cultural Heritage Management Plan approved. Audited in June and August 2018. Checked during review of design and construction packages and through site surveillance.	D&C
CHP2 Design and Construction to Minimise Impacts on Heritage		X	X	X			X		D, PC, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
CHP3 Archaeological Management Plan	X		X	X			X		PC, C	Heritage Management Plan (including Archaeological Management Plan) approved. Checked during review of construction package and through site surveillance. Not relevant to design package. To be audited in November 2018.	D&C
CHP4 Monitoring of Heritage Sites and Places		X	X	X			X		C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
CHP5 Archival Photographic Records		X						X	PC	Checked during review of design package. Relevant construction activities have not commenced. To be audited in February 2019.	D&C
CHP6 Port Phillip Monument								X	D,C	Not relevant to design package or current construction activities. To be audited in February 2019.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
CHP7 Heritage Interpretation Strategy	X	X						X	PC, C	Draft Heritage Interpretation Strategy reviewed. Checked during review of design packages. To be audited in February 2019.	D&C
CHP8 Shipwrecks	X	X	X	X				X	PC, C	Heritage Management Plan (including Archaeological Management Plan) approved. Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
CHP9 Maribyrnong River Front (Footscray)		X	X	X				X	D	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
CHP10 Bluestone Bridge		X						X	C	Checked during review of design package. Not relevant to current construction activities. To be audited in February 2019.	D&C
CHP11 Rail Turntables		X	X	X				X	D	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
CHP12 Flinders Street								X	C	Not relevant to design package or current construction activities. To be audited in February 2019.	D&C
CONTAMINATED SOIL & SPOIL MANAGEMENT											
CSP1 Contaminated Soil Requirements	X	X	X	X	X		X		C	Soil and Spoil Management Plan approved. Partially audited in June. Checked during review of design and construction packages and through site surveillance. To be audited in November 2018 in full.	D&C
CSP2 Contaminated Soil and Spoil Management	X	X	X	X		X			PC, C	Soil and Spoil Management Plan approved. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
CSP3 Acid Sulphate Soil	X		X	X	X		X		PC, C	Soil and Spoil Management Plan (including Acid Sulphate Soil Management Plan) approved. Partially audited in June. Checked during review of construction package and through site surveillance. Not relevant to design package. To be audited in November 2018 in full.	D&C
CSP4 Odour Management	X		X	X			X		C	Soil and Spoil Management Plan approved. Checked during review of construction package and through site surveillance. Not relevant to design package. To be audited in November 2018.	D&C
ECOLOGY											
EP1 Minimise Vegetation Removal and Disturbance		X	X	X		X			D, PC, C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
EP2 Vegetation Protection Measures	X	X	X	X		X			PC, C	Flora and Fauna Management Plan approved. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
EP3 Reinstatement		X	X	X				X	C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
EP4 Fauna Management Measures	X	X	X	X				X	PC, C	Flora and Fauna Management Plan approved. Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
EP5 Works on Waterways		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
EP6 Landscaping Plan		X						X	D, PC, C	Checked during review of design package. Not relevant to current construction activities. To be audited in February 2019.	D&C
EP7 Vegetation Offsets	X		X	X				X	C	Flora and Fauna Management Plan approved. Checked during review of construction packages and through site surveillance. Not relevant to design package. To be audited in February 2019, as removal of native vegetation not scheduled to occur until late 2018, early 2019.	WGTA
GREENHOUSE GAS EMISSIONS											
GGP1 Greenhouse Gas Emissions		X	X	X			X		D	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
GGP2 Emissions Reduction		X	X	X		X			D, C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
GROUND MOVEMENT											
GMP1 Geotechnical Model and Assessment		X	X	X		X			PC, C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
GMP2 Tunnel and Portal Drainage		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
GMP3 Condition Surveys and Determination of Settlement Criteria for Property and Infrastructure		X	X	X	X	X			PC, C, O	Construction Communications and Community Engagement Plan approved. Partially audited in June. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C / Project Co
GMP4 Settlement Criteria for Utilities		X	X	X		X			PC	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
GMP5 Ground Movement Monitoring	X	X	X	X		X			PC, C, O	Ground Movement Management Plan approved. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C / Project Co
GMP6 Mitigation of Ground Movement Impact	X	X	X	X				X	C, O	Ground Movement Management Plan approved. Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C / Project Co
GROUNDWATER											
GWP1 Groundwater Management Measures	X	X	X	X	X	X			PC, C, O	Groundwater Management Plan approved. Partially audited in June. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C / Project Co
GWP2 Protection of Groundwater Quality	X		X	X			X		C	Groundwater Management Plan approved. Checked during review of construction packages and through site surveillance. Not relevant to design package. To be audited in November 2018.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
GWP3 Tunnel Drainage Design and Construction Methods		X	X	X			X		D, PC, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
GWP4 Predictive Groundwater Model		X	X	X		X			PC, C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
GWP5 Groundwater Monitoring			X	X	X	X			PC, C, O	Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design package.	D&C / Project Co
GWP6 Interception of Groundwater	X	X	X	X				X	C	Groundwater Management Plan approved. Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
GWP7 Impacts on Groundwater Users		X	X	X				X	PC, C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
LAND USE											
LPP1 Minimise Design Footprint		X				X			D	Audited in August. Checked during review of design packages. Not relevant to construction package or site surveillance.	D&C
LPP2 Recreation Facilities		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
LPP3 Future Development Opportunities		X				X			D	Audited in August. Checked during review of design packages. Not relevant to current construction package or site surveillance.	D&C
LPP4 Pedestrian and Bicycle Connections		X					X		D	Checked during review of design packages. Not relevant to construction package or site surveillance. To be audited in November 2018.	D&C
LPP5 Public Land		X	X	X			X		D, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
LANDSCAPE AND VISUAL											
LVP1 Urban Design Approach		X	X	X				X	D, C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
LVP2 Reinstatement Following Temporary Works		X						X	D, C	Checked during review of design packages. Not relevant to construction package or site surveillance. To be audited in February 2019.	D&C
LVP3 Light Spillage	X	X	X	X		X			D, C	Lighting Management Plan approved. Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
LVP4 Vegetation Screening		X						X	C	Checked during review of design packages. Not relevant to current construction package or site surveillance. To be audited in February 2019.	D&C
LVP5 Design Review								X	D	No design or construction component. To be audited in February 2019, currently too early in the Project to audit.	WGTA
NOISE AND VIBRATION											
NVP1 Traffic Noise Limits		X	X	X				X	D, C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
NVP2 Traffic Noise Reduction of Open Space		X	X	X				X	D, C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
NVP3 Maintenance of Noise Mitigation Measures									O	N/A - operational EPR	Project Co
NVP4 Traffic Noise Reduction of Millers Road North of West Gate Freeway									PO	N/A - operational EPR	WGTA
NVP5 Construction of Noise Barriers		X	X	X		X			C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
NVP6 Traffic Noise Monitoring		X							PO, O	Checked through design review. Not relevant to current construction package or site surveillance. To be audited prior to operation. Date TBC.	Project Co
NVP7 Construction Noise, Vibration Management, and Monitoring	X		X	X	X	X			PC, C	Construction Noise and Vibration Management Plan approved. Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
NVP8 Construction Noise Targets			X	X	X	X			C	Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
NVP9 Blasting Trials and Assessment								X	C	Blasting not within current scope. To be audited in February 2019 if required.	D&C
NVP10 Construction Vibration Targets (Amenity)			X	X	X			X	C	Partially audited in June. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
NVP11 Construction Vibration Targets (Structures)			X	X				X	C	Checked during review of construction packages and through site surveillance. Not relevant to design packages. To be audited in February 2019.	D&C
NVP12 Ground-borne (Internal) Noise Targets								X	C	Not relevant to current design or construction packages. To be audited in February 2019, dependant on status of tunnelling.	D&C
NVP13 Utility Asset Protection		X	X	X				X	PC, C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
NVP14 Tunnel Ventilation System Noise Design							X		D, O	Not relevant to current design or construction packages. To be audited in November 2018, dependant on status of tunnelling.	D&C / Project Co
NVP15 Tunnel Ventilation System Noise Monitoring									O	N/A - operational EPR	Project Co
NVP16 Amenity Blast Vibration								X	C	Not relevant to current design. Not relevant to construction packages. To be audited in February 2019, dependant on status of tunnelling.	D&C
NVP17 Amenity 0 Blast Overpressure Implement								X	C	Blasting not within current scope. To be audited in February 2019 if required.	D&C
NVP18 Construction Noise Management	X		X	X	X	X			C	Construction Noise and Vibration Management Plan approved. Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
NVP19 Traffic Noise of Hyde Street, South of Francis Street								X	C	Not relevant to current design or construction packages. To be audited in February 2019.	WGTA
SOCIAL											
SP 1 Urban Design Principles and Vision		X					X		D	Checked during review of design packages. Not relevant to current construction packages. To be audited in November.	D&C
SP2 Communications and Community Engagement Plan (CCEP)	X		X	X		X			PC, C, O	Communications and Community Engagement Plan (including Construction Communications and Community Engagement Plan) approved. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C / Project Co
SP3 Community Liaison Group Participation						X			C	Audited in August. Not relevant to design or construction packages.	D&C / WGTA
SP4 Social and Local Procurement	X					X			PC, C	Construction Communications and Community Engagement Plan (including Workforce Development Plan and Local Industry Development Plan) approved. Audited in August. Not relevant to design or construction packages.	D&C
SP5 Community Involvement and Participation Plan (CIPP)	X							X	PC, C	Construction Communications and Community Engagement Plan (including Community Involvement and Participation Plan) approved. To be audited in February 2019.	WGTA
SURFACE WATER											
SWP1 Design of Discharges and Runoff		X						X	D	Checked during review of design packages. Not relevant to current construction packages. To be audited in February 2019.	D&C
SWP2 Water Sensitive Road Design		X						X	D	Checked during review of design packages. Not relevant to current construction packages. To be audited in February 2019.	D&C
SWP3 Tunnel Waste Water		X	X	X				X	PC	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
SWP4 Water Quality Monitoring	X		X	X	X	X			PC	Water Management Plan approved. Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
SWP5 Spill Containment Design		X						X	D	Checked during review of design packages. Not relevant to construction packages. To be audited in February 2019.	D&C
SWP6 Management of Chemicals, Fuels, and Hazardous Materials			X	X				X	C	Checked during review of construction packages and through site surveillance. Not relevant to design packages. To be audited in February 2019.	D&C
SWP7 Surface Water Management During Construction	X		X	X	X	X			C	Water Management Plan approved. Partially audited in June. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
SWP8 Use of non-potable water		X	X	X				X	C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C

ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
SWP9 Bank Stability		X	X	X			X		C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
SWP10 Waterway Modifications		X					X		D, C	Checked during review of design packages. Not relevant to construction packages. To be audited in November 2018.	D&C
SWP11 Flood Levels, Flows and Velocities		X	X	X		X			D, PC, C	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
SWP12 Floodplain Storage Capacity		X	X	X		X			D	Audited in August. Checked during review of design and construction packages and through site surveillance.	D&C
SWP13 Tunnel Portal Flood Risk		X					X		D, O	Checked during review of design packages. Not relevant to construction packages. To be audited in November 2018.	D&C / Project Co
SWP14 Maintenance of Melbourne water and Other Drainage Assets		X	X	X				X	D	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
SWP15 North Yarra Main Sewer		X					X		D	Checked during review of design packages. Not relevant to current construction packages. To be audited in November 2018.	D&C
TRANSPORT											
TP1 Optimise Design Performance		X					X		D	Checked during review of design packages. Not relevant to construction packages. To be audited in November 2018.	D&C
TP2 Traffic Monitoring			X	X		X			PC, C, O	Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C / Project Co
TP3 Traffic Management Plan	X		X	X		X			PC, C	Transport Management Plan approved. Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
TP4 Public Transport		X	X	X			X		PC, C	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C
TP5 Rail operations		X						X	D, C	Checked during review of design packages. Not relevant to current construction packages. To be audited in February 2019.	D&C
TP6 Design Standards		X					X		D, C	Checked during review of design packages. Not relevant to construction packages. To be audited in November 2018.	D&C
TP7 Traffic Management Liaison Group			X	X		X			PC, C	Audited in August. Checked during review of construction packages and through site surveillance. Not relevant to design packages.	D&C
TP8 River Navigation		X	X	X				X	C	Checked during review of design and construction packages and through site surveillance. To be audited in February 2019.	D&C
TP9 Melbourne Metro Rail Authority Interface							X		C	Not relevant to current construction packages. Not relevant to design. To be audited in November 2018.	D&C
WASTE MANAGEMENT											

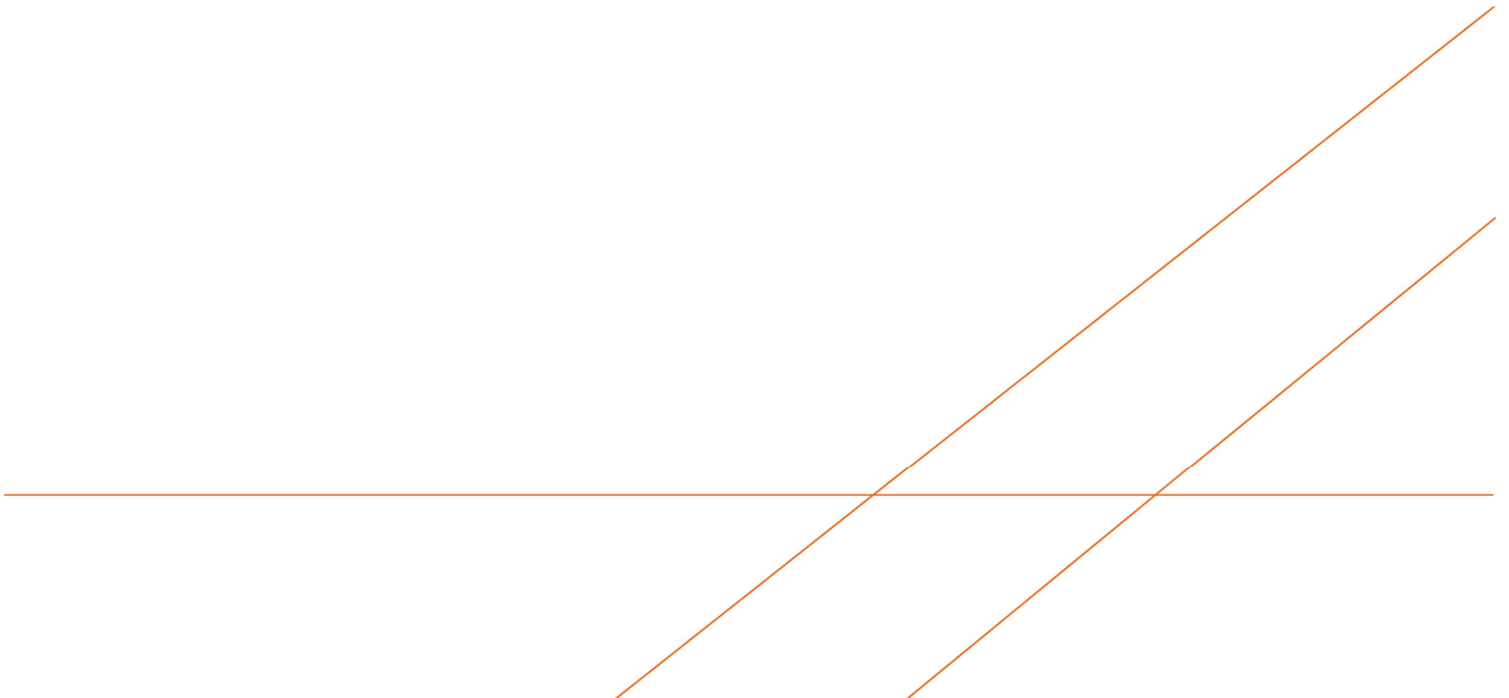
ENVIRONMENTAL PERFORMANCE REQUIREMENTS	REVIEW & SURVEILLANCE				AUDIT				PHASE	PROJECT AND AUDIT STATUS (MARCH TO AUGUST 2018)	RESPONSIBLE PARTY
	MP	DR	CR	CS	Jun- 18	Aug- 18	Nov- 18	Feb- 19			
WMP1 Waste Management		X	X	X			X		D, C, O	Checked during review of design and construction packages and through site surveillance. To be audited in November 2018.	D&C / Project Co

APPENDIX B – IREA SPECIALIST TEAM

The formal audits described in this Ministers Report have been undertaken by the lead IREA Environment Auditor, Elizabeth Hurst and Assistant Environment Auditors, Camilla Freestone and Mahsa Najjari. The Lead Auditor was supported by a team of specialists, including (but not limited to):

- IREA Construction Lead, Mike Cragg
- IREA Deign Lead, Neil Brownlee
- IREA Technical Lead for Stakeholder and Community Engagement, Esther Diffey
- IREA Technical Lead for Groundwater, Gary Hirst and Assistant Groundwater Auditor Sarah Sawyer
- IREA Technical Lead for Soil and Spoil, Dr Dave Adams
- IREA Technical Lead for Noise and Vibration, Adrian White and Mike Dowsett
- IREA Technical Lead for Ground Movement, Damian Kennedy
- IREA Technical Lead for Sustainability, Bernadette Fitzgerald

This report has been reviewed by the IREA Representative, Simon O'Hana.



APPENDIX C – AUDIT LIMITATIONS

This report was prepared in accordance with generally accepted consulting practice for audit services. The environmental audit requires the IREA to apply a process of “general overview and reasonable checking” of the Project documentation and Design and Construction activities (as required under the contract between the IREA and Project Co / WGTA). The audit program is risk-based, targeting those Design and Construction activities with a potential for risk to the environment or to environmental management arrangements. Accordingly, it is possible that not all environmental issues will be examined during each audit. However, the IREA maintains a structured program of audits designed to cover all aspects of the Project and to enable the formation of an opinion on whether there is conformance with the requirements of the Strategy, CEMP (and subordinate documentation), WEMPs, and the EPRs (as applicable).