Design &
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VICTORIA
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Government

WESTERN PORTAL DEVELOPMENT PLAN

TAS-CYP-WPZ-ZWD-PLA-XLP-MMN-X0001

REV F MINISTERIAL SUBMISSION

Thursday, 22 October 2020

ACKNOWLEDGMENT TO COUNTRY

We acknowledge the land on which the Metro Tunnel Project is being delivered, is the traditional land for the People of the Kulin Nation. We respect their spiritual beliefs and acknowledge their ongoing connection with their Country.

We would also like to pay our respect to Elders past, present and future.

DOCUMENT CONTROL AND AMENDMENT

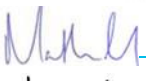
The current reviewed and approved version of this Plan is available on IMS for all project personnel to access. Downloaded Plans are deemed uncontrolled and it is the responsibility of the user to ensure they are using the latest revision. The responsibility for maintenance, review, update and approval of this Plan is as per the Delegation of Authority Matrix. All changes to this document are noted.

Document Number	
Document Title	Western Portal Development Plan
Document Path	Cross Yarra Partnership
Document Template	Management Plan Template

REVISION RECORD

Revision	Date	Reason for Issue	Prepared by
A	23/02/2018	Stakeholder Draft	Sabrina Chapman
B	06/04/2018	Public Display	Sabrina Chapman
C	09/05/2018	Review by Victorian Government Development Plan Review Committee	Sabrina Chapman
D	28/05/2018	Submission to the Minister for Planning	Sabrina Chapman
E	28/09/20	Minor amendment: Review by Victorian Government Development Plan Review Committee	Jenna Beckett
F	22/10/20	Submission to the Minister for Planning	Jenna Beckett

APPROVALS

Name	Signature	Date
Jenna Beckett		22-10-20
Mat Peel		22-10-20
Mark Wells		22-10-20

DEFINITIONS

STANDARD TERMS AND DEFINITIONS

Term	Definition
Project	The Metro Tunnel Project (MTP)
Company	Cross Yarra Partnership (CYP)
Client	Rail Projects Victoria (RPV)
Package Contractors	Contractors for the Early Works, TAS PPP, RSA and RIA work Packages in the Metro Tunnel Project
TAS Package	The Tunnel and Stations PPP Package (CYP's project)

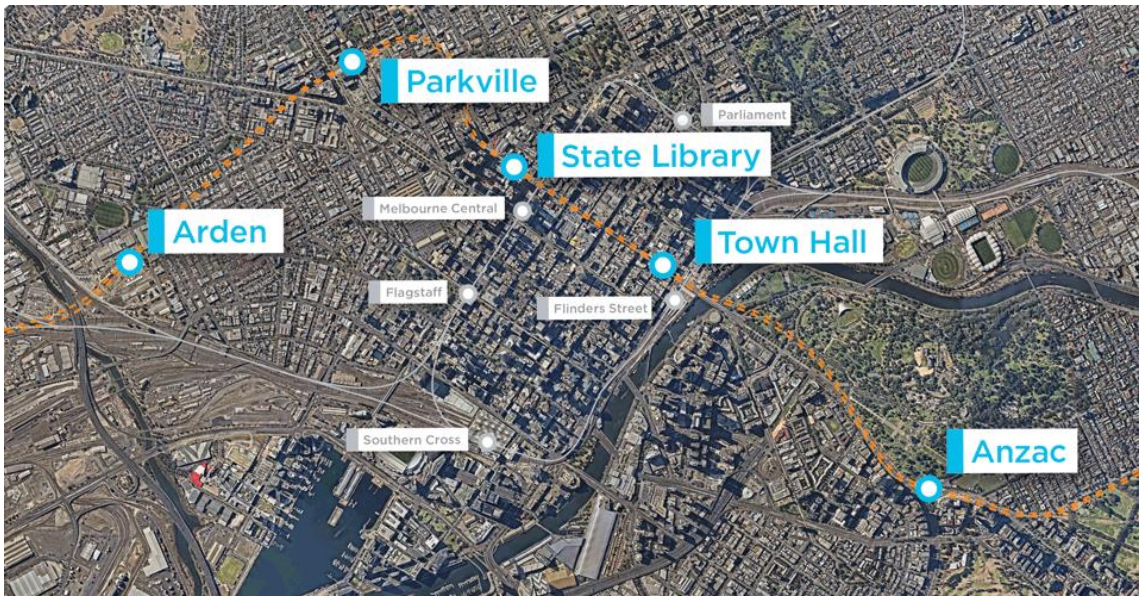
ABBREVIATIONS

Term	Definition
CoM	City of Melbourne
CPTED	Crime Prevention Through Environmental Design
CYP	Cross Yarra Partnership
DoT	Department of Transport
EES	Environment Effects Statement
EMF	Environmental Management Framework
EPA	Environment Protection Authority Victoria
EPR	Environmental Performance Requirements
HV	Heritage Victoria
OVGA	Office of Victorian Government Architect
PS&TR	Project Scope and Technical Requirements
PSA	Planning Scheme Amendment
PTV	Public Transport Victoria
RPV	Rail Projects Victoria
RIA	Rail Infrastructure Alliance
RPV	Rail Projects Victoria
TBM	Tunnel Boring Machine
TfV	Transport for Victoria
The Project	The Metro Tunnel, or The Metro Tunnel Project

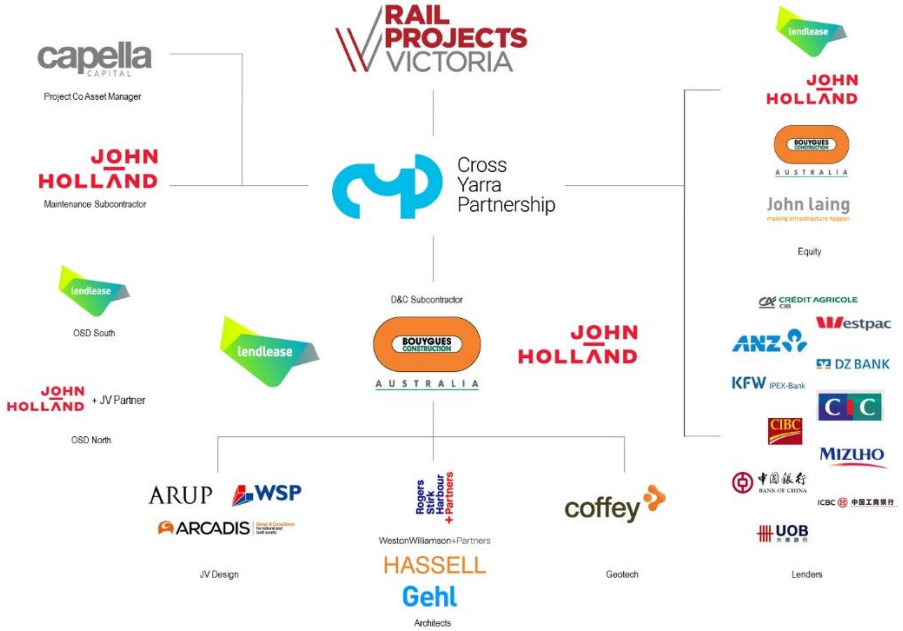
Term	Definition
UDAAP	Urban Design and Architecture Advisory Panel
UDS	Urban Design Strategy
WSUD	Water Sensitive Urban Design

PROJECT AND SCOPE

The Metro Tunnel Project is one of the largest transport infrastructure projects ever undertaken in Australia. It will deliver twin nine kilometre rail tunnels from Kensington to South Yarra as part of a new end-to-end Sunshine to Dandenong line. In addition to the tunnel, new underground stations will be established at the Arden, Parkville, and Domain precincts and two new stations in the CBD precinct.



CONSORTIUM STRUCTURE



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Rail Projects Victoria
Level 17, 222 Exhibition Street,
Melbourne VIC 3000
T 1800 105 105
railprojects.vic.gov.au

Foreword from Rail Projects Victoria

Rail Projects Victoria (RPV) is a division of the Major Transport Infrastructure Authority, an administrative office in relation to the Department of Transport, and is responsible for delivery of the Metro Tunnel Project (the Project). RPV is responsible for all aspects of the Project including planning and development of a project reference design, site investigations, stakeholder engagement, planning approvals and procurement, through to construction delivery and project commissioning.

The Project has already undergone an extensive and robust planning assessment process. As part of this, RPV published an Environment Effects Statement (EES) and draft Planning Scheme Amendment that included an integrated assessment of the potential environmental, social, economic and planning impacts of the Project, and the approach to managing these impacts.

In developing the EES, RPV undertook a comprehensive engagement program to seek input from stakeholders and the community. The EES provides flexibility for design changes to be made within the approved Project Land as contractors are appointed and designs are refined, provided the Environmental Performance Requirements (EPRs) are met by the contractors delivering the works.

The Project's concept design in the EES considered two locations for the Western Portal. The selected design positions the portal within the council reserve on the south side of Childers Street, approximately 150 metres west of the South Kensington station subway entrance opposite Ormond Street.

The Project is being procured in a series of staged works packages, with the built form at Western Portal having the following work packages:

- Cross Yarra Partnership (CYP) has been contracted to deliver the Tunnel and Stations Public Private Partnership (PPP) works package, including twin nine-kilometre tunnels, two portals, one intake substation and five new underground stations. As part of delivering this package, CYP will be responsible for main tunnelling works, station fit-out, mechanical and electrical systems, tunnel boring machine extraction shafts at the portals, and specific station operations and maintenance services
- The Rail Infrastructure Alliance (RIA) is responsible for works at the Western Portal including cut and cover tunnelling, tunnel decline structures and realignment of existing tracks to allow for the new Metro Tunnel tracks as they surface.

Figure 1 presents the indicative scope and extent of CYP and the RIA's built form within the Western Portal precinct.

This Western Portal Development Plan only addresses the scope and extent of the built form of CYP's works at the Western Portal precinct, including:

- An ancillary building with emergency access and egress
- Reinstatement of a temporary Childers Street.

All other works proposed in the wider Western Portal precinct, including landscaping and hardscaping in the public realm, will be undertaken by the RIA. The scope and extent of the built form for the RIA is addressed in a separate Development Plan, which has been subject to public inspection and comment in accordance with the Incorporated Document.

Evan Tattersall
Chief Executive Officer
16 / 09 / 2020

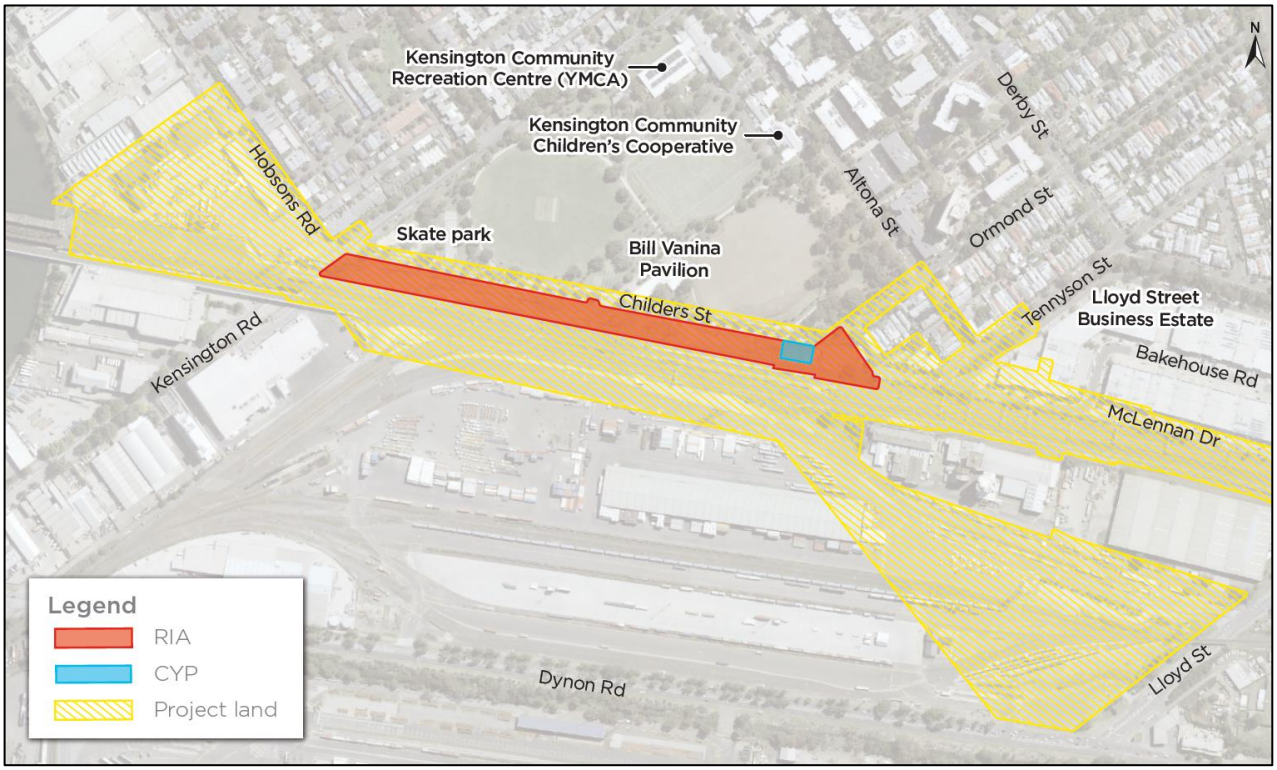


Figure 1 – Western Portal works by CYP and the RIA

EXECUTIVE SUMMARY

Cross Yarra Partnership (CYP) has been contracted by Rail Projects Victoria (RPV) (a division of the Major Transport Infrastructure Authority, an administrative office in relation to the Department of Transport) to design, build and maintain the stations and tunnels for the Metro Tunnel Project (the Project). The Project includes:

- Twin nine-kilometre rail tunnels from the west of the city to the south-east as part of a new Sunbury to Cranbourne/Pakenham line
- Five new underground stations: Arden (North Melbourne) Station, Parkville Station (under Grattan Street), State Library Station (at the northern end of Swanston Street), Town Hall Station (at the southern extent of Swanston Street) and Anzac Station (under Domain Interchange on St Kilda Road)
- A new Intake Substation at Arden and the two tunnel portals at South Yarra (Eastern Portal) and South Kensington (Western Portal).

The western tunnel portal will enable the Sunbury line to peel off from the existing rail corridor and join up with the Cranbourne / Pakenham line, via the new Metro Tunnel.

Located at the nexus between a busy railway reserve, adjacent to a vibrant recreational park and a near neighbour to a historic detached single family residential typology, the Western Portal building presents a unique opportunity to create a sensitive and place specific architectural response to the challenge of ancillary service buildings located in the public realm.

This Western Portal Development Plan presents the scope and extent of the built form of CYP's works for the Western Portal precinct. This Development Plan is a requirement of Clause 4.7 of the Melbourne Metro Rail Project Incorporated Document (Incorporated Document), which requires Development Plans be prepared for each of the five stations, two portals and any other above ground works or structures that are part of the Project. This Development Plan must be submitted to and approved by the Minister for Planning.

The Project has already undergone an extensive and robust planning assessment process. As part of this, RPV published an Environment Effects Statement (EES) and draft Planning Scheme Amendment that included an integrated assessment of the potential environmental, social, economic and planning impacts of the Project, and the approach to managing these impacts.

In developing the EES, RPV undertook a comprehensive engagement program to seek input from stakeholders and the community. This included stakeholders and the community having the opportunity to provide formal submissions during a public exhibition period, which were then presented to an Inquiry and Advisory Committee. This committee then considered the EES and submissions and prepared a report for the Minister for Planning.

In December 2016, the Minister for Planning released his Assessment of the environmental effects of the Project. The Minister subsequently approved a Planning Scheme Amendment for the Project, which inserted the Incorporated Document into the Melbourne, Port Phillip, Stonnington and Maribyrnong Planning Schemes.

In accordance with Clause 4.7 of the Incorporated Document, this plan includes:

- Site layout plan (refer to Appendix A: Western Portal Site Layout Plan)
- Architectural plans and elevations (refer to Appendix B: Western Portal Architectural Plans and Elevations)
- Landscape and public realm plans (refer to Appendix C: Western Portal Landscape and Public Realm Plans)
- An explanation demonstrating how this Development Plan is in accordance with the approved Urban Design Strategy (refer to Section 4.3 and Appendix D: Western Portal Urban Design Strategy guidelines Assessment)

- An explanation demonstrating how this Development Plan is in accordance with the approved Environmental Management Framework particularly the Environmental Performance Requirements (refer to Section 4.4 and Appendix E: Western Portal Environmental Performance Requirements Assessment).

The CYP design for the Western Portal has incorporated feedback from a range of stakeholders including those identified in the Incorporated Document; the Office of the Victorian Government Architect, City of Melbourne, Heritage Victoria, Transport for Victoria, VicRoads, Public Transport Victoria and Melbourne Water.

Consultation with community stakeholders has also occurred as part of the preparation of this Western Portal Development Plan including during a 15-business day public inspection period from Friday 6 April 2018 until Friday 27 April 2018, allowing for the Anzac Day public holiday. During this time, it was available on the Metro Tunnel website along with an opportunity to provide written comments.

The previous version of this Western Portal Development Plan was approved by the Minister for Planning on 21 June 2018. Under the Project's Incorporated Document, and in accordance with clause 4.7.8, CYP is seeking a minor amendment to this Development Plan.

The amendments to this Development Plan relate to the colour and materiality of the upper part of the Western Portal building, and the addition of a water meter located adjacent to the Western Portal building. The decision-making in relation to these elements has involved an iterative stakeholder consultation process as part of detailed design.

This Development Plan presents the scope and extent of the built form of CYP's works in the Western Portal with associated construction works to occur within the Project Land boundary and construction impacts to be managed in accordance with the approved Environmental Management Framework. This includes separately prepared Environmental Management System, Construction Environmental Management Plan, Site Environmental Implementation Plans and aspect-specific management plans (as specified in the Environmental Performance Requirements).

CHANGE REGISTER

In accordance with Clause 4.7.8 of the Incorporated Document, a minor amendment has been made to the Western Portal Development Plan. This report has been updated to reflect changes to colour and materiality associated with the upper part of the Western Portal building, and the addition of a water meter adjacent to the building. Table 1 outlines the amendments to this Development Plan.

Table 1 – Amendments to the Western Portal Development Plan, since Ministerial Approval 21 June 2018

Section	Amendment
Figure 1	Updated to reflect confirmed RIA scope of works
Executive Summary	Detail added on the minor amendment to colour and materiality of the upper part of the Western Portal building, and the water meter located adjacent to the building
1. Introduction	Detail added to outline that the Western Portal Development Plan was previously approved by the Ministerial for Planning on 21 June 2018. CYP are now seeking a minor amendment to this Development Plan
1.2 Incorporated Document Conditions	Table 2 clauses 4.7.5, 4.7.6, 4.7.7 and 4.7.8 responses amended to reflect the Western Portal Development Plan approval process to date and the minor amendment going forward
1.3.2 Stakeholder Engagement during detailed design	New section added to outline stakeholder engagement post-Ministerial Approval of the Western Portal Development Plan, and during detailed design
Figure 2	Updated to include the additional consultation process post-Ministerial Approval of the Western Portal Development Plan
Figure 3	Updated figure to reflect current Western Portal design
Figure 4	Updated to reflect confirmed RIA scope of works
4.1 Design Development	Additional detail added to explain the design development process post-Ministerial Approval
4.3.1 Architectural Response	Updated to reflect the revised colour and materiality for the upper part of the Western Portal building, and the water meter located adjacent to the building
4.3.2 Landscape Response	Updated to reflect tree removals as part of CYP mains works
4.3.7 Ancillary Features	Updated to include the water meter located adjacent to the Western Portal building
4.3.8 Materials and Finishes	Updated to reflect the revised colour and materiality for the upper part of the Western Portal building, following further stakeholder consultation during detailed design
Figure 8	Updated to show the revised materials and finishes for the Western Portal building
4.4.2 Arboriculture	Table 5 updated to accurately reflect the tree removal numbers stated in the EES in comparison to CYP's Western Portal Development Plan and the RIA's Western Portal Development Plan
5 Conclusion	Updated to reflect changes throughout the Western Portal Development Plan
Appendix A	Drawings updated to reflect revised design
Appendix B	Drawings updated to reflect revised design
Appendix C	Drawings updated to reflect revised design
Appendix D	Responses to the Urban Design Strategy updated to reflect the revised design
Appendix E	Responses to the Environmental Performance Requirements updated to reflect the revised design

1. INTRODUCTION

Cross Yarra Partnership (CYP) has been contracted by Rail Projects Victoria (RPV) (a division of the Major Transport Infrastructure Authority, an administrative office in relation to the Department of Transport) to design, build and maintain the stations and tunnels for the Metro Tunnel Project (the Project). The Project includes:

- Twin nine-kilometre rail tunnels from the west of the city to the south-east as part of a new Sunbury to Cranbourne/Pakenham line
- Five new underground stations: Arden (North Melbourne) Station, Parkville (under Grattan Street), State Library (at the northern extent of Swanston Street), Town Hall (at the southern extent of Swanston Street and Anzac (under Domain Interchange on St Kilda Road)
- A new Intake Substation at Arden and the two tunnel portals at South Yarra (Eastern Portal) and South Kensington (Western Portal).

The Project has already undergone an extensive and robust planning assessment process. As part of this, RPV published:

- An Environment Effects Statement (EES) that included an integrated assessment of the potential environmental, social, economic and planning impacts of the Project, and the approach to managing these impacts
- A Draft Planning Scheme Amendment (PSA) that detailed changes to the Planning Scheme that were recommended to protect the tunnels, stations and associated infrastructure and guide future development in their vicinity.

In developing these, RPV undertook a comprehensive engagement program to seek input from stakeholders and the community. This included stakeholders and the community having the opportunity to provide formal submissions during a public exhibition period, which were then presented to an Inquiry and Advisory Committee. This committee then considered the EES and submissions and prepared a report for the Minister for Planning.

In December 2016, the Minister for Planning released his Assessment of the environmental effects of the Project. The Minister subsequently approved a Planning Scheme Amendment for the Project, which inserted the *Melbourne Metro Rail Project Incorporated Document* into the Melbourne, Port Phillip, Stonnington and Maribyrnong Planning Schemes.

As a condition of the Incorporated Document, a Development Plan must be approved by the Minister for Planning for each of the five stations, two tunnel portals, rail turnback at West Footscray Station and any other above ground works or structures that are part of the Project.

The Project is being procured in a series of staged works packages, with the built form at Western Portal having the following work packages:

- CYP has been contracted to deliver the Tunnels and Stations Public Private Partnership (PPP) works package, including within the Western Portal precinct the tunnel boring machine extraction shaft, an ancillary building with emergency access and egress, and reinstatement of a temporary Childers Street
- The Rail Infrastructure Alliance (RIA) is responsible for works at the Western Portal including the cut and cover tunnelling, tunnel decline structures and realignment of existing tracks to allow for the new Metro Tunnel tracks as they surface.

This Western Portal Development Plan only addresses the scope and extent of the built form of CYP's works at the Western Portal precinct. The scope and extent of the built form of the RIA is addressed in a separate approved Development Plan, which was subject to public inspection and comment in accordance with the Incorporated Document.

This Western Portal Development Plan was approved by the Minister for Planning on 21 June 2018. Under the Project's Incorporated Document, and in accordance with Clause 4.7.8, CYP are seeking an amendment to this Western Portal Development Plan.

1.1. PURPOSE OF THIS DEVELOPMENT PLAN

This Western Portal Development Plan presents the scope and extent of the built form of CYP's works for the Western Portal precinct. In accordance with Clause 4.7.3 of the Incorporated Document, this plan includes:

- Site layout plans
- Architectural, landscape and public realm plans and elevations
- An explanation demonstrating how this Development Plan is in accordance with the relevant sections of the approved Urban Design Strategy and Environmental Management Framework particularly the Environmental Performance Requirements.

1.2. INCORPORATED DOCUMENT CONDITIONS

The use and development permitted by the Incorporated Document must be undertaken in accordance with the stated conditions, including Clause 4.7 that requires Development Plans be prepared prior to construction. Table 2 provides a response against each requirement of Clause 4.7 for this Development Plan.

Table 2 – Response to conditions of the Incorporated Document

Clause	Condition	Response
4.7.1	Subject to Clause 4.13, a Development Plan must be approved by the Minister for Planning for development that relates to each of the following: a) Western tunnel portal b) Eastern tunnel portal c) Arden Station d) Parkville Station e) CBD North Station f) CBD South Station g) Domain Station h) Rail turnback at West Footscray Station i) Any other above ground works or structures that are part of the Project. *Clause 4.13 relates to Project preparatory works and are subject to separate approval requirement.	This Western Portal Development Plan presents the scope and extent of the built form of CYP's works in the Western Portal precinct.
4.7.2	A Development Plan must address surface works that are associated with each of the items listed in Clause 4.7.1. A Development Plan for a station must address underground areas from the station entrance to the ticket gate.	CYP's surface works within the Western Portal are described in Section 3 and the drawings in Appendix A: Western Portal Site Layout Plan, Appendix B: Western Portal Architectural Plans and Elevations and Appendix C: Western Portal Landscape and Public Realm Plans .
4.7.3	A Development Plan must include:	
	a) A site layout plan/s	Site layout plans in Appendix A: Western Portal Site Layout Plan
	b) Architectural, landscape and public realm plans and elevations including lighting, signage, pedestrian access, bicycle access and other ancillary facilities	Architectural plans and elevations in Appendix B: Western Portal Architectural Plans and Elevations.

Clause	Condition	Response
		Landscape and public realm plans in Appendix C: Western Portal Landscape and Public Realm Plans.
	c) An explanation demonstrating how the Development Plan (including materials and external finishes) is in accordance with the approved Environmental Performance Requirements included within the Environmental Management Framework.	Consistency with Urban Design Strategy in Section 4.3 and Appendix D: Western Portal Urban Design Strategy guidelines Assessment. Consistency with the Environmental Management Framework in Section 4.4 and Appendix E: Western Portal Environmental Performance Requirements Assessment .
4.7.4	Prior to submission of a Development Plan to the Minister for Planning for approval under Clause 4.7.1, a Development Plan must be: a) Provided to the Office of the Victorian Government Architect and relevant council/s for consultation b) Where relevant, provided to the Roads Corporation, Public Transport Development Authority, Melbourne Water and Heritage Victoria for consultation c) Made available for public inspection and comment on a clearly identifiable Project website for 15 business days. The website must set out details about the entity and contact details to which written comments can be directed during that time and specify the time and manner for the making of written comments. For the avoidance of doubt, consultation in accordance with (a) and (b) can occur prior to or after the public inspection and comment period in (c). Before, or on the same day as a Development Plan is made available in accordance with Clause 4.7.4(c), a notice must be published in a newspaper generally circulating in the area to which a Development Plan applies informing the community of the matters set out in Clause 4.7.4(c).	Stakeholder and community consultation is outlined in Section 1.3.
4.7.5	A Development Plan submitted to the Minister for Planning for approval under Clause 4.7.1 must be accompanied by all written comments received under Clause 4.7.4 and a summary of consultation and response to issues raised during the consultation.	CYP provided the Minister for Planning with a comment / response register containing all written comments made by stakeholders and the community in relation to this Western Portal Development Plan. As part of the amendment to the Western Portal Development Plan, CYP will provide the Minister for Planning with additional written comments made by stakeholders.
4.7.6	Before deciding whether to approve a Development Plan under Clause 4.7.1, the Minister for Planning must consider all written comments received under Clause 4.7.4 and the consultation and response summary provided under Clause 4.7.5.	
4.7.7	A Development Plan must be approved by the Minister for Planning prior to the commencement of any development relating to an item in Clause 4.7.1, except for Early Works that are carried out in accordance with Clause 4.10.	The Western Portal Development Plan was approved by the Minister for Planning on 21 June 2018. Following approval of this Development Plan, CYP commenced works on the Western Portal. Early Works was undertaken in accordance with Clause 4.10 and Preparatory Works was undertaken in accordance with Clause 4.13.
4.7.8	A Development Plan may be prepared and approved in stages or parts, and may be amended from time to time with the	This Development Plan presents the scope and extent of the built form of

Clause	Condition	Response
	approval of the Minister for Planning. The Minister must require an application for approval of an amendment to a Development Plan to comply with the requirements of Clauses 4.7.3, 4.7.4, 4.7.5 and 4.7.6 unless, in the opinion of the Minister: a) the proposed amendment: i. does not result in a material detriment to any person; or ii. a person who may suffer a material detriment as a result of the Minister's approval of the amendment has already been sufficiently consulted in respect of the amendment; and b) any amendment does not involve any change to an approved Environmental Performance Requirement.	CYP's works in the Western Portal area. CYP are seeking an amendment to the Western Portal Development Plan, in accordance with Clause 4.7.8, and approval will be sought from the Minister for Planning.
4.7.9	For land to which a Development Plan applies, development must be carried out in accordance with an approved Development Plan.	CYP will develop the Western Portal in accordance with this Development Plan.

1.3. COMMUNITY AND STAKEHOLDER ENGAGEMENT

The Metro Tunnel is a city-shaping project, and as such it is vital to draw on the ideas, expertise and aspirations of the community and stakeholders to inform the planning, construction and future operation of the project. There have been two distinct periods of community and stakeholder engagement:

- The Early Engagement Period sought to gain targeted feedback from key stakeholders to help inform drafts of the Development Plan, whilst the Public Display Period sought to obtain further feedback from the broader community
- Following approval of the Western Portal Development Plan on 21 June 2018, further stakeholder engagement during detailed design has been undertaken. This sought to refine any outstanding design issues with key stakeholders.

1.3.1. EARLY ENGAGEMENT AND PUBLIC DISPLAY PERIOD

The consultation requirements of the Incorporated Document are shown in Figure 2. In addressing these it is important to note that RPV has undertaken a comprehensive engagement program to seek input from stakeholders and the community. As part of preparing the EES, stakeholders and the community had the opportunity to provide formal submissions during a public exhibition period, and these were then presented to an Inquiry and Advisory Committee. This committee then considered the EES and submissions and prepared a report for the Minister for Planning.

This Western Portal Development Plan builds on that previous consultation, with CYP having already consulted with each of the relevant stakeholders identified in the Incorporated Document, being:

- Office of Victorian Government Architect (OVGA)
- City of Melbourne
- Heritage Victoria
- Transport for Victoria
- VicRoads
- Public Transport Victoria
- Melbourne Water.

In accordance with the Incorporated Document requirements, this Western Portal Development Plan was made available for public inspection for 15 business days from Friday 6 April 2018 until Friday 27 April 2018, allowing for the Anzac Day public holiday. During this time, it was available on the Metro Tunnel website along with an opportunity to provide written comments. As part of this process a notice was published in The Age newspaper to inform the community on Friday 6 April 2018.

In addition to the requirements of the Incorporated Document, CYP also consulted with other key stakeholders to understand their key issues and concerns, including Kensington residents and businesses.

During the public inspection period CYP held four community information sessions on the tunnel portals, as follows:

- Saturday 14 April 2018 – 11am – 1pm at Bill Vanina Pavilion, JJ Holland Park, Kensington
- Monday 16 April 2018 – 5 – 7pm at Botanic Room, Punthill Apartments, South Yarra
- Tuesday 17 April 2018 – 11am – 1pm at Botanic Room, Punthill Apartments, South Yarra
- Wednesday 18 April 2018 – 5 – 7pm at Bill Vanina Pavilion, JJ Holland Park, Kensington.

At the community information sessions attendees were invited to ask questions about the two tunnel portal Development Plans and specialist technical staff were available to answer any queries. Attendees were also provided with instructions on how to access the online submission portal and paper submission copies were provided.

Two of the community information sessions were held in the Western Portal vicinity at the Bill Vanina Pavilion, JJ Holland Park at 11am – 1pm and 5 – 7pm on Saturday 14 and Wednesday 18 April 2018, respectively.

Metro Tunnel social media accounts also posted links to this Western Portal Development Plan and online submission portal, and featured information on the time and locations of the community sessions.

During the public display period eight key stakeholders were emailed directly, as well as e-newsletters sent out to 9,263 subscribers of the Metro Tunnel Project updates, which provided links to the two portal Development Plans on the RPV website. In addition to the community information sessions and emails, a further 2,890 letter drops occurred to addresses adjacent to the Western Portal.

Overall, 22 public submissions were received across the two portals and 15 of these submissions elected to provide comments on this Western Portal Development Plan.

As part of the submission to the Minister for Planning, CYP will provide all written comments received during stakeholder and community consultation, and a summary of consultation and responses to the issues and queries raised.

1.3.2. STAKEHOLDER ENGAGEMENT DURING DETAILED DESIGN

The Minister for Planning approved the Western Portal Development Plan on 21 June 2018. Since approval, the design for the Western Portal has progressed through detailed design in consultation with key stakeholders. In accordance with clause 4.7.8 of the Incorporated Document, the Western Portal Development Plan is now being amended to reflect design changes made during this process.

Stakeholder engagement during detailed design sought to refine outstanding design. The previously approved Western Portal Development Plan submission highlighted that the final pattern and colour of facades would be selected through a collaborative process with key stakeholders (specifically the City of Melbourne and the Office of Victorian Government Architect (OVGA)) and selected to respond to the surrounding context.

The materials and finishes were developed in consultation with the Rail Infrastructure Alliance (RIA). CYP has collaborated with the OVGA, City of Melbourne and RPV through meetings as well as the

project design review process to review the materials and finishes. The final selection is based on comments received from these key stakeholders. In addition, specific façade engineering input was also sought from the respective manufacturers and incorporated into the design.

CYP has amended the colour and materiality of the upper part of the Western Portal building to better suit the surrounding environment. Further detail is provided in Section 4.3.8.

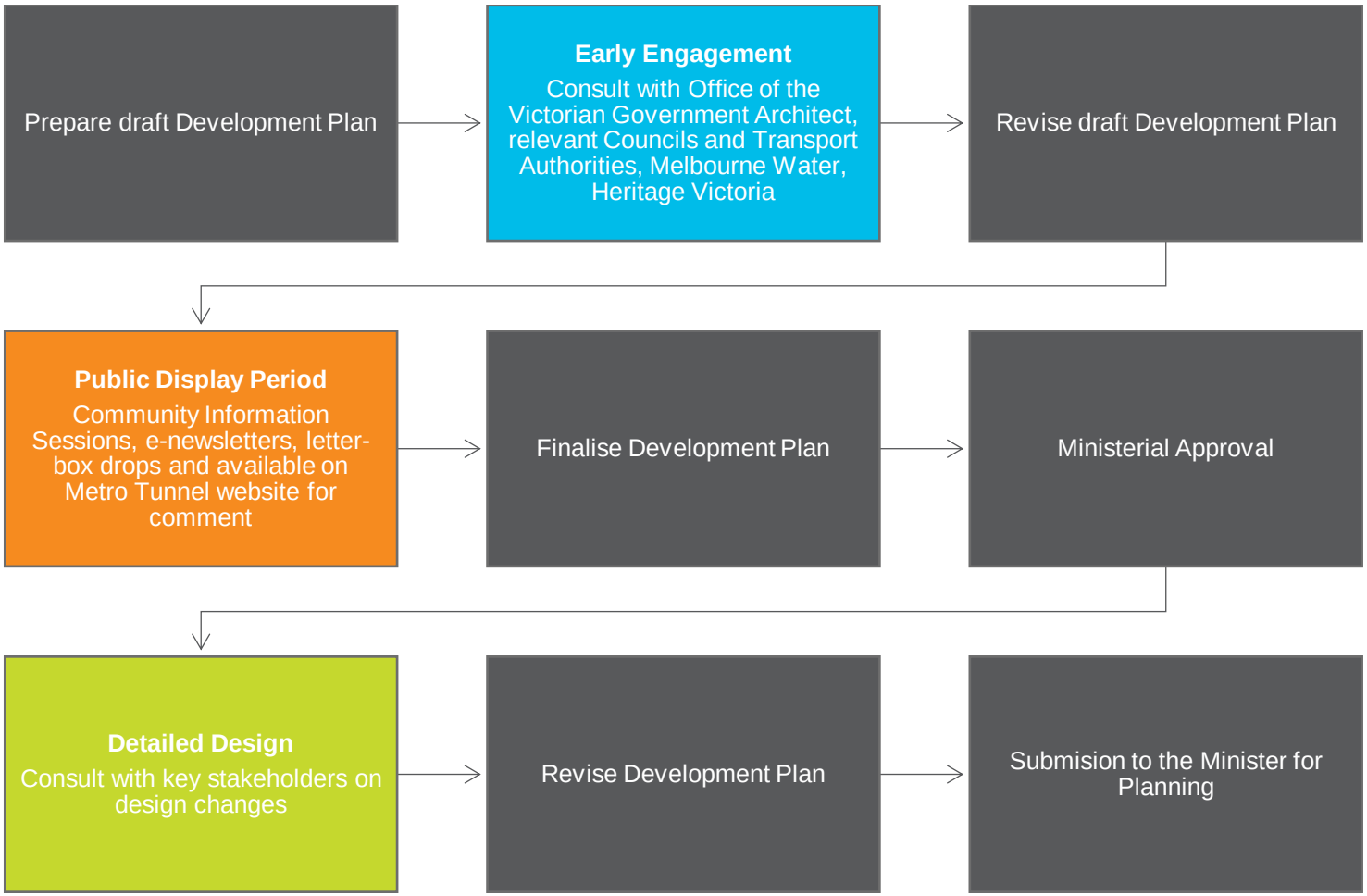


Figure 2– Development Plan consultation process (blue refers to Early Engagement, orange refers to Public Display Period, and green refers to Stakeholder Engagement during detailed design)

2. SITE CONTEXT

This section describes how the strategic, physical and natural context of the Western Portal has been considered in the design development process. The Western Portal area is located 5 kilometres north-west of Melbourne's CBD in the suburb of Kensington and is within the City of Melbourne municipality. The broader precinct contains the existing South Kensington Station that is currently serviced by the Werribee and Williamstown lines. In addition, the Sunbury line passes through South Kensington Station, however it does not stop and service the station. Access to South Kensington Station is via a pedestrian underpass along Childers Street connecting up to platform level.

2.1. BROADER CONTEXT AND STRATEGIC POSITIONING

The western tunnel entrance will enable the Sunbury line to peel off from the existing rail corridor and join up with the Cranbourne / Pakenham line, via the new Metro Tunnel.

The JJ Holland Park to the north of the proposed portal is subject to the City of Melbourne *JJ Holland Park Concept Plan 2008*. This plan identifies car parking as an issue in the precinct but considers the provision of car parking along Childers Street as sufficient for the ongoing use of the park. Other than the added pressure on car parking in the area, the Metro Tunnel will not impact on the implementation of the *JJ Holland Park Concept Plan 2008.*

The planning approach has sought to minimise the effect on residents through the selection of an alternative design option proposed in the EES, which limits private land acquisition to one residential property.

2.2. HISTORICAL AND NATURAL CONTEXT

An understanding of the Western Portal's natural features, as referenced in the EES, has informed the design response.

Prior to the European settlement, the landscape would have comprised of terraces and a floodplain land system, with vegetation comprising of grassy woodland and brackish grasslands. In addition to the land being exposed to direct rainfall, some areas within the Western Portal are located in the floodplains of the Maribyrnong River and Moonee Ponds Creek, which may be exposed to overland flow and flooding.

The Western Portal works area has historically been cleared of indigenous vegetation and no Aboriginal Places have been recorded. Overall, this precinct was assessed as being of low archaeological sensitivity. Since non-Aboriginal settlement, the Western Portal has undergone industrial development, with railway infrastructure dominating the landscape.

CYP's planning approach sought to limit effects on heritage values, with an alternative design option selected for the Western Portal which does not require the demolition of any graded buildings in the Kensington Precinct (HO9). Alternatively, one ungraded residence (number 135-143 Ormond Street) has been acquired and has been demolished.

2.3. EXISTING SITE CONDITIONS

At the western end of the alignment, the Western Portal precinct in Kensington is located at the transition from railway- and port-related uses to a residential area. The Western Portal will be located adjacent to the existing South Kensington Station and associated pedestrian underpass. The precinct contains housing, public open space and an industrial estate, with railway lines and a freight terminal located to the south. Several residential properties are also located to the north of the proposed

portal in Childers Street. Much of the housing stock in the area dates from the late Victorian era and is characterised by narrow grid blocks, high quality streetscapes (with interlinking tree canopies) and a number of well-preserved heritage areas – all of which contribute to the area's high level of urban amenity. JJ Holland Park is located to the north of the proposed portal and is an area of well-used public open space, which also provides a visual separation between a large proportion of the residential area and the existing rail yards to the south.

As the majority of permanent works in the Western Portal are located within the existing rail corridor, there will be a limited impact on built form.

The Western Portal works area has been cleared of indigenous vegetation. As referenced in the EES, vegetation includes a row of planted river sheoaks along the southern perimeter of JJ Holland Park and a planted hedge of bottlebrush to the south of Childers Street. The garden beds in between parking bays have been planted with juvenile water gums and black-anther flax-lily.

3. SCOPE OF WORKS IN WESTERN PORTAL PRECINCT

This Western Portal Development Plan presents the scope and extent of the built form of CYP's works for the Western Portal precinct. Figure 3 shows CYP's works within the Western Portal, which include:

- The portal shaft, above which sits an ancillary building that houses mechanical and electrical systems, emergency equipment, and provides emergency access and egress from the tunnels
- Temporary reinstatement of Childers Street for use during the RIA construction works
- Removal of a total of 30 trees (two less than identified in the previous Development Plan submission).

The Western Portal associated works area generally includes land south of Childers Street (comprising railway lines and a freight terminal) and west of South Kensington Station. The associated works area also includes the following road reserves:

- Ormond Street (property numbered 135-143)
- Childers Street (car parking associated with JJ Holland Park).

Associated construction works to occur within the Project Land boundary (refer to plans in Appendix A: Western Portal Site Layout Plan) and construction impacts will be managed in accordance with the approved Environmental Management Framework (refer to Section 4.4 and Appendix E: Western Portal Environmental Performance Requirements Assessment). The associated works area is shown on the plan included in Appendix A: Western Portal Site Layout Plan. As considered in the EES, the nature of works within the Western Portal associated works area will change over time and will be characterised by the following CYP activities:

- Site establishment: Site establishment at the Western Portal includes set-up of site offices, laydown areas, and plant and equipment required for managing construction. Provision for flood water storage and a tunnel air ventilation and extraction plant would also be located on site
- Civil / Structural, including:
  - Construction of the ancillary building
  - Tunnel excavation and tunnel boring machine retrieval
- Fit out: This phase of the Project includes the fit out of ancillary building infrastructure, surface and subsurface levels, including emergency egress, ventilation and smoke controls, staff rooms and equipment rooms
- Testing and commissioning: These works ensure that all new portal infrastructure meets the requirements of Victorian Rail Safety legislation and is fit for purpose
- Operation: The operational phase of the Project will include activities associated with the day to day operation of the ancillary building. CYP will undertake preventative and corrective maintenance of all installed assets to ensure reliability and availability of portal infrastructure for day to day operations.

To manage potential impacts, CYP has implemented an Environmental Management System, Construction Environmental Management Plan and will prepare an Operations Environmental Management Plan prior to the operations phase of the Project. The aspect-specific control measures are identified in a series of specific management plans with precinct specific controls identified in a Site Environmental Implementation Plan. This is approved by RPV and the Project's Independent Reviewer. This is subject to separate stakeholder consultation requirements and reviewed by the Independent Environmental Auditor, including quarterly audits of performance throughout construction.

The RIA is responsible for remaining works at the Western Portal precinct including cut and cover tunnelling, decline structures and realignment of existing lines. In addition, the wider public realm design response, including landscaping and tree planting and permanent reinstatement of Childers Street, is outside of CYP scope of works and is addressed by the RIA. The scope and extent of the built form for the RIA is addressed in a separate Development Plan, which has been subject to public inspection and comment in accordance with the Incorporated Document.

Figure 4 provides the scope and extent of the CYP and the RIA built form within the Western Portal precinct.

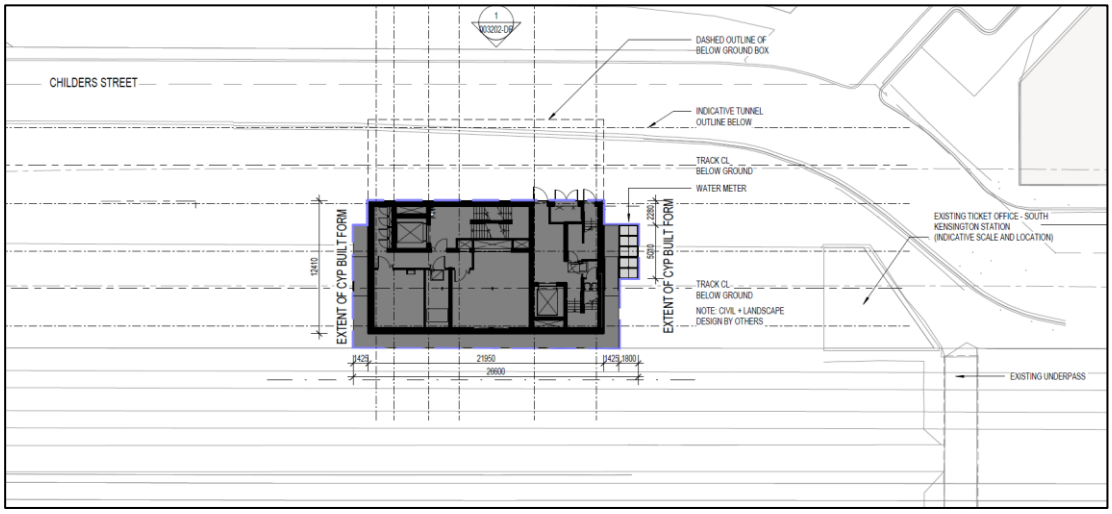


Figure 3 – Scope and extent of built form of CYP's works at the Western Portal precinct (blue boundary)

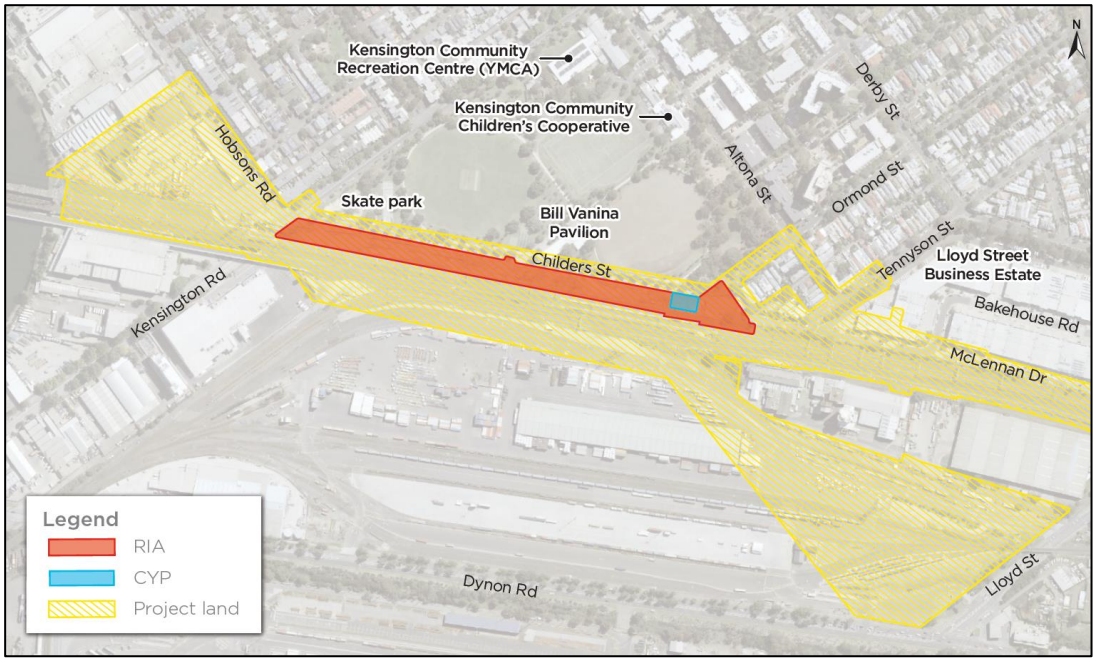


Figure 4 – Western Portal works by CYP and the RIA

4. DESIGN RESPONSE

4.1. DESIGN DEVELOPMENT

The Project's design has developed through an iterative process informed by phases of specialist technical assessment integrated with stakeholder and community engagement.

In 2016, RPV publicly exhibited the Project concept design in the EES and as a draft Planning Scheme Amendment.

CYP's design development has been informed by the approved Planning Scheme Amendment, in particular the Incorporated Document conditions that led to the Minister for Planning approving:

- RPV's Urban Design Strategy – the Project must be designed in accordance with the approved Urban Design Strategy. Developed by RPV with input from the OVGA, local councils and key stakeholders, the Urban Design Strategy sets out the design vision, key directions, objectives and design guidelines across the Project and for each precinct
- RPV's Environmental Management Framework – the Project must be designed in accordance with the approved Environmental Management Framework, which provides a transparent and integrated governance framework to manage the environmental aspects of the Project. This framework includes Environmental Performance Requirements (EPRs), which are performance-based management requirements, and provides clear accountabilities for the delivery and monitoring of the EPRs so that the environmental effects of the Project are appropriately managed.

This is reflected in the design presented in this Western Portal Development Plan with the following sections explaining how this design in accordance with the design guidelines from the Urban Design Strategy and Environmental Performance Requirements from the Environmental Management Framework.

The previous version of this Western Portal Development Plan was approved by the Minister for Planning on 21 June 2018. Following an iterative consultation period during detailed design, there have been amendments to the colour and materiality of the upper part of the Western Portal building, and the addition of a water meter located directly adjacent to the building. In accordance with Clause 4.7.8 of the Incorporated Document, CYP is now seeking approval for this revised Western Portal Development Plan which incorporates these minor amendments.

4.2. DESIGN PRINCIPLES FOR METRO TUNNEL

4.2.1. VISION AND KEY DIRECTIONS

The Urban Design Strategy establishes an Urban Design Vision that is:

"A legacy of outstanding rail stations and associated public spaces that put people first, contribute to Melbourne's reputation for design excellence, and deliver an overall substantial benefit in terms of urban quality for Melbourne, for the transport network, and for local areas influenced by the Project".

Under this it identifies six key design themes or project-wide directions, being:

- Make new and improved connections
- Make great public places
- Balance line-wide consistency with site responsiveness
- Support integrated site redevelopment

- Design to help manage construction impacts
- Design for the future.

Each of these key directions has objectives with associated design guidelines to inform the design response.

4.2.2. PRECINCT SPECIFIC DESIGN ISSUES FOR THE WESTERN PORTAL

The Urban Design Strategy identifies precinct-specific design issues for the Western Portal. The future built form of the wider Western Portal precinct, including the landscaping and hardscaping design response, has been developed and addressed by the RIA. Where within CYP scope of works, this Western Portal Development Plan has addressed and met the objectives of associated design guidelines to inform the design response.

The ancillary building has been designed by CYP to not preclude future development of the surrounding area (which is not included in this Development Plan).

4.3. CONSISTENCY WITH THE URBAN DESIGN STRATEGY

Key components of the wider Western Portal precinct, including JJ Holland Park and associated landscaping and hardscaping works, is addressed by the RIA in a separate Development Plan.

This Development Plan presents the scope and extent of the built form of CYP's works at the Western Portal, which include an ancillary building with emergency access and egress, and reinstatement of a temporary Childers Street.

The design drawings of CYP's resultant built form for the Western Portal are attached as follows:

- Site layout plan (Appendix A: Western Portal Site Layout Plan)
- Architectural plans and elevations (Appendix B: Western Portal Architectural Plans and Elevations
- Landscape and public realm plans (Appendix C: Western Portal Landscape and Public Realm Plans).

Additionally, Appendix D: Western Portal Urban Design Strategy guidelines Assessment has an assessment of the design guidelines in the Urban Design Strategy that includes cross references to where each relevant design guideline is addressed in this Development Plan.

4.3.1. ARCHITECTURAL RESPONSE

Located at the nexus between a busy railway reserve, adjacent to a vibrant recreational park and a near neighbour to a historic detached single family residential typology, the Western Portal building for the Project presents a unique opportunity to create a sensitive and place specific architectural response to the challenge of ancillary service buildings located in the public realm.

Two options for the location of the Western Portal were considered in the EES.

Option A proposed commencing the track slew on the east side of Kensington Road into a decline structure situated in the council reserve on the south side of Childers Street. The portal was proposed to be located at the western interface of the cut and cover section directly opposite Ormond Street, with the TBM retrieval shaft situated in Bakehouse Road on the east side of McClure Road.

Option B proposed commencing the track slew on a widened embankment on the west side of Kensington Road, crossing Kensington Road on a rail over road bridge, into a decline structure situated in the council reserve on the south side of Childers Street. The portal was proposed to be located at the western interface of the cut and cover section approximately 120 metres west of Ormond Street, with the TBM retrieval shaft situated within the council reserve immediately west of the existing South Kensington station subway, at the intersection of Ormond and Childers Street.

The EES assessed each option against a number of criteria and indicators, with key criteria differentiating between the two options including: customer experience, disruption, land acquisition and cost.

Option A was estimated to cost significantly less then Option B, however the final Western Portal location (Option B) was selected on the basis of the following benefits:

- Approximately 25 car spaces would be lost along Childers Street, in comparison to approximately 50 car spaces permanently lost under Option A
- Less night-time and weekend occupations of the rail line would be required in comparison to Option A
- Acquisition of one residential property would be required compared to nine residential and 13 business properties under Option A.

The functional requirements of the ancillary building, combined with required setbacks from existing infrastructure, largely dictate the form and scale of the building and demand a robust and enduring materiality. The building footprint is approximately 22 metres long, 12.5 metres wide and 9.1 metres high. This consists of two levels above ground facing Childers Street, and a basement below ground reaching the tunnels. The above-ground building serves two core functions for the safe operation of the railway tunnels. Firstly, it contains spaces and equipment associated with safe emergency egress of passengers from the tunnel, and secondly, having created an opening to below-ground infrastructure, the building is required to provide flood immunity through elevating all shaft and stair openings above the predicted future flood levels. Adjacent to the ancillary building, a water meter is enclosed within a perforated aluminium mesh box. This enclosure is approximately 5 metres long, 1.8 metres wide and one metre high.

Figure 5 demonstrates the Western Portal's susceptibility to flooding due to its proximity to the Maribyrnong River and Moonee Ponds Creek. The height of the ancillary building is dictated by the requirement for active and passive flood control in mitigating the 1 in 100 and 1 in 1,000-year Average Recurrence Interval (ARI) flood events, respectively. The relevant floodplain manager for the Western Portal is Melbourne Water. As a minimum, Melbourne Water's design standards require buildings to be elevated at least 300mm above the 1 in 100-year ARI flood event. As per the Project Scope and Technical Requirements (PS&TR), a freeboard that is 600mm above the 1 in 1,000-year ARI flood event level (plus provision for climate change considerations for rainfall and sea level rise) must be provided at all openings into the Tunnels and Stations.

Figure 6 shows the provision for flood immunity at the Western Portal. This is achieved by elevating all shaft and stair openings above the predicted future flood levels. The additional 3 metres in height (making up the total approximate 9.1 metre height of the ancillary building), is required to house a lift overrun and mechanical plant for the safe operation of the tunnel and emergency egress, as shown Figure 7.

The ancillary building concrete treatment is reflective of the local context of the Western Portal and is required to provide water resistance. The proposed treatment of the upper section of the ancillary building, which is situated above the 1 in 1,000-year flood level, is perforated powder coated aluminium façade panels for screening the roof mounted plant. This has been discussed in consultation with relevant stakeholders throughout detailed design. Materials and finishes are further detailed in Section 4.3.8.

The architectural design of the Western Portal will be integrated with the wider public realm design response, and is addressed by the RIA. CYP is working collaboratively with the RIA to achieve a consistent vision and integration of the architectural response with the public realm design as part of this staged development.

The relevant architectural elevation drawings showing works at ground level, the north south cross section, east west long section, and north elevation are attached in Appendix B: Western Portal Architectural Plans and Elevations:

- TAS-CYP-WPZ003001-DP
- TAS-CYP-WPZ003201-DP
- TAS-CYP-WPZ003202-DP.

4.3.2. LANDSCAPE RESPONSE

The landscaping design response for the future built form of the Western Portal precinct is developed and addressed by the RIA and has been subject to a separate Development Plan. This includes any tree planting within the Western Portal precinct.

Tree removal within the Western Portal precinct comprises of multiple work packages and associated approvals. This CYP Western Portal Development Plan seeks removal of a total of 30 trees. The breakdown of tree removal is as follows:

- This Western Portal Development Plan seeks approval for the removal of 12 trees by CYP, not previously sought for approval. These trees are primarily located along the south side of Childers Street.

In addition, this Development Plan also outlines previously sought approval for the removal of 18 trees within the precinct, outlined as followed:

- One tree has already been removed by the Early Works Managing Contractor, located at the east end of Childers Street
- Removal of 17 trees, as part of the approved CYP Early Works Plan (2018), that are primarily located at the intersection of Childers Street and Ormond Street.

In summary, this Western Portal Development Plan seeks approval for the removal of 12 trees, plus those 18 trees previously sought for approval, resulting in a total of 30 trees to be removed by CYP within the precinct. This is two less trees than identified in the previous Development Plan submission.

It is anticipated that some of these trees required for removal will overlap with the RIA works in the Western Portal.

CYP removal of trees has been avoided where possible, with particular emphasis given to the retention of native biodiversity values in close proximity to JJ Holland Park.

All tree removal is subject to EPR AR1. A number of trees will be retained along Childers Street, with reinstatement of trees to be addressed by the RIA. This future tree reinstatement will contribute to RPV's project goal of doubling tree canopy coverage and providing landscaped areas within the public realm.

4.3.3. PUBLIC REALM RESPONSE

The Western Portal public realm design response will provide an ancillary building which serves a number of core functions in the safe operation of the Project. The Western Portal precinct contains housing, public open space, an industrial estate to the east, and railway lines and a freight terminal to the south. Due to the proximity of JJ Holland Park to the ancillary building, the CYP design seeks to reduce impacts on existing land use. The role of the architecture is therefore to minimise both the visual and social impact of the building in the public realm, providing a unified whole for the required space and equipment. The majority of permanent works will be undertaken within the existing rail corridor, with relatively limited impact on land outside the corridor.

Project works will change the streetscape of Childers Street, with construction resulting in controlled access to Childers Street for local vehicles and the temporary removal of car parking. CYP design will include the reinstatement of a temporary Childers Street for use during the RIA construction works. The re-implementation of vehicular traffic lanes and vehicle parking will be addressed by the RIA, with CYP providing the emergency vehicle loading bay (refer to Appendix C: Western Portal Landscape and Public Realm Plans).

The ancillary building has been designed to not preclude future development of the surrounding area (which is not included in this Development Plan). The wider public realm design response is outside of CYP scope of works and will be addressed by the RIA.

In addition, the landscaping and hardscaping design response for the future built form of the Western Portal precinct, including the provision of footpaths, pedestrian road crossings, street furniture, bicycle lanes and bicycle parking will be addressed by the RIA. The RIA works will be subject to a separate Development Plan. Elements of the RIA design will interface with the CYP design, to be confirmed in the detailed design process.

The relevant landscape and public realm plans listed below are attached in Appendix C: Western Portal Landscape and Public Realm Plans:

- TAS-CYP-WP-00-DRG-AUD-MMN-002211-DP
- TAS-CYP-WP-00-DRG-AUD-MMN-002212-DP
- TAS-CYP-WP-00-DRG-AUD-MMN-002213-DP
- TAS-CYP-WP-00-DRG-AUD-MMN-002214-DP
- TAS-CYP-WP-00-DRG-AUD-MMN-002215-DP

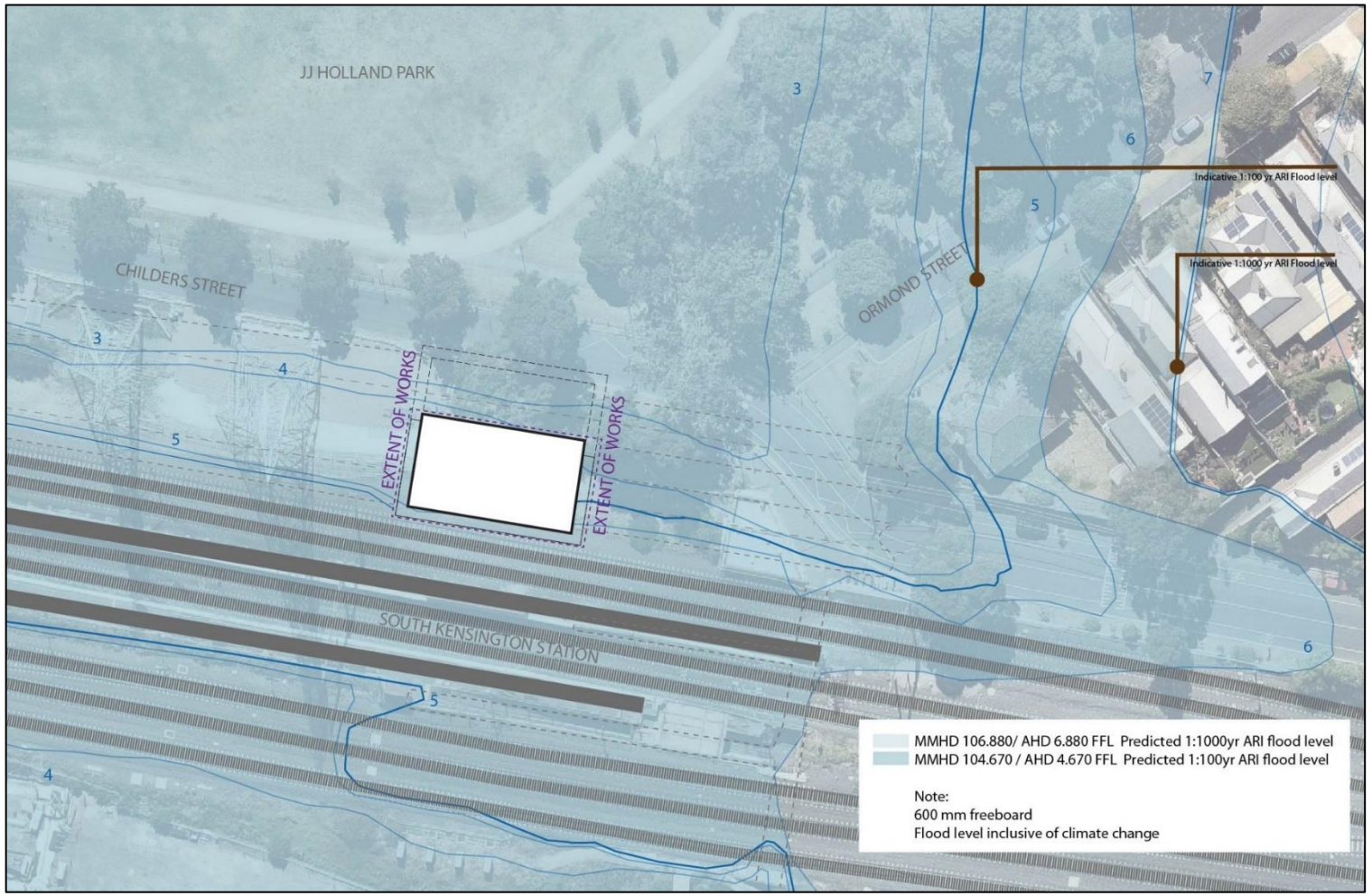


Figure 5 – Flooding susceptibility for indicative extent of CYP built form at the Western Portal

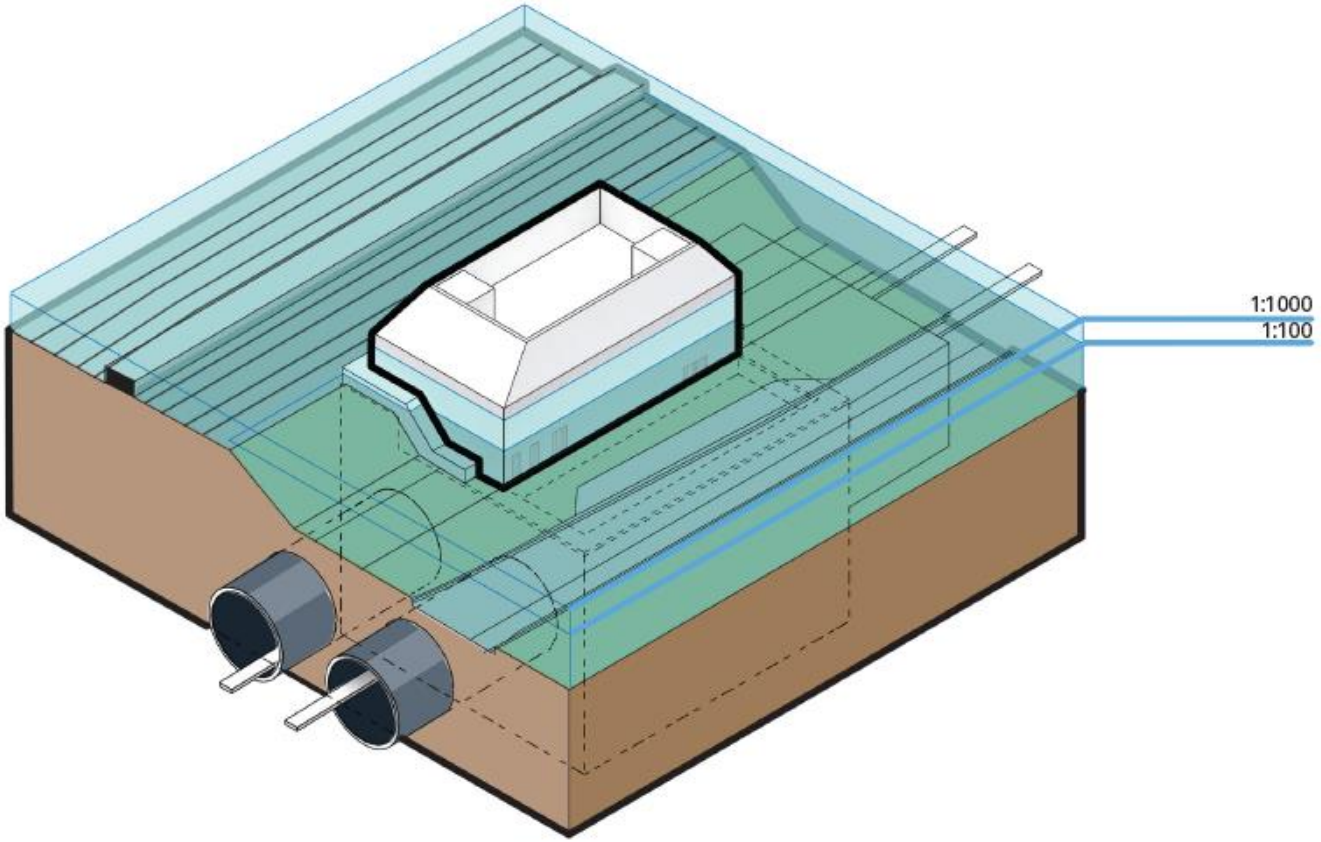


Figure 6 – Indicative schematic showing provision for flood immunity at the Western Portal

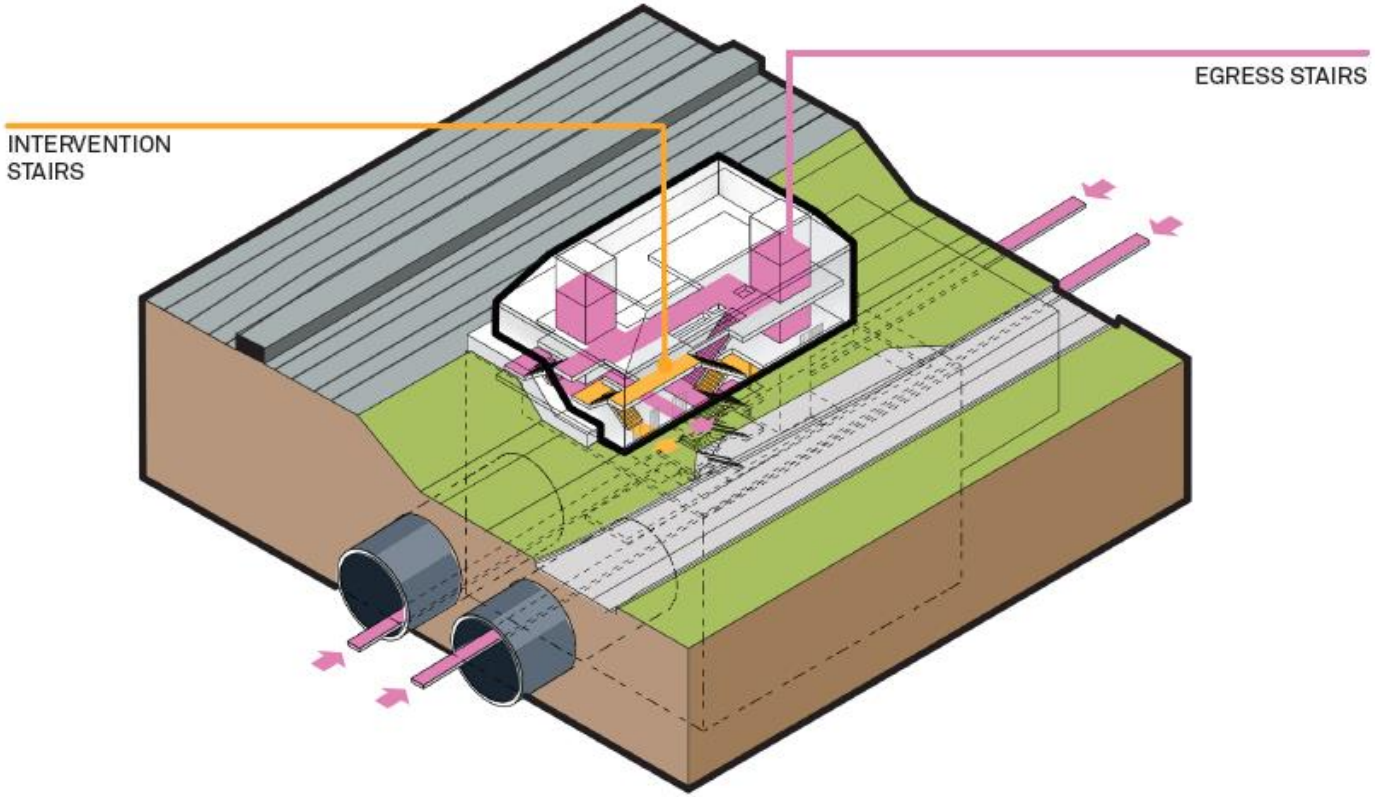


Figure 7 – Indicative schematic of emergency egress at the Western Portal

4.3.4. USER EXPERIENCE AND SURROUNDING ENVIRONMENT

The user experience is determined by the functional requirements of the ancillary building and emergency access and egress including:

- An emergency vehicle loading bay located directly north of the ancillary building (design by the RIA)
- A set of outward doors provide emergency egress from the northern side of the ancillary building in the event of an emergency in the tunnel below
- The emergency egress at this location will meet universal access requirements, in accordance with the *Disability Discrimination Act 1992* (which includes the *Disability Standards for Accessible Public Transport Amendment 2010)*. The internal design layout of the ancillary building will incorporate emergency evacuation procedures to ensure safe and efficient access and egress. An emergency evacuation plan will be developed during the operational phase of the Project.

The surrounding environment includes the ticket office for South Kensington Station, to the east of the ancillary building, providing the community with direct rail access to the City and surrounding destinations. JJ Holland Park is also within close proximity to the Western Portal and offers important recreational and respite experiences to the community.

CYP is not undertaking any works on South Kensington Station and the portal ancillary building does not allow for public access or provide direct access to the station. However, the proposed design does not preclude an upgrade to South Kensington Station in the future. CYP works will not directly affect the operation of the sporting clubs and facilities in JJ Holland Park.

Key components of the wider Western Portal precinct, including landscaping and hardscaping works, will be addressed by the RIA in a separate Development Plan.

4.3.5. LIGHTING

Street and pathway lighting along Childers Street will come from pole-mounted lights, at a scale and form to suit the purpose and local context. Lighting for the future built form of the Western Portal precinct will be addressed by the RIA and is subject to a separate Development Plan. Existing lighting and station amenity of South Kensington Station is not proposed to change.

4.3.6. SIGNAGE

Signage is outside the scope of this Western Portal Development Plan for CYP's works and will be addressed by the RIA. Existing signage that is part of the South Kensington Station will remain within the Western Portal precinct. Any signage required for the ancillary building will be in accordance with PTV, VicRoads, City of Melbourne standards and guidelines.

4.3.7. ANCILLARY FEATURES

An integrated formal approach has been pursued in order to conceal extraneous functional elements within a single unified Western Portal ancillary building. CYP design has strategically consolidated ventilation structures and chiller plant both on the rooftop and within the ancillary building. This placement avoids the utilisation of public space and makes them less visibly obtrusive, reducing their potential to impede on sightlines and future development of the Western Portal precinct. Placing plant on the roof level and within the ancillary building is beneficial in reducing the footprint of the ancillary building. The water meter located directly adjacent to the Western Portal building is housed in a perforated aluminium mesh box. This enclosure is approximately 5 metres long, 1.8 metres wide

and one metre high, reducing any widespread visual impacts to the existing landscape. The aluminium finish of the enclosure ties in with the proposed materials and finishes of the ancillary building.

4.3.8. MATERIALS AND FINISHES

A schedule of materials and finishes has been prepared to highlight the intended colour tones and textures of the Western Portal.

The external material finishes for the Western Portal include:

- Concrete structural walls with form-liner pattern at low level
- Perforated powder coated aluminium façade panels at high level for screening of the roof mounted plant
- Flush metal panel doors with blank panels to visually combine egress, intervention and fire booster doors.

The façade design responds to the context and constraints of the site, while acknowledging that this building is a background element to the streetscape and the proposed upgraded South Kensington Station entrance. Based on the preliminary concepts received from the RIA, the materials were selected to compliment the design of the South Kensington station forecourt upgrades and flood protection walls adjacent to the existing tracks.

At lower levels, deep texture and reveals will be integral in the concrete facade achieved through restrained use of custom concrete form liners, which, combined with refined detailing of openings and material junctions, will result in a recessive but beautifully crafted architecture. The textures will create shadow play on the facade along with subtle cranks and folds in the orthogonal geometry serving to reduce the visual mass of the structure. The zones of deepest texture will be located to assist in graffiti deterrence.

At higher levels, the perforated metal cladding is sectioned to replicate the constantly changing shapes of the container yard on the opposite side of the rail corridor. Similarly, the highly varied colourful backdrop that these containers provide, and following a long colour study (alongside stakeholder consultation), has resulted in grey being chosen as suitable for the surrounds. This has been selected to nestle into the landscaped embankment and respond quietly to the parkland setting.

The materials and finishes were developed in consultation with the RIA through the detailed design phase. Specific façade engineering input by the respective manufacturers has also been sought and incorporated into design. In addition, CYP has collaborated with OVGA and City of Melbourne through stakeholder meetings as well as the project design review process to review the materials and finishes.

Figure 8 provides indicative materials and finishes for the Western Portal. A copy of the materials schedule is provided in Appendix B: Western Portal Architectural Plans and Elevations, refer to schedule:

- TAS-CYP-WPZ000006-DP.

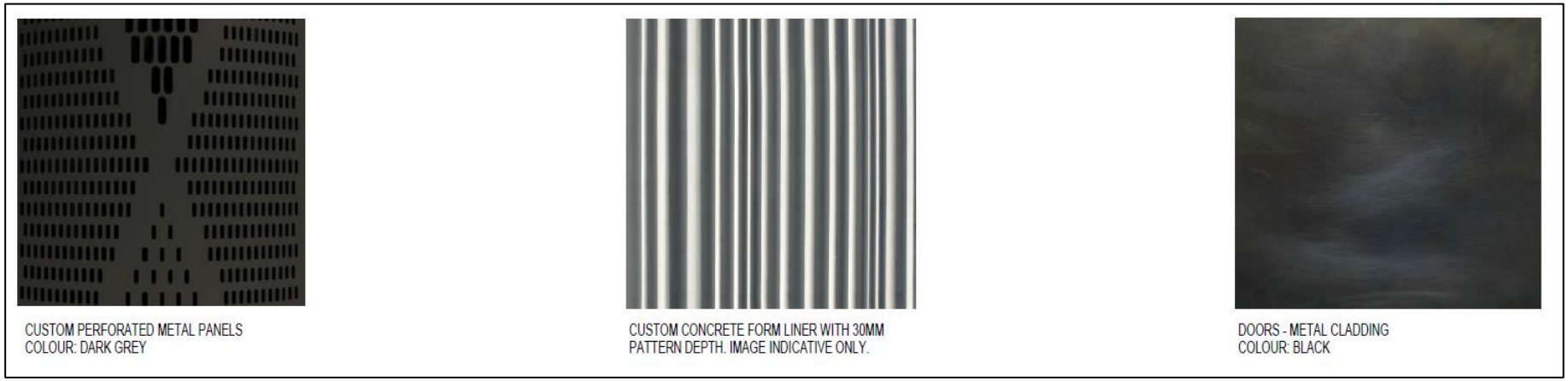


Figure 8 – Materials and finishes at the Western Portal

4.3.9. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Natural access control and passive surveillance, in addition to territorial reinforcement, make up the three basic strategies of Crime Prevention through Environmental Design (CPTED).

The design concept of access control is directed primarily at decreasing criminal accessibility. Natural access control restricts criminal intrusion, in particular into areas where they are not easily observed. This is achieved by limiting access and increasing natural surveillance. Design initiatives integrated into the Western Portal which aim to accomplish this include the use of walls, footpaths and lighting to:

- Restrict public access to, or from, the ancillary building (except in the case of maintenance works or emergency access / egress)
- Enable intruders to be more easily recognised.

Natural, or passive, surveillance is a design concept that aims to keep potential offenders and intruders under observation through the creation of environments where there is sufficient opportunity for people engaged in their normal behaviour to observe the space around them.

Territorial reinforcement, the third basis of CPTED, focuses on the delineation of private space from semi-public and public spaces, creating a sense of ownership. This in turn identifies intruders, making them less likely to offend.

It is noted that natural surveillance and territorial reinforcement design measures, and future landscaping and hardscaping are outside CYP's scope of works. Potential CPTED design measures will be addressed by the RIA and are subject to a separate Development Plan.

4.4. CONSISTENCY WITH ENVIRONMENTAL MANAGEMENT FRAMEWORK

The Environmental Management Framework provides a transparent and integrated governance framework to manage the environmental aspects of the entire Project. A summary of the framework is provided in Table 3.

Table 3 – Summary of RPV Environmental Management Framework

Topic	Summary
Contract structure	Outlines the RPV procurement strategy that includes different delivery packages including an Early Works Managing Contractor, Rail Infrastructure Alliance, Rail Systems Alliance and Tunnels & Stations Public Private Partnership (CYP).
Roles and responsibilities	Defines roles and responsibilities for the Minister for Planning, regulators and agencies, RPV, PTV, project contractors (for the delivery packages above), Independent Reviewer and Independent Environmental Auditor.
Environmental management plans and documentation	Provides requirements for project contractors to have an Environmental Management System, Development Plans, Early Works Plan/s, Construction Environmental Management Plan, Operations Environmental Management Plan, Transport Management Plan/s, Business Disruption Plan, Construction Noise & Vibration Management Plan, Site Environmental Implementation Plans, Work Method Statements and records and checklists.
Evaluating environmental performance	Provides requirements for project contractors in relation to monitoring, reporting and auditing environmental performance.
Environmental Performance Requirements (EPRs)	EPRs are performance-based requirements that define the project-wide environmental outcomes that must be achieved during design, construction and operation of the Project. This performance-based approach allows for a delivery model with sufficient flexibility to encourage innovation by the project contractors to determine how any approved EPR would be achieved.
Residential Impact Management Guidelines	Appended to the framework, the guidelines provide direction to the project contractors on how to address residual impacts on residential amenity so far as is reasonably practicable and appropriate.
Business Support Guidelines for Construction	Appended to the framework, the guidelines provide a framework for project contractors to address residual impacts on businesses so far as reasonably practicable and appropriate.

The Environmental Management Framework rightly extends well beyond just the application to this Development Plan, which presents the scope and extent of the built form of CYP's works in the Western Portal. This includes:

- Construction impacts – will be addressed by CYP's Environmental Management System, Construction Environmental Management Plan, Site Environment Implementation Plans, Early Works Management Plan and aspect-specific management plans (as specified in the Incorporated Document and EPRs). This is subject to separate stakeholder consultation requirements and review by the Independent Environmental Auditor, including quarterly audits of performance throughout construction
- Operational impacts – will be addressed by CYP's Environmental Management System and Operations Environmental Management Plan. This is subject to separate stakeholder consultation requirements and review by the Independent Environmental Auditor

- Geographically-specific – location specific requirements that are not in the Western Portal will be addressed in the relevant precinct Development Plan
- Specific to another project contractor – compliance by other project contractors (e.g. Early Works Managing Contractor) will be addressed in the relevant environmental management documentation of that project contractor.

An assessment of each EPR is provided in Appendix E: Western Portal Environmental Performance Requirements Assessment . This assessment identified key EPRs relevant to this Development Plan and these are presented below.

4.4.1. AQUATIC ECOLOGY AND RIVER HEALTH

Table 4 provides the CYP design response to the relevant aquatic ecology and river health EPRs.

Table 4 – Design response to relevant aquatic ecology and river health EPRs

EPR	Design response
EPR AE1: Stormwater treatment EPR AE7: Stormwater treatment	The design of the Western Portal has been developed in consultation with Melbourne Water and City of Melbourne. The Western Portal decline structure is approximately 500m west of the Maribyrnong River, therefore stormwater runoff has the potential to impact on water quality in the Maribyrnong River and / or Moonee Ponds Creek. The tunnel alignment would not cross the Maribyrnong River; however, the Project area would extend near to the eastern bank of the Maribyrnong River (upstream of Dynon Road) at the Western Portal. The integration of the stormwater treatment system into the future built form and public realm of the Western Portal precinct is outside CYP scope and will be addressed by the RIA. The RIA design and compliance with State Environment Protection Policy (SEPP) (Waters of Victoria) will be subject to a separate Development Plan.

4.4.2. ARBORICULTURE

Table 5 provides the CYP design response to the relevant arboriculture EPRs.

Table 5 – Design response to relevant arboriculture EPRs

EPR	Design response
EPR AR1: Maximise tree retention	The design of the Western Portal is being developed in consultation with City of Melbourne. The removal of trees has been avoided where possible, with particular emphasis given to the retention of native biodiversity values. This has been achieved through the selection of an alternative design option for the Western Portal, which has sought to minimise adverse effects on indigenous trees. While the alternative design option will result in the removal of additional trees from the public realm and the temporary occupation of a section of JJ Holland Park, these trees are not indigenous. A number of trees will also be retained along Childers Street. This CYP Western Portal Development Plan seeks removal of a total of 30 trees (two less than the previous Development Plan submission), noting the following: 12 of the 30 trees will be removed as part of CYP main works, primarily located along the south side of Childers Street One tree has already been removed by the Early Works Managing Contractor, located at the east end of Childers Street 17 of the 30 trees required for removal have been approved as part of CYP's Early Works Plan in 2018, primarily located at the intersection of Childers Street and Ormond Street.

EPR	Design response
	The RIA Development Plan for Western Portal has not sought approval for the removal of any trees within the precinct. The retained and removed trees are shown on the landscape plans in Appendix C: Western Portal Landscape and Public Realm Plans.
EPR AR2: Tree soil and water supply	The landscaping design response for the future built form of the Western Portal precinct, including tree planting, is addressed by the RIA and has been subject to a separate Development Plan.
EPR AR3: Tree replacement	The landscaping design response for the future built form of the Western Portal precinct, including tree replacement, is addressed by the RIA and has been subject to a separate Development Plan. This includes any tree planting within the Western Portal precinct.

4.4.3. HISTORICAL CULTURAL HERITAGE

Table 6 provides the CYP design response to the relevant historical cultural heritage EPRs.

Table 6 – Design response to relevant historical cultural heritage EPRs

EPR	Design response
EPR CH1: Minimise heritage impact EPR CH10: Response to heritage places EPR CH23: Heritage street fabric	The design of the Western Portal is being developed in consultation with the City of Melbourne. The area's predominantly Victorian era residences, with railway and local industry influencing development, is expressed through the proposed materials and finishes of the ancillary building. Deep texture and reveals will be integral in the concrete facade achieved through restrained use of custom concrete form liners, which combined with refined detailing of openings and material junctions will result in a recessive but beautifully crafted architecture. Heritage impacts at the Western Portal have been avoided through the selection of an alternative design option which does not require the demolition of any graded buildings in the Kensington Precinct (HO9). One ungraded residence (number 135-143 Ormond Street) has been demolished as part of construction works, however overall there is no adverse impact to heritage within the Kensington Precinct.
EPR CH11: Former Glueworks site in Kensington	The former Kensington Glue Works site, located at 1-39 Hobsons Road, is of local historical and architectural significance as an example of an interwar factory complex associated with the meat and by-products industry. The proposed construction works at the southern end of the site are to be undertaken by the RIA, with any potential heritage impacts to be addressed in a separate Development Plan.

4.4.4. LAND USE AND PLANNING

Table 7 provides the CYP design response to the relevant land use and planning EPRs.

Table 7 – Design response to relevant land use and planning EPRs

EPR	Design response
EPR LU1: Minimise impact on existing land use	The design of the Western Portal is being developed in consultation with the City of Melbourne. The Western Portal precinct contains housing, public open space, an industrial estate to the east, and railway lines and a freight terminal to the south. Due to the proximity of JJ Holland Park to the ancillary building, the design seeks to reduce impacts on existing land use. For example, the majority of permanent works will be undertaken within the existing rail corridor, with relatively limited impact on land outside the corridor.

EPR	Design response
	In addition, an alternative design option was selected for the Western Portal which includes the relocation of the TBM retrieval box further west. This limits private land acquisition to one residential property for proposed demolition. The design response for the future built form of the Western Portal precinct, including the wider public realm, is addressed by the RIA and has been subject to a separate Development Plan. The extent of CYP's works in the public realm, as shown on the landscape and public realm drawings, is included in Appendix C: Western Portal Landscape and Public Realm Plans.
EPR LU2: Master plans	The design of the Western Portal is being developed in consultation with City of Melbourne. Although not an established Master Plan, the Metro Tunnel does not impact on the implementation of the *JJ Holland Park Concept Plan 2008.* The future built form of the Western Portal precinct, in accordance with relevant master plans, is addressed by the RIA contractor and has been subject to a separate Development Plan.
EPR LU4: Urban Design Strategy	The design of the Western Portal is being developed in consultation with Urban Design and Architectural Advice Panel (UDAAP). The future built form of the wider Western Portal precinct, including the landscaping and hardscaping design response, will be developed and addressed by the RIA. Where within CYP scope of works, this Western Portal Development Plan has addressed and met the objectives of associated design guidelines to inform the design response. A detailed assessment of consistency with the Urban Design Strategy is provided in Appendix D: Western Portal Urban Design Strategy guidelines Assessment and Section 4.3.

4.4.5. LANDSCAPE AND VISUAL

Table 8 provides the CYP design response to the relevant landscape and visual EPRs.

Table 8 – Design response to relevant landscape and visual EPRs

EPR	Design response
EPR LV1: Reduce visual impact EPR LV2: Re-establishment of public open space	The design of the Western Portal is being developed in consultation with the Office of the Victorian Government Architect and City of Melbourne. The Western Portal design has given consideration to visual impact on the surrounding residences and users of JJ Holland Park. The views from the north across the park towards the construction works will be partially screened by existing vegetation within and on the perimeter of the park. Metro Tunnel structures will also be architecturally integrated with the entry to South Kensington Station, contributing to the visibility of the station entry without dominating views from JJ Holland Park or visually overwhelming the scale of nearby houses. Temporary hoarding at Western Portal will be installed for the duration of the construction works (including along Childers Street). The hoarding artwork with be consistent with RPV's Creative Strategy. The wider landscaping and public realm design response for the future built form of the Western Portal precinct is addressed by the RIA and has been subject to a separate Development Plan. The extent of CYP's works in the public realm, as shown on the landscape and public realm drawings, is included in Appendix C: Western Portal Landscape and Public Realm Plans.

4.4.6. SOCIAL AND COMMUNITY

Table 9 provides the CYP design response to the relevant social and community EPR.

Table 9 – Design response to relevant social and community EPR

EPR	Design response
EPR SC8: Re-establish public open space	The design of the Western Portal is being developed in consultation with City of Melbourne. The JJ Holland Park to the north of the proposed portal is subject to the *JJ Holland Park Concept Plan 2008*. Other than the added pressure on car parking in the area, the Metro Tunnel will not impact on the implementation of this plan. The landscaping design response for the future built form of the Western Portal precinct, including the re-establishment of public open space, is addressed by the RIA and has been subject to a separate Development Plan. The landscape and public realm drawings are shown in Appendix C: Western Portal Landscape and Public Realm Plans.

4.4.7. SURFACE WATER

Table 10 provides the CYP design response to the relevant surface water EPRs.

Table 10 – Design response to relevant surface water EPRs

EPR	Design response
EPR SW1: Flood design EPR SW2: Water sensitive urban design	The design of the Western Portal is being developed in consultation with Melbourne Water and City of Melbourne. The Western Portal site is subject to flooding from the Maribyrnong River which is challenging for the development potential of the site. Any loss of floodplain storage for the Maribyrnong River from construction works or permanent structures would also likely result in increases in flood flows and levels in the vicinity of this area. In response to the susceptibility of flooding, the ancillary building has been designed to provide flood immunity through elevating all shaft and stair openings above predicted future flood levels. This functional requirement determines the approximate 9.1 metre height of the ancillary building. The landscaping design response for the future built form of the Western Portal precinct, including tree planting which contributes to achieving Water Sensitive Urban Design (WUSD) principles, is addressed by the RIA and has been subject to a separate Development Plan. A detailed assessment of consistency with the Urban Design Strategy is provided in Appendix D: Western Portal Urban Design Strategy guidelines Assessment and Section 4.3

4.4.8. TRANSPORT

Table 11 provides the CYP design response to the relevant transport EPRs.

Table 11 – Design response to relevant transport EPRs

EPR	Design response
EPR T7: Operational road transport	The design of the Western Portal road network is being developed in consultation with VicRoads, Transport for Victoria, Public Transport Victoria and City of Melbourne. In maintaining operational road transport in the Western Portal area, CYP will temporarily reinstate Childers Street for use during the RIA construction works. The temporary removal of car parking along Childers Street during construction would be likely to exacerbate parking issues in the area; however, much of the lost car parking in the area would be replaced at the completion of construction. It is noted that reinstatement of car parking is outside of CYP scope. The reinstatement of the local road network and car parks associated with JJ Holland

EPR	Design response
	Park for the future built form of the Western Portal precinct is addressed by the RIA and has been subject to a separate Development Plan.
EPR T8: Operational public transport	The design of the Western Portal road network is being developed in consultation with VicRoads, Transport for Victoria, Public Transport Victoria and City of Melbourne. The route 402 bus, which traverses the western end of the precinct, currently has a stop on Kensington Road / Childers Street. This stop is situated outside of the CYP extent of works and therefore its existing and planned future uses will likely be addressed by the RIA and subject to a separate Development Plan.
EPR T9: Operational active transport	The design of the Western Portal road network is being developed in consultation with VicRoads, Transport for Victoria, Public Transport Victoria and City of Melbourne. The future Western Portal precinct hardscaping design, including the development of a pedestrian footpath and on-road bicycle design for Childers Street, is outside CYP scope and is addressed by the RIA. These works have been subject to a separate Development Plan.
EPR T10: Waste collection	The design of the Western Portal road network is being developed in consultation with VicRoads, Transport for Victoria, Public Transport Victoria and City of Melbourne. The implementation of a waste collection plan in the Western Portal precinct will be addressed during the detailed design phase of the Project by the RIA. Ongoing consultation between CYP and the RIA will take place to ensure an integrated design response.

5. CONCLUSION

This Western Portal Development Plan presents the scope and extent of the built form of CYP's works at the Western Portal precinct. In accordance with Clause 4.7 of the Incorporated Document, this plan includes:

- Site layout plan (refer to Appendix A: Western Portal Site Layout Plan)
- Architectural plans and elevations (refer to Appendix B: Western Portal Architectural Plans and Elevations)
- Landscape and public realm plans (refer to Appendix C: Western Portal Landscape and Public Realm Plans)
- An explanation demonstrating how this Development Plan is in accordance with the relevant sections of the approved Urban Design Strategy (refer to Section 4.3 and Appendix D: Western Portal Urban Design Strategy guidelines Assessment)
- An explanation demonstrating how this Development Plan is in accordance with the relevant sections of the approved Environmental Management Framework particularly the Environmental Performance Requirements (refer to Section 4.4 and Appendix E: Western Portal Environmental Performance Requirements Assessment).

RPV's Urban Design Strategy established the following Urban Design Vision for the Project:

"A legacy of outstanding rail stations and associated public spaces that put people first, contribute to Melbourne's reputation for design excellence, and deliver an overall substantial benefit in terms of urban quality for Melbourne, for the transport network, and for local areas influenced by the Project."

The western tunnel entrance will enable the Sunbury line to peel off from the existing rail corridor and join up with the Cranbourne / Pakenham line, via the new Metro Tunnel.

The CYP design for the Western Portal has incorporated feedback from a range of stakeholders including those identified in the Incorporated Document; the Office of the Victorian Government Architect, City of Melbourne, Heritage Victoria, Transport for Victoria, VicRoads, Public Transport Victoria and Melbourne Water.

Consultation with community stakeholders has also occurred as part of the preparation of this Western Portal Development Plan including during a 15-business day public inspection period from Friday 6 April 2018 until Friday 27 April 2018, allowing for the Anzac Day public holiday. During this time, it was available on the Metro Tunnel website along with an opportunity to provide written comments.

The previous version of this Western Portal Development Plan was approved by the Minister for Planning on 21 June 2018. Under the Project's Incorporated Document, and in accordance with clause 4.7.8, CYP is seeking a minor amendment to this Development Plan.

The amendments to this Development Plan relate to the colour and materiality of the upper part of the Western Portal building, and the addition of a water meter located adjacent to the Western Portal building. The decision-making in relation to these elements has involved an iterative stakeholder consultation process as part of detailed design.

This Development Plan presents the scope and extent of the built form of CYP's works in the Western Portal with associated construction works to occur within the Project Land boundary and construction impacts to be managed in accordance with the approved Environmental Management Framework. This includes separately prepared Environmental Management System, Construction Environmental Management Plan, Site Environmental Implementation Plans and aspect-specific management plans (as specified in the Environmental Performance Requirements).

APPENDIX A: WESTERN PORTAL SITE LAYOUT PLAN

Key Plan and Legend	TAS-CYP-WP-00-DRG-AUD-MMN-000012-DP
Site Layout Plan	TAS-CYP-WP-00-DRG-AUD-MMN-002211-DP
Associated Works Area	TAS-CYP-WPZ-ZWD-DRG-XLP-NAP-X0001

Certified By (BLOCK LETTERS) (SIGNATURE) (DATE)

LEGEND

PROJECT LAND BOUNDARY

EXTENT OF CYP BUILT FORM

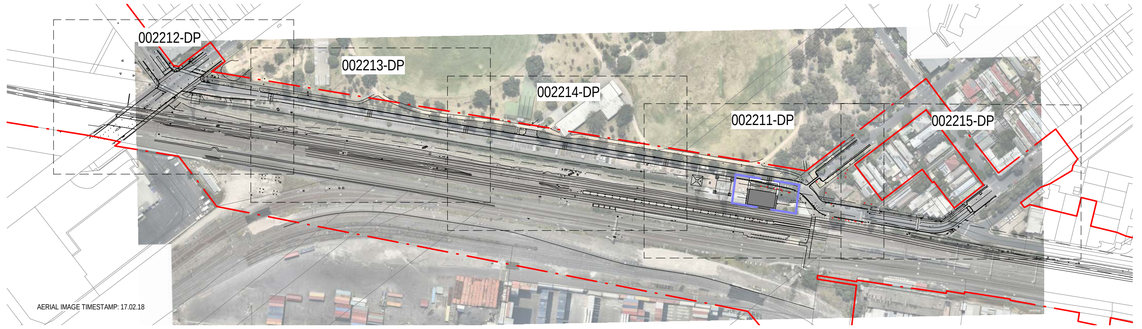
EXISTING TREE

TREE TO BE REMOVED;
AS PER THE CYP MELBOURNE METRO GIS

NOTES:
DESIGN AND INSTALLATION OF LANDSCAPE WORKS BY OTHERS. EXTENT SHOWN IS APPROXIMATE ONLY.

EXISTING TREES TO BE REMOVED AND RETAINED ARE CURRENT AS AT 03.04.2018 AND SUBJECT TO FURTHER DETAILED DESIGN THAT MAY RESULT IN FURTHER CHANGE. CROSS YARRA PARTNERSHIP IS COMMITTED TO PROTECTING AS MANY TREES AS POSSIBLE. THIS WILL REMAIN A PRIORITY THROUGHOUT DETAILED DESIGN

KEY PLAN



DEVELOPMENT PLAN SUBMISSION

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CYP		G.4	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

Cross Yarra Partnership

ARCHITECTURAL
METRO TUNNEL
WESTERN PORTAL
LEGEND

Up Location	Down Location	Datum
East.	East.	
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PUBLIC TRANSPORT VICTORIA PT

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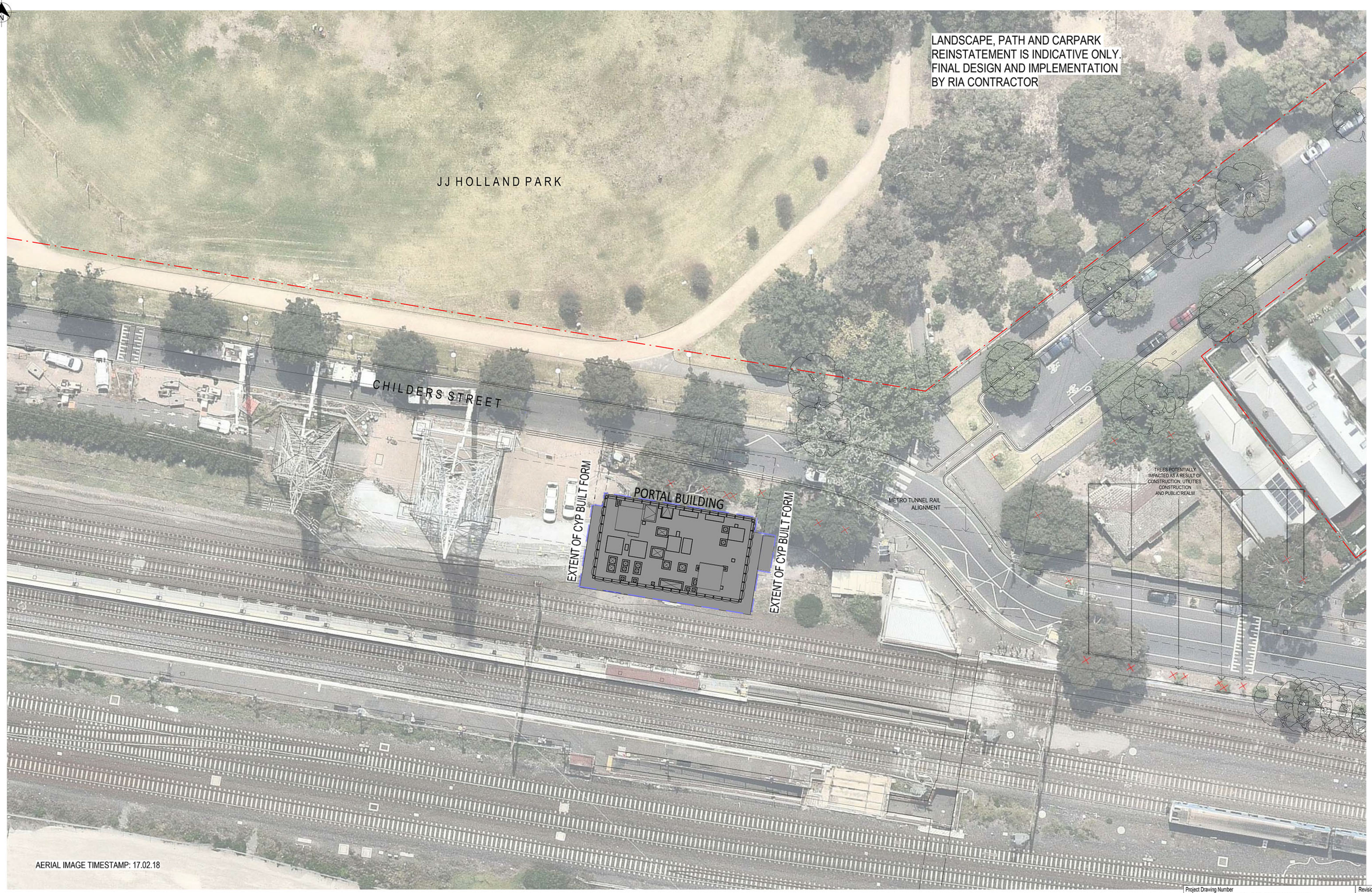

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CYP		H.1	07.05.20	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		
CYP		G.5	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL

METRO TUNNEL

WESTERN PORTAL

SITE PLAN

Up Location	Down Location	Datum
East.	East.	
North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

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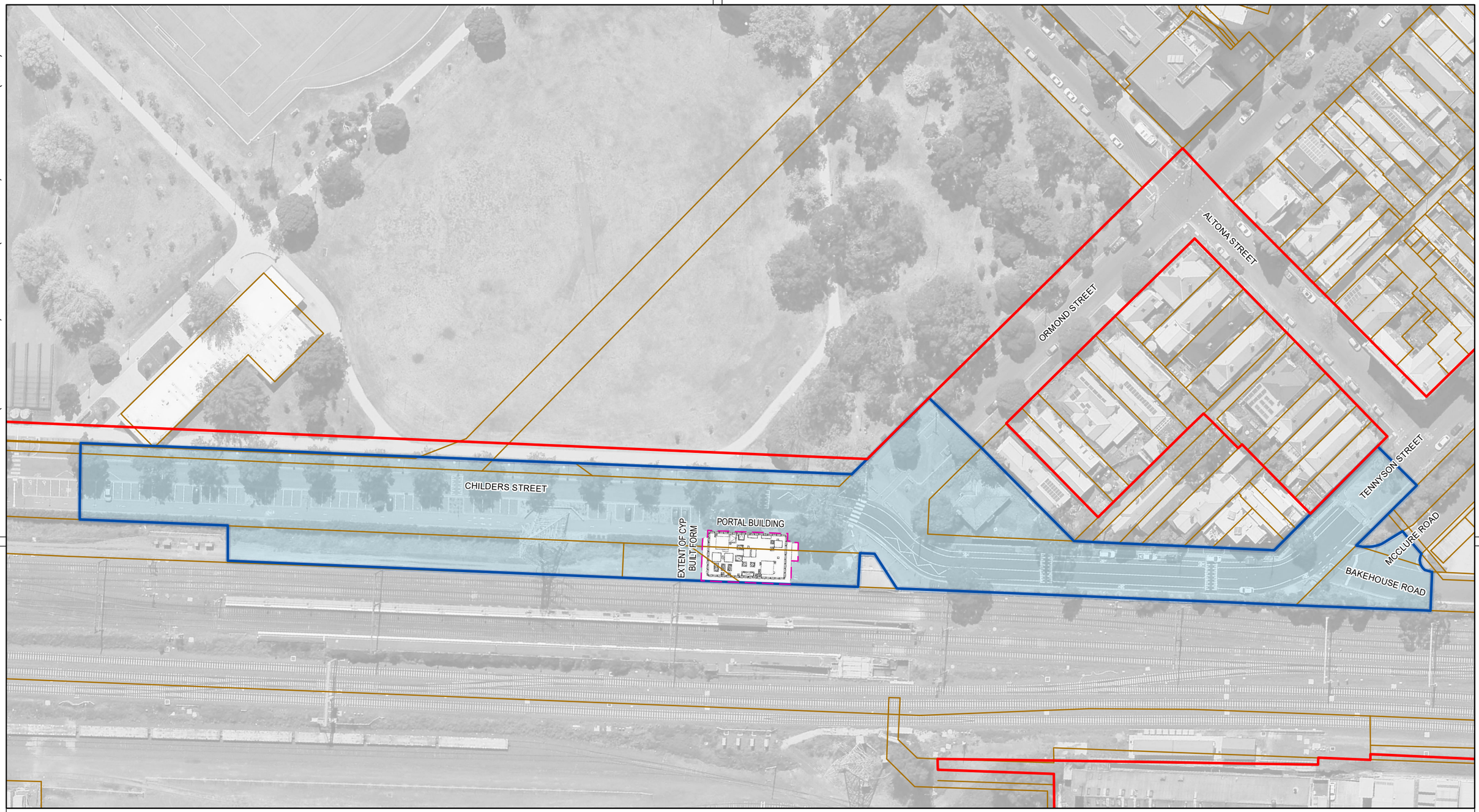

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- DIGITAL CADASTRE
- PROJECT LAND BOUNDARY
- PROJECT LAND FOR ASSOCIATED WORKS
- EXTENT OF BUILT FORM

WORKING DRAFT

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CYP		D4	17.08.20	ISSUED FOR SUBMISSION	E.Y.	J. B.		
CYP		D3	02.05.18	ISSUED FOR SUBMISSION	E.Y.	M. A.		
CYP		D2	08.03.18	ISSUED FOR SUBMISSION	E.Y.	M. A.		
CYP		D1	12.02.18	ISSUED FOR SUBMISSION	E.Y.	M. A.		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: MELBOURNE METRO RAIL AUTHORITY

OTHER

METRO TUNNEL WESTERN PORTAL CONSTRUCTION PLAN

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East. North. ID#	East. North. ID#	MGA Z55

PUBLIC TRANSPORT VICTORIA PT

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Drawing Number	Revision

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APPENDIX B: WESTERN PORTAL ARCHITECTURAL PLANS AND ELEVATIONS

Ground Floor Plan	TAS-CYP-WPZ003001-DP
North South Cross Section and East West Long Section	TAS-CYP-WPZ003201-DP
North Elevation	TAS-CYP-WPZ003202-DP
Material Schedule	TAS-CYP-WPZ000006-DP

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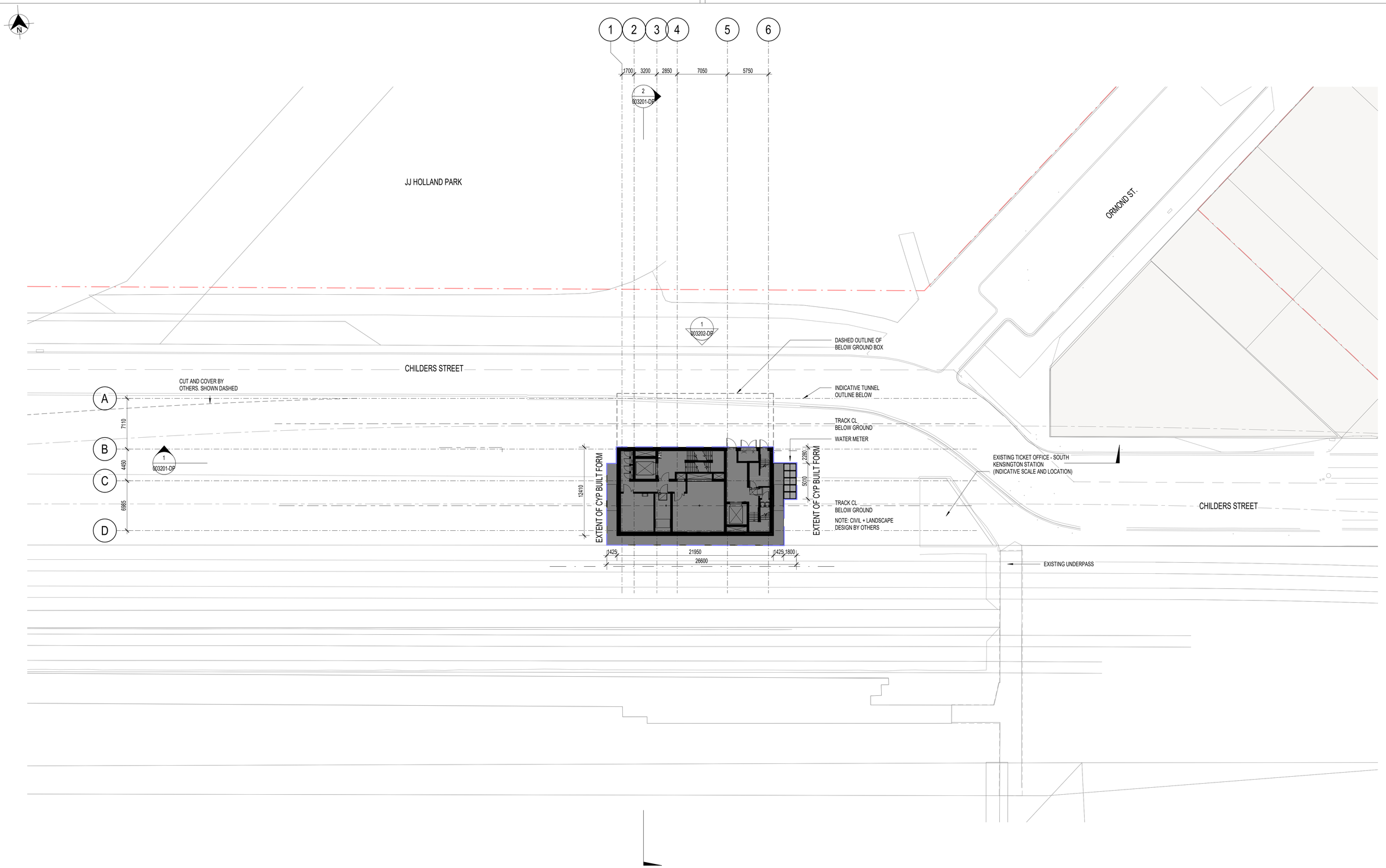

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CYP		G.2	23.02.18	DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL
WESTERN PORTAL
GROUND FLOOR PLAN

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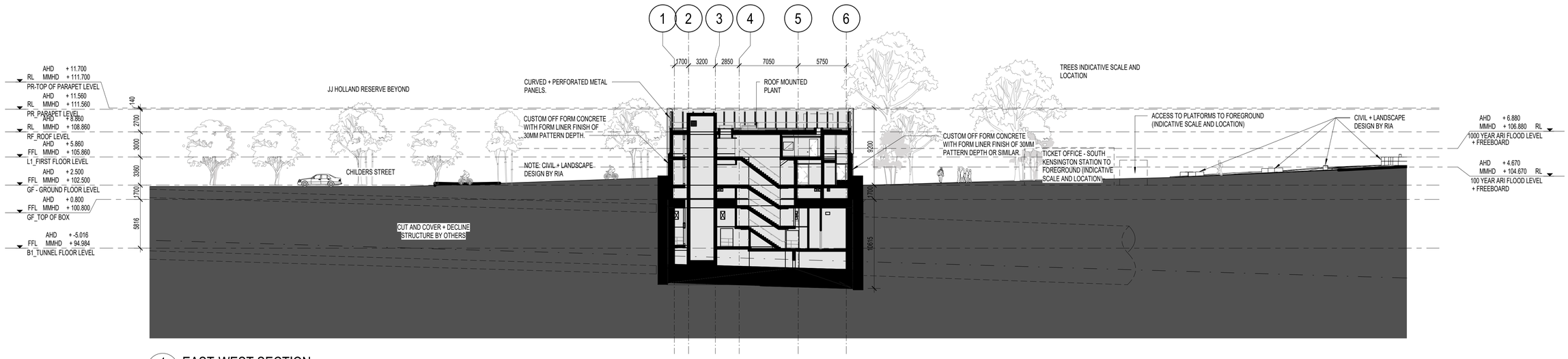

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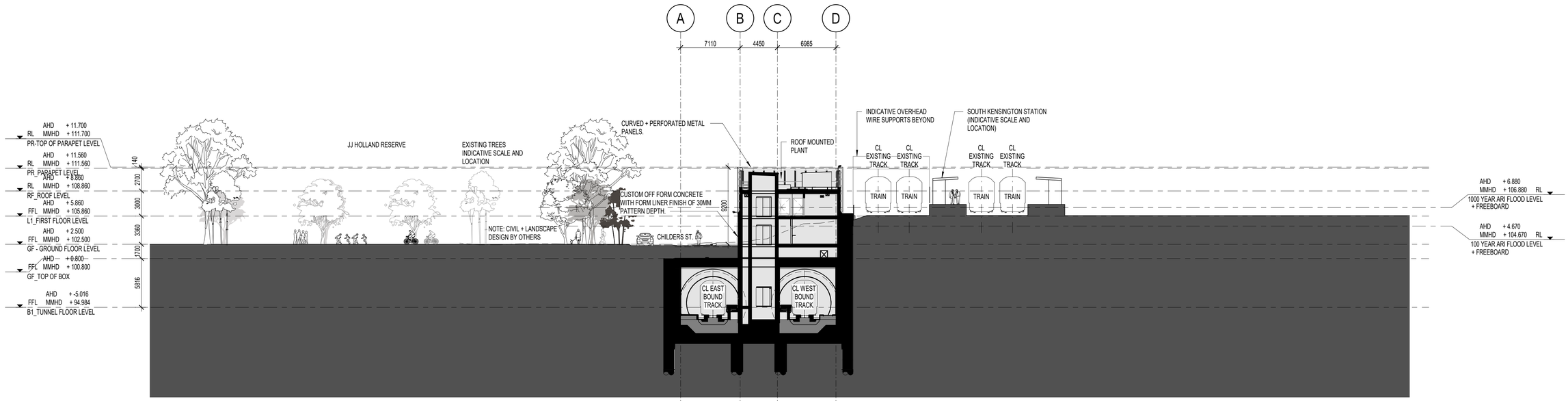

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ARCHITECTURAL
WESTERN PORTAL
SECTIONS 1-250

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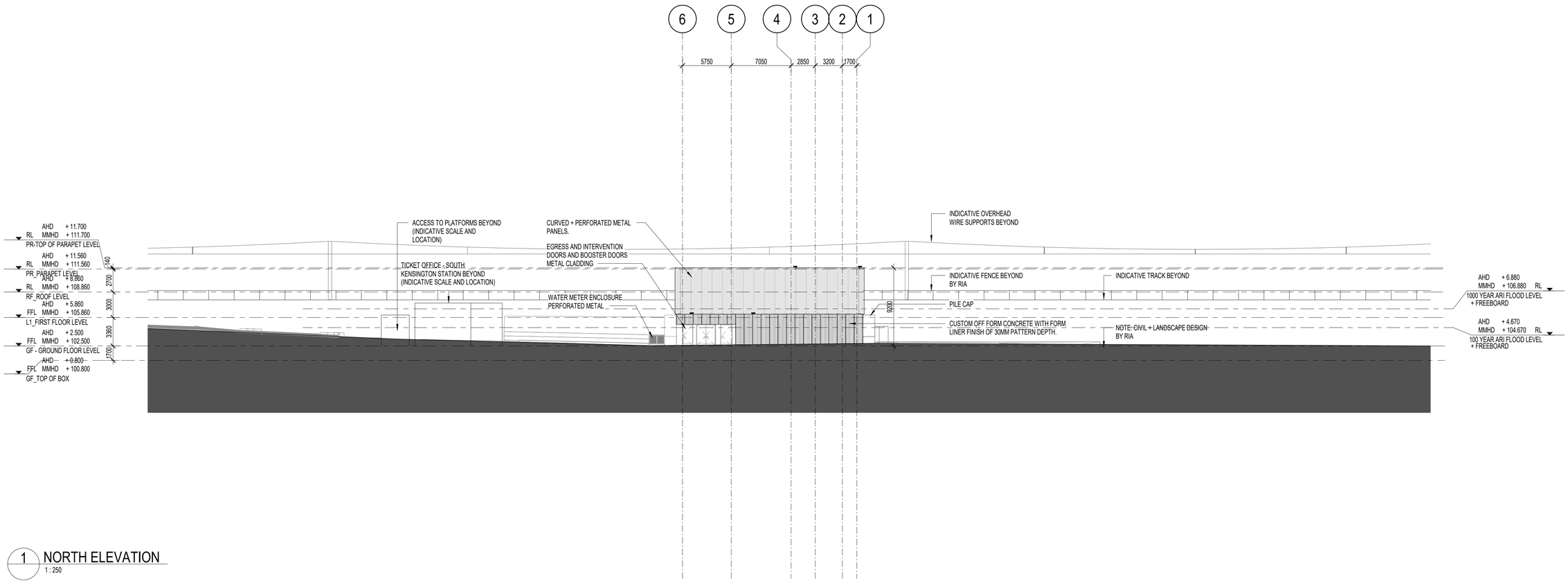

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ARCHITECTURAL
WESTERN PORTAL
ELEVATIONS 1-250

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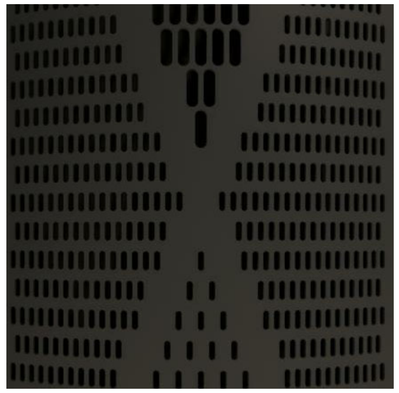

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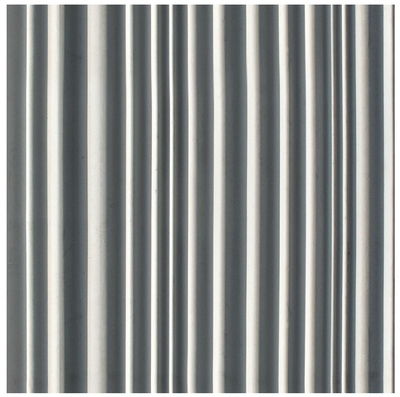

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DEVELOPMENT PLAN SUBMISSION

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Cross Yarra Partnership

ARCHITECTURAL
WESTERN PORTAL
INDICATIVE MATERIALS

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North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

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Sheet No.

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Approved	Approval Date
Drawing Number	Revision

APPENDIX C: WESTERN PORTAL LANDSCAPE AND PUBLIC REALM PLANS

Key Plan and Legend	TAS-CYP-WP-00-DRG-AUD-MMN-000012-DP
Landscape Plan – Sheet 01 of 05	TAS-CYP-WP-00-DRG-AUD-MMN-002211-DP
Landscape Plan – Sheet 02 of 05	TAS-CYP-WP-00-DRG-AUD-MMN-002212-DP
Landscape Plan – Sheet 03 of 05	TAS-CYP-WP-00-DRG-AUD-MMN-002213-DP
Landscape Plan – Sheet 04 of 05	TAS-CYP-WP-00-DRG-AUD-MMN-002214-DP
Landscape Plan – Sheet 05 of 05	TAS-CYP-WP-00-DRG-AUD-MMN-002215-DP

Certified By (BLOCK LETTERS) (SIGNATURE) (DATE)

LEGEND

PROJECT LAND BOUNDARY

EXTENT OF CYP BUILT FORM

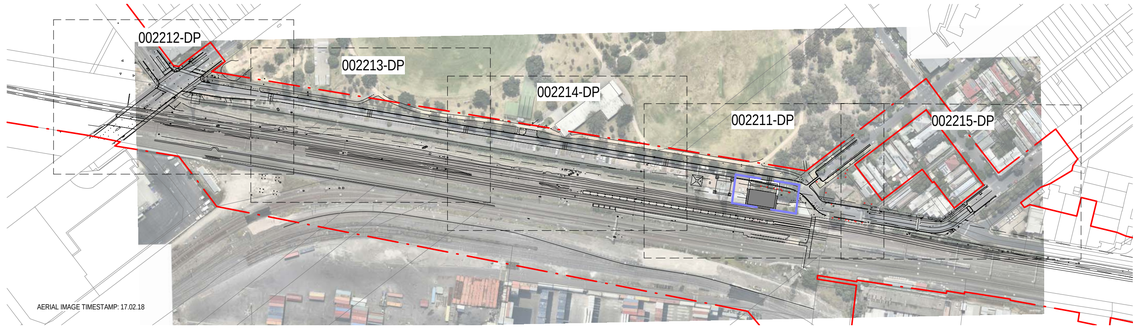
EXISTING TREE

TREE TO BE REMOVED;
AS PER THE CYP MELBOURNE METRO GIS

NOTES:
DESIGN AND INSTALLATION OF LANDSCAPE WORKS BY OTHERS. EXTENT SHOWN IS APPROXIMATE ONLY.

EXISTING TREES TO BE REMOVED AND RETAINED ARE CURRENT AS AT 03.04.2018 AND SUBJECT TO FURTHER DETAILED DESIGN THAT MAY RESULT IN FURTHER CHANGE. CROSS YARRA PARTNERSHIP IS COMMITTED TO PROTECTING AS MANY TREES AS POSSIBLE. THIS WILL REMAIN A PRIORITY THROUGHOUT DETAILED DESIGN

KEY PLAN



DEVELOPMENT PLAN SUBMISSION

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Cross Yarra Partnership

ARCHITECTURAL
METRO TUNNEL
WESTERN PORTAL
LEGEND

Up Location	Down Location	Datum
East.	East.	
North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

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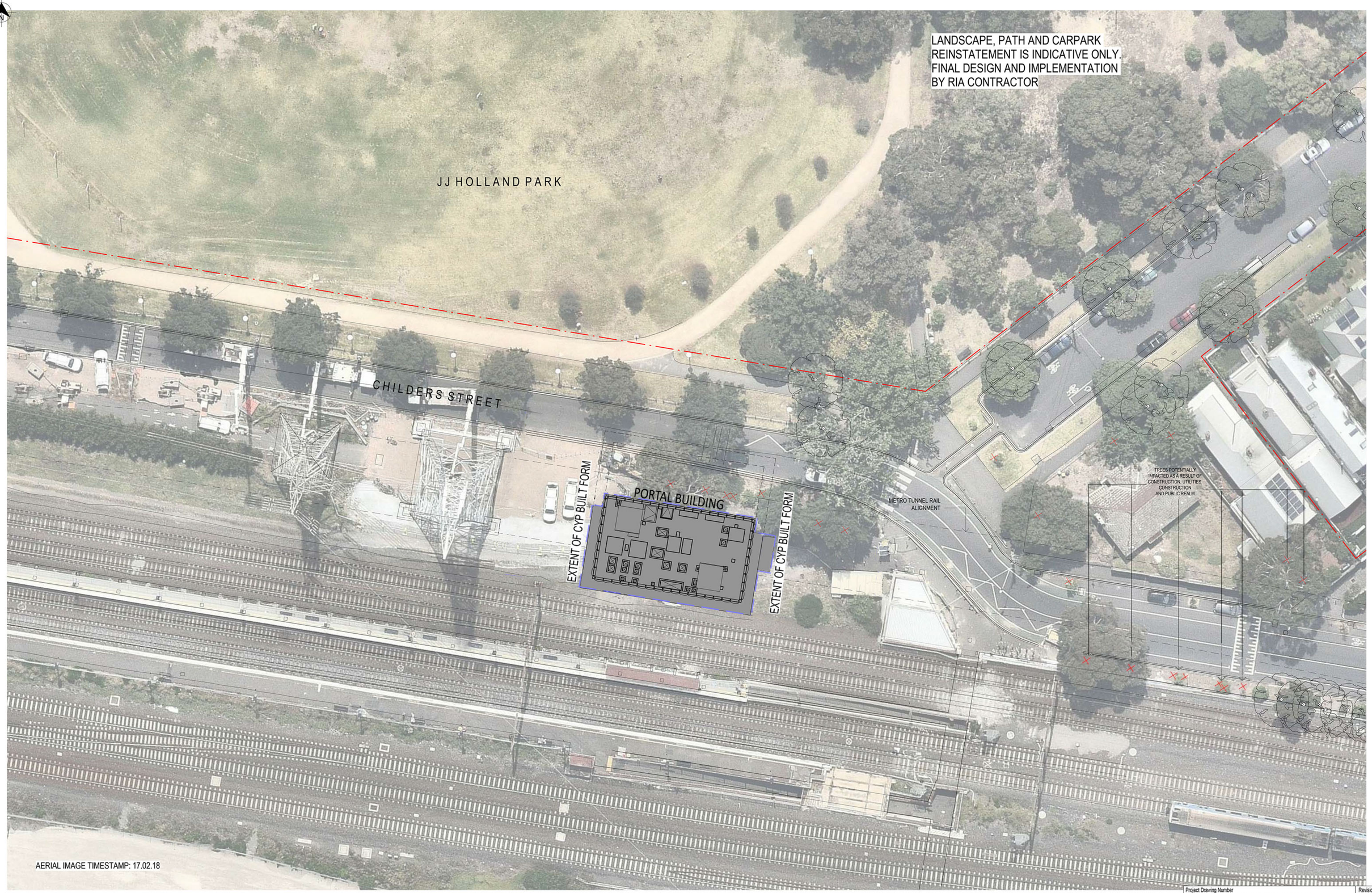

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LEGEND

PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM / DESIGN RESPONSE

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
CYP		H.2	07.09.20	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		
CYP		H.1	07.05.20	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		
CYP		G.5	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL

METRO TUNNEL

WESTERN PORTAL

LANDSCAPE PLAN - SHEET 01 OF 05

Up Location	Down Location	Datum
East.	East.	
North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

File Name

Sheet No.

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Project Drawing Number: TAS-CYP-WP-00-DRG-AUD-MMN-002211-DP

Revision: H.2

Drawn By	Designed By
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Checked By	Ind. Review
hrlv/GB	
Approved	Approval Date
Drawing Number	Revision

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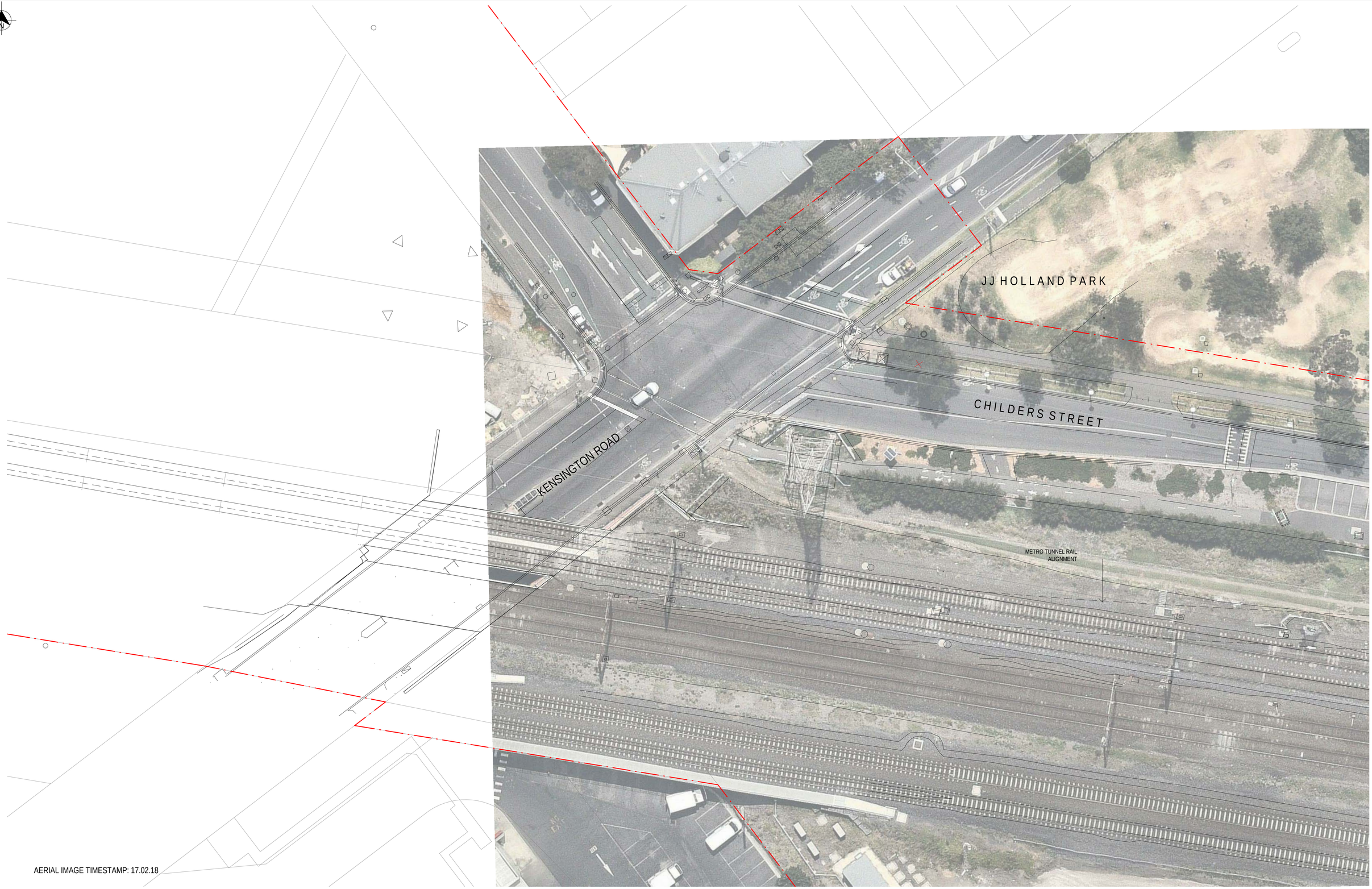

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LEGEND

PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM / DESIGN RESPONSE

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
CYP		G.4	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL

METRO TUNNEL
WESTERN PORTAL
LANDSCAPE PLAN - SHEET 02 OF 05

Up Location	Down Location	Datum
East. North. IDI#	East. North. IDI#	

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number	Revision
TAS-CYP-WP-00-DRG-AUD-MMN-002212-DP	G.4

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PROJECT LAND BOUNDARY
EXTENT OF PUBLIC REALM / DESIGN RESPONSE

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CYP		G.4	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL

METRO TUNNEL
WESTERN PORTAL
LANDSCAPE PLAN - SHEET 03 OF 05

Up Location	Down Location	Datum
East.	East.	
North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number: TAS-CYP-WP-00-DRG-AUD-MMN-002213-DP
Revision: G.4

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PROJECT LAND BOUNDARY
EXTENT OF PUBLIC REALM / DESIGN RESPONSE

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
CYP		G.5	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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METRO TUNNEL
WESTERN PORTAL
LANDSCAPE PLAN - SHEET 04 OF 05

Up Location	Down Location	Datum
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ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number	TAS-CYP-WP-00-DRG-AUD-MMN-002214-DP
Revision	G.5
Drawn By	H+WW
Designed By	H+WW
Checked By	hrlv/GB
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LEGEND

PROJECT LAND BOUNDARY
EXTENT OF PUBLIC REALM / DESIGN RESPONSE

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
CYP		H.1	07.09.20	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		
CYP		G.5	04.05.18	ISSUED FOR DEVELOPMENT PLAN	H+WW	hrlv/GB		

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ARCHITECTURAL

METRO TUNNEL
WESTERN PORTAL
LANDSCAPE PLAN - SHEET 05 OF 05

Up Location	Down Location	Datum
East.	East.	
North.	North.	
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number	TAS-CYP-WP-00-DRG-AUD-MMN-002215-DP
Revision	H.1
Drawn By	H+WW
Designed By	H+WW
Checked By	hrlv/GB
Ind. Review	
File Name	
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Drawing Number	
Revision	

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APPENDIX D: WESTERN PORTAL URBAN DESIGN STRATEGY GUIDELINES ASSESSMENT

Western Portal Development Plan - Urban Design Strategy guidelines assessment

Author: Jenna Beckett
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Approver: Mat Peel
Date: 28-09-20

Section	Clause	Design Guideline	Design Response
3.1	**Make new and improved connections**		
	3.1.c.1.	Station precinct environments must support safe and predictable movements that are prioritised along the following transport hierarchy: - active transport - pedestrian and cycling, including people entering the station as well as passing the station entrances - sustainable transport - train, tram, bus and coach - emergency and short term vehicles - emergency vehicles, service vehicles, commercial / private transport, taxi ranks, kiss-and-ride - private transport - disabled-access car parking, staff and maintenance car parking, park and ride car parking.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.1.c.2.	Provide for integration of all transport modes in line with the modal hierarchy above: - locate, orient and design station entries to connect via public routes into the wider pedestrian network. - ensure clear visual and physical connections to nearby bus, tram and taxi stops and kiss-and-ride facilities. - maximise bicycle parking facilities associated with stations where it will expand access to Metro services by connecting to major cycling routes and key catchments, in particular at Arden, Parkville and Domain stations.	The Western Portal does not have defined transport modal hierarchy compared with the station precincts and therefore assessment against this UDS clause is not included as part of the Western Portal Development Plan. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.1.c.3.	Minimise conflicts between transport modes and intersecting routes of travel: - design station entries with adequate space for people to transition from stairs, escalators and lifts to travel routes along the ground surface so that congestion in surrounding thoroughfares is minimised and appropriately managed. - define pathways and promote awareness of crossing transport modes, e.g. using changes in surface treatments and other visual cues. - ensure that aboveground station infrastructure does not create unnecessary barriers or obstructions to pedestrian or cycle flows in the streets. - integrate balustrades and other required barriers and safety devices into the overall precinct design.	Pedestrian access surrounding the Western Portal is addressed in Section 4.3.4 of this Development Plan.
	3.1.c.4.	Support ease of wayfinding - create well-structured paths and clear sightlines so that wayfinding is intuitive and reliance on directional signage is minimised. - orient stations entries onto public streets where possible. Ensure that paths of travel to and from station entries that are not directly connected to main streets are easy to find and follow, and are clearly identifiable as being accessible to the general public. - design stations to capitalise on view lines to existing local landmarks and spaces that will assist with orientation. - create new visual markers and treatments that will assist with orientation and recognition of specific locations. - provide clear, consistent and easy-to-follow directional signage, responding to the particular local requirements and nearby destinations. - establish appropriate links between directional signage provided as part of Melbourne Metro and directional signage used in surrounding precincts.	Wayfinding signage is not required for the Western Portal as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.1.c.5.	Create and improve strategic walking and cycling routes that connect the stations into surrounding areas. - create opportunities for public pedestrian links through non-ticketed areas of station buildings to provide safe crossings of major streets. - create convenient and safe alignments of footpaths and walking routes that facilitate access to the stations and to the other destinations in the precinct. - consider the needs of future growth, long-term development patterns, and changes to demand. - provide generous path widths, safe and accessible slopes and cross-falls, and the placement of features to maintain clear circulation space, with priority generally given to circulation areas along the building line. - design of crossings and Shared Zones (where pedestrians, cyclists and motorised traffic share the same road space) to ensure safety and prioritisation according to the modal hierarchy. - provide bike paths, shared paths and on-street bike lanes, with widths and treatments that maximise safety and allow for future growth in demand.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.1.c.6.	Provide universal access throughout public spaces and stations, with intuitive paths of travel for people with visual impairments, accessible grades along paths, and appropriate use of ramps, kerb ramps, and tactile paving.	Universal access to the Western Portal, including DDA compliance, is presented in Section 4.3.4 of the Development Plan.

Western Portal Development Plan - Urban Design Strategy guidelines assessment

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	3.1.c.7.	Provide for vehicular traffic lanes as appropriate, with consideration of lane widths, kerb radials at corners and intersections to suit swept paths, and appropriate levels, slopes and cross-falls.	Vehicular traffic lanes at the Western Portal are presented in Section 4.3.3 of the Development Plan.
	3.1.c.8.	Provide for vehicle parking, as appropriate, with consideration of locations and arrangements, management systems (ticket machines etc.) and motorcycle parking.	Vehicle parking for the Western Portal is presented in Section 4.3.3 of the Development Plan.
3.2	**Make great public places**		
	3.2.c.1.	Ensure that all aspects of the design are of a high quality in concept, resolution and execution. Designs must be: - fit for purpose - responsive to all users' needs - responsive to the site and associated cultural values - sustainable.	The public realm design philosophy for the Western Portal is presented in Section 4.3.3 of the Development Plan.
	3.2.c.2.	Design spaces to be activated by public use: - provide seating and other infrastructure to encourage people to inhabit the space. - support the programming of spaces for a range of event scales and type. - accommodate opportunities for street trading activities as consistent with local authority policies and guidelines. - locate, design and manage activities in underground stations, including business opportunities, to contribute to activation of the wider precinct. - support appropriate uses of public streets and spaces to support social and recreational needs of the precinct.	The public realm for the Western Portal is presented in Section 4.3.3 of the Development Plan.
	3.2.c.3.	Provide safe environments that promote safe behaviour and the feeling of safety: - design spaces with consideration of Crime Prevention Through Environmental Design principles. - support complementary mixes of activities, activation and passive surveillance that contribute to other users' interest and safety. - maximise visual connectivity between spaces to enable passive surveillance, and arrange uses to maximise passive surveillance. - design and manage entries to underground stations and pedestrian subways to ensure safe conditions in surrounding spaces and approach routes, including when the stations are closed.	Crime prevention through environmental design is presented in Section 4.3.9 of the Development Plan for the Western Portal.
	3.2.c.4.	Respect heritage and respond to local cultural and indigenous heritage issues: - retain and protect significant heritage elements including spaces, views, vegetation, natural and designed landforms and built fabric. - design new works to complement heritage elements. - integrative interpretive elements into designs to reflect local cultural and indigenous heritage where appropriate.	The Western Portal response to the local culture and heritage is presented in Section 4.4.3 of the Development Plan.
	3.2.c.5.	Make provision for stormwater drainage and management: - incorporate pollution control measures to protect water quality. - integrate the provision of pits, covers and grates and discharges into drains with other aspects of the design. - incorporate stormwater capture and reuse as appropriate. - incorporate drainage swales, bio-filtration beds and soil drainage as appropriate. - respond to existing and future local flood levels and overland flow paths.	Stormwater drainage and management for the Western Portal is presented in Section 4.4.7 of the Development Plan.
	3.2.c.6.	Select and design paving and surface finishes to be fit for purpose, durable and sustainable and easy to maintain, and to enhance the character and use of the space.	Materials and finishes for the Western Portal are presented in Section 4.3.8 of the Development Plan.
	3.2.c.7.	Integrate street and park furniture into the overall design of public spaces as appropriate to support their use and to provide for the comfort, convenience and safety of patrons and users.	Street and park furniture are outside the scope of CYP's works for the Western Portal. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.

Western Portal Development Plan - Urban Design Strategy guidelines assessment

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3.2.c.8.	Provide lighting for amenity, wayfinding, visual comfort, road safety and personal security: - provide a high quality of illumination with respect to supporting people's perception at night, including minimisation of flare and the use of white light to improve colour rendition and people's ability to recognise detail. - contribute positively to and integrate with the character of the area. - incorporate feature lighting as appropriate to express the hierarchy and functionality of spaces. - minimise light spill to adjacent sensitive land uses. - use responsible management systems, efficient technology and other forms of best practice energy conservation. - reinstate existing CCTV infrastructure where affected by the project.	A lighting strategy for the Western Portal is presented in Section 4.3.5 of the Development Plan. Street furniture and public seating are outside the scope of the Western Portal. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
3.2.c.9.	Provide access to public amenities including public toilets	Public toilets are not proposed as part of the scope and extent of CYP's works for the Western Portal as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
3.2.c.10.	Provide access to public transport facilities including passenger shelters, other forms of weather protection, ticket sales and validation machines etc.	Public transport facilities are not proposed as part of the scope and extent of CYP's works for the Western Portal. The surrounding South Kensington Station features station amenities, however the Western Portal is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
3.2.c.11.	Incorporate public art in appropriate places - integrate site responsive art into the project design where appropriate. - design the settings of existing artworks, memorials and monuments to be retained to respect the works' cultural values and formal design qualities. - integrate site responsive art into the project design (e.g. facilitating playful interaction and seating opportunities) and located to optimise the legibility of the surrounding area.	Public art is not proposed as part of the scope and extent of CYP's works for the Western Portal. The surrounding South Kensington station features public art, however the Western Portal is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
3.2.c.12.	Provide signage in accordance with PTV, VicRoads, land manager and authority standards and guidelines, including: - traffic and parking management signs - street signs, place / building name signage, and address numbers. - pedestrian direction signs and tourist information. - interpretive signage and commemorative plaques. - temporary or events signage.	Signage, where required, will be in accordance with the Department of Transport (previously known as PTV, VicRoads and Transport for Victoria), land manager and authority standards and guidelines. CYP's works within the Western Portal do not propose signage installation, as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
3.2.c.13.	Integrate any advertising with public infrastructure and energy that they complement the character, functionality and amenity of the precinct: - advertising must not detract from directional or wayfinding signs. - advertising must not dominate the public realm or detract from the architectural design intent of the stations. - advertising must be minimised within heritage areas. - advertising should be minimised at locations that are prominent in views from significant heritage sites and public parks. - advertising must be in accordance with local government, VicRoads and PTV guidelines. - advertising must not conflict with existing contractual relationships relating to the sites or elements on them e.g. for the supply and maintenance of tram passenger shelters with advertising panels.	Advertising is not considered relevant for the submission of this Development Plan. Within the Incorporated Document, under Clause 4.6.3, a Development Plan must include references to signage, however advertising is not specified. Signage is outlined in UDS guideline response 3.2.c.12.

Western Portal Development Plan - Urban Design Strategy guidelines assessment

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	3.2.c.14.	Incorporate planting as an integral part of site designs: - provide shade and shelter, screening, ornament and define of a sense of a place that relates to each site and its landscape context. - create superior soil conditions for new planting, including consideration of the use of permeable paving materials within trees' drip zones, extensive soil preparation, and high quality structural soils beneath pavements. - avoid containerised planting conditions and provide contiguous root zones where possible. - contribute to increased biodiversity and resilience of plant communities in accordance with the Urban Forest and Nature in the City strategies. - offset any vegetation loss. - ensure that plantings are designed to complement and protect the functionality of other infrastructure including public lighting, CCTV surveillance systems and underground utilities.	The scope and extent of CYP's works within the Western Portal do not propose landscaping. Landscaping forms part of the scope of the Rail Infrastructure Alliance (RIA) (appointed by RPV). Therefore the incorporation of planting will be addressed in a separate Western Portal Development Plan, developed by RIA.
	3.2.c.15.	Address irrigation including passive irrigation and opportunities for rain water infiltration into the soil, options for non-potable water supplies, irrigation zones and system types, control systems and equipment.	The scope and extent of CYP's works within the Western Portal do not propose landscaping. Landscaping forms part of the scope of the Rail Infrastructure Alliance (RIA) (appointed by RPV). Therefore measures such as passive irrigation and rain water infiltration will be addressed in a separate Western Portal Development Plan, developed by RIA .
3.3	**Balance line-wide consistency with site responsiveness**		
	3.3.c.1.	Operational elements of the public transport system, involving the public and staff, must be consistent with the transport system as a whole in terms of their functionality and style of presentation. This includes the adoption of detailed design standards and use of those details in a manner consistent with their intent and function throughout the wider system, including but not limited to: - ticket systems and barriers - timetable displays, directional signs and other information used to access platforms and services - ticket sales and other assistance - safety systems.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.3.c.2.	The character of individual stations may vary between sites, and should be responsive to their physical, social and functional context: - the architecture of the stations should be of a contemporary high quality that clearly expresses function and important civic role. - station entries should be of an appropriate scale, form and design to support wayfinding and accessibility while responding to the local urban environment.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.

Western Portal Development Plan - Urban Design Strategy guidelines assessment

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	3.3.c.3.	Locate and design infrastructure to integrate sensitively with its surroundings and to ensure the amenity and functionality of spaces it occupies: - permanent infrastructure should be located outside public spaces, utilising or expanding future over site development to accommodate above ground services such as vents and emergency accesses where possible. - respond to the setting and complement the design of adjoining buildings and open space. - give each element of Melbourne Metro infrastructure in the public realm a design character appropriate to its public function, ranging from striking visual qualities for entries and other elements that people use and interact with, or that function as landmarks for wayfinding, through to recessive treatments for service facilities. - minimise detrimental impacts on uses, e.g. as may result from fragmentation of spaces by physical structures, cluttering footpaths, conflicting traffic patterns (including pedestrian traffic), and noise. - where fragmentation is unavoidable, design structures and spaces to support the activation and use of surrounding spaces. - avoid obstructing views to building frontages or important pedestrian pathways. - minimise visual conflicts with significant buildings, monuments, specimen trees, open spaces and landscape vistas, especially those with a formal character that is highly sensitive to intrusions. - where possible, locate aboveground utilitarian structures near to larger nearby structures and plantings (other than sensitive ones noted above) to make the new structures seem relatively insignificant by comparison. - Design all structures to complement and coordinate with existing nearby structures and service infrastructure, with consideration of their cumulative impact on the visual character with the site. - where appropriate, minimise the visual impact of structures with screen plantings that are consistent in character with the site. - provide high quality architectural and landscape solutions including the use of forms, sustainable materials, finishes and detailing that are appropriate to their uses, responsive to the context, that present well to nearby viewers. - minimise inactive and blank walls visible from the public realm, especially between ground and first floor levels. - maximise levels of solar access, passive surveillance and views into, through and between pedestrian routes and open spaces. - integrate acoustic treatments, where required, into the form and design of structures and equipment to minimise requirements for additional noise abatement screens. - minimise opportunities for, and likely damage from, graffiti and vandalism.	The public realm design of the Western Portal and how it integrates with its surrounds is presented in Section 4.3.3 of the Development Plan.
	3.3.c.4.	Design streetscapes and open spaces to integrate with their context: - use furniture and material palettes that are consistent with standards and guidelines of the Cities of Melbourne, Stonnington and Port Phillip, and the University of Melbourne. - use furniture and material palettes that respond to the changed context created by Melbourne Metro, including increases in pedestrian activity and heightened prominence in certain locations. - designs for streetscape works should be consistent with the remainder of the affected street, including the street layout, tree planting, paving materials and detailing (unless otherwise specified for particular sites). - tree species, tree densities and their locations in the road reserve (e.g. in footpaths or medians) should be consistent with relevant local plans and strategies.	The public realm design of the Western Portal is presented in Section 4.3.3 of the Development Plan. Material palettes are presented in Section 4.3.8 of the Development Plan.
3.4	**Support integrated site redevelopment**		
	3.4.c.1.	Avoid limiting future redevelopment potential of residual properties acquired for the project at the Western Portal and Eastern Portal.	The design of the Western Portal will not preclude future redevelopment of residual properties acquired for the project. This is presented in Section 4.3.3 of the Western Portal Development Plan.
	3.4.c.2.	Consider future precinct-wide redevelopment at Arden, as well as over-site development of the station.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Refer to the Arden Precinct Development Plan.
	3.4.c.3.	Permit adjoining and potential over-site development at station entries within the University of Melbourne, either in parallel with the project or at a future date.	This is not located in the Western Portal Precinct. Refer to the Parkville Precinct Development Plan.
	3.4.c.4.	Permanent infrastructure should be located outside public spaces, utilising or expanding future over-site development to accommodate above ground services such as vents and emergency accesses wherever possible.	The public realm at the Western Portal is presented in Section 4.3.3 of the Development Plan.

Western Portal Development Plan - Urban Design Strategy guidelines assessment

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	3.4.c.5.	Development plans for station infrastructure should consider, and integrate with, over-site development to provide for coordinated design outcomes.	This Western Portal Development Plan addresses the tunnel portal and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, State Library, Town Hall and Domain Precinct Development Plans.
	3.4.c.6.	Consolidate infrastructure within over-site developments so as to minimise impacts on the public realm, including: - minimise above ground infrastructure on the public realm. - minimise constraints on surface features and uses in the public realm due to underground infrastructure.	The public realm at the Western Portal is presented in Section 4.3.3 of the Development Plan.
	3.4.c.7.	Integrate redevelopment for complementary uses with the station entries in the CBD, including: - over-site development of properties acquired at the La Trobe - Little La Trobe Sub-Precinct and Cocker Alley Sub-Precinct - redevelopment of the City Square underground car park - reconstruction of the eastern and western shards in Federation Square.	This is not located in the Western Portal Precinct. Refer to State Library and Town Hall Precinct Development Plans.
	3.4.c.8.	Not preclude possible future across, decking over or development above rail cuttings at South Yarra.	This is not located in the Western Portal Precinct. Refer to the Eastern Portal Development Plan.

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3.5	**Design to help manage construction impacts**		
	3.5.c.1.	Maintain circulation and transport operations during the construction process: - Redirect pedestrian and cyclist movements as necessary to ensure safe access around construction work sites, businesses and properties immediately adjacent to construction work sites. - Provide for universal access, amenity and safety. - Provide for emergency and maintenance access, deliveries, access for construction projects on nearby sites, and public events. - Provide temporary bus and tram stops, including shelters, where appropriate. - Provide awnings for weather protection, where appropriate. - Provide directional signage and temporary signs for businesses and properties obscured by construction activities.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Transport Management Implementation Plan). These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
	3.5.c.2.	Protect the viability of, and amenity for, activities at and near construction work sites: - Apply principles of Crime Prevention Through Environmental Design to arrangements of access routes, hoardings and other features during the construction period. - Ensure that the location of temporary works sites and temporary infrastructure requirements align with future land use renewal, public realm activation and uplift opportunities.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Health and Safety Management Plan and Land Use Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
	3.5.c.3.	Protect features from damage: - where existing trees are to be retained, avoid damage to their canopies and minimise soil compaction and excavation within root zones. Where damage to existing canopies is likely, undertake advance pruning. Where damage to existing roots is likely, provide appropriate arboriculture care in preparation for and during construction including advanced root pruning and irrigation. - protect, relocate, reinstate or upgrade underground and overhead services as appropriate. - protect and /or temporarily remove, restore and reinstall monuments and artworks. - conserve, salvage and reuse materials where possible and appropriate including bluestone kerbs and cobblestones, street furniture etc.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
	3.5.c.4.	Maintain an attractive presentation to surrounding areas: - provide enclosures, hoardings and screens that are designed to respond to the predominant viewing distance and types of activity they are exposed to (e.g. addressed to nearby pedestrians or to motorists at a distance). - design all enclosures, hoardings, screens and other temporary features to create a positive visual presentation to prominent sites, busy pedestrian areas and key tourism precincts. - design enclosure, hoardings, screens and other temporary features with increasing quality in proportion to the time they will present. - design all temporary elements to respect the character of their setting, to ensure a neat appearance throughout the construction process, to assist in minimisation of graffiti, bill-posting and other unauthorised advertising, and to include consistent project branding. - provide opportunities to convey information about the Melbourne Metro to the community including explanation of the project objectives, scope of works, construction impacts, innovations and progress, - design to allow for temporary uses, programs of events, and pop-up public spaces to offset the impact of construction activities, including temporary parks, outdoor dining areas, pop-up markets and community arts / music festivals. - recognise the potential of acoustic sheds, in particular those at CBD North, CBD South and Domain to be designed to contribute to the image and identity of the city.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Urban Design Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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3.6	**Design for the future**		
	3.6.c.1.	Anticipate growth of Melbourne's population and future changes in activity patterns and development in response to the new Metro Tunnel services: - reinstate or redesign open spaces and infrastructure to a high standard that responds to heavier pedestrian traffic, heightened public profile and other changes that will be generated by Melbourne Metro, e.g. through the use of higher standards of materials and finishes, more robust surfaces, widened footpaths etc. - design to maximise long term flexibility in the management of, and options for improvement, of nearby spaces and infrastructure.	The future growth of Melbourne's population and response to the new Metro system is presented in Section 4.3.1 of the Western Portal Development Plan.
	3.6.c.2.	Although RPV will take possession of various areas to enable construction of Melbourne Metro, many of these will revert to other owners or managers after construction is completed. Management requirements after this handover must be supported by the design: - streets, spaces and assets that will be managed and maintained by a particular agency must be designed to the satisfaction of that agency. - boundaries between areas and assets included in the project area and scope of works, but which are ultimately to be managed by other agencies, must be delineated and the implications of that long-term management responsibility must be reflected in the design. - facilities that are managed through separate contractual processes (e.g. the City of Melbourne's self-cleaning public toilets) should, where possible, be maintained as discrete elements enabling clear demarcation of responsibilities.	The Development Plan process requires key transport agencies such as the Department of Transport (previously known as PTV, VicRoads and Transport for Victoria) and Councils, to take possession of areas that are beyond the current project scope. These areas are not included within the Development Plan, but are clearly marked as 'development by others'. Where considered relevant it is noted within the Western Portal Development Plan appendices.
	3.6.c.3.	Allow for long-term flexibility in the uses of public spaces and in the provision of facilities and services: - notwithstanding the requirement for an integrated design approach, take a cautious approach in the creation of any multifunction structures - e.g. co-locating public toilets and emergency access shafts, or recreational structures and vents - in situations where demands in relation to one function are likely to vary over time but adaptive redesign may be constrained by requirements of the other function. - design underground structures at any location in road reserves, parkland and other public spaces to withstand vehicular loadings as appropriate to a trafficable roadway, regardless of current carriageway layouts.	Public space is presented in Section 4.3.3 of the Western Portal Development Plan.
	3.6.c.4.	Support the healthy growth of canopy trees throughout parks, streets and other open spaces and allow for the potential to plant and replant over the long-term with minimal constraints: - locate underground structures at sufficient depth below the finished ground level to support healthy root systems of large canopy trees over the long-term, including provision of reserves of soil moisture to sustain trees in periods of drought and extreme heat - where underground structures must be at relatively shallow depths below the existing surface, give consideration to wholesale elevation of the finished surface to help achieve satisfactory depth of cover (within constraints relating to issues such as provision for accessibility and drainage, and protection of landscape character and heritage fabric) - areas over structures where soil volumes are unavoidably too shallow to ensure long-term tree health should be designed to be successful without trees, making other provisions for shade, shelter and greening - any new or relocated underground services should, if possible, be clustered into compact corridors and away from likely areas of planting - overhead power or telecommunication lines should be placed underground where possible to avoid interference with tree canopies.	The landscaping design response for the future Western Portal precinct will be addressed by RIA and is subject to a separate Development Plan.
	3.6.c.5.	Create robust and durable landscapes: - select plants with consideration of climate, microclimate and likely climate change - design to ensure resistance to wear due to intensive use of urban spaces and potential vandalism - minimise requirements for irrigation while ensuring appropriate landscape qualities and amenity of public spaces - design to suit relatively low-level maintenance regimes without reliance on a high level of horticultural skill.	The landscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan. Relevant materials and finishes are presented in Section 4.3.8 of the Development Plan.

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	3.6.c.6.	Respond to changing climate and microclimate conditions to improve thermal comfort and create enjoyable places for use throughout the year: - incorporate climate change adaptation measures - use trees and awnings to provide shade and shelter and to mitigate the urban heat island effect - minimise tree loss as a result of construction - replace trees removed as a result of the project to improve existing landscape character and biodiversity and contribute to increased tree canopy coverage and species diversity.	The landscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan. Relevant materials and finishes are presented in Section 4.3.8 of the Development Plan.
	3.6.c.7.	Integrate water-sensitive urban design initiatives: - incorporate rainwater collection, treatment, storage and re-use systems - maximise the proportion of stormwater from within the project area that is treated, evaporated or retained within the project footprint - use permeable surfaces where possible to allow rainwater infiltration and passive irrigation.	The landscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
	3.6.c.8.	Practice sustainable use of materials and resources	Materials and finishes for the Western Portal are presented in Section 4.3.8 of the Development Plan.
4.1	**Precinct 1: Tunnels**		
	4.1.1	**Domain Parklands Emergency Access Shaft and Tunnel Works**	
	4.1.1.e.1	If the emergency access shaft is located near the King Edward VII Memorial: Create an integrated design using landform, plantings and built elements of the emergency access shaft to form a recessive backdrop for the Edward VII Memorial and that complements the memorial's wider landscape setting.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.2	If the emergency access shaft is located near the King Edward VII Memorial: Minimise the height and bulk of aboveground structures, in particular any elements higher than ground level adjacent to the Edward VII Memorial.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.3	If the emergency access shaft is located near the King Edward VII Memorial: Keep clear of the shared path on the north side of Linlithgow Avenue	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.4	If the emergency access shaft is located near the King Edward VII Memorial: After construction, reconstruct Linlithgow Avenue to allow for City of Melbourne plans for access improvements (generally as illustrated in 'Proposed Road Closure, Linlithgow Avenue, Domain Parklands,' City of Melbourne City Design Division, project no. 901894, drawing no. L01, September 2011.)	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.5	If the emergency access shaft is located in Tom's Block: Respect the character of, cultural significance of, and views to existing memorials.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.6	If the emergency access shaft is located in Tom's Block: Create a form that presents well when viewed in the round.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.7	If the emergency access shaft is located in Tom's Block: Use recessive finishes and colours to avoid distracting from nearby monuments.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.8	If any surface works for tunnel construction occur in Tom's Block: Reinstate the existing character of gently sloping lawns with specimen trees.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.1.1.e.9	If any surface works for tunnel construction occur in Tom's Block: Avoid preventing the future installation of a new path extending the King George V avenue to St Kilda Road, as proposed in the 2007 Domain Parklands Master Plan (generally as illustrated in 'King George V Avenue Extension, Kings Domain,' City of Melbourne City Projects Division, Project No. 903197, Drawing no. SD01, 2012.)	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.2	**Precinct 2: Western Portal**		
	4.2.1	**Hobsons Road Mixed Use Precinct**	

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4.2.1.e.1	Leave the site in a condition with no added constraints to its future redevelopment, beyond those existing at present.	Hobsons Road is outside the scope and extent of CYP works for the Western Portal and is addressed in a separate Development Plan, developed by RIA (appointed by RPV).
4.2.2	**JJ Holland Park Interface**	
4.2.2.e.1	Generally maintain the northern kerb of Childers Street at its existing alignment.	The hardscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
4.2.2.e.2	Minimise physical encroachment of new rail infrastructure into Childers Street: - Use vertical retaining walls to support Metro Tunnel tracks, both where on a raised embankment and in a cutting. - Design walls and screens to prioritise preservation of space for greening and travel along Childers Street over decorative effects that increase the structure's bulk	The public realm design of the Western Portal is presented in Section 4.3.3 of the Development Plan.
4.2.2.e.3	Design walls, fencing and acoustic screens facing JJ Holland Park to be visually recessive, to present a high quality finish, and to deter graffiti.	Crime prevention through environmental design is presented in Section 4.3.9 of the Development Plan for the Western Portal.
4.2.2.e.4	Provide planted screening of railway infrastructure south of Childers Street	The landscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
4.2.2.e.5	Minimise excavation within the root zone of existing trees along the north side of Childers Street and protect the trees from damage during construction.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan which requires the development of a Tree Protection Plan. The public realm response in regards to tree retention for the Western Portal is presented in Section 4.4.2 of the Development Plan.
4.2.2.e.6	Provide a continuous and east-west bicycle route connecting Kensington Road and Ormond Street, designed to minimise conflicts with park uses, to minimise conflicts between cyclists and vehicles, and to minimise potential safety issues resulting from limited sightlines and cross traffic near the Bill Vanina sports pavilion.	The hardscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
4.2.2.e.7	Design the overpass of Kensington Road to present a high quality finish, to present well in both distant and nearby views, to ensure a high standard of visibility and lighting to paths below it, and to deter graffiti.	Crime prevention through environmental design is presented in Section 4.3.9 of the Development Plan for the Western Portal.
4.2.3	**South Kensington Station Entry (Ormond Street to Tennyson Street)**	
4.2.3.e.1	Architecturally integrate Metro Tunnel structures in the area with the entry to South Kensington station.	The architectural design of the Western Portal is presented in Section 4.3.1 of the Development Plan.
4.2.3.e.2	Contribute to visibility of the station entry, without dominating views from JJ Holland Park or visually overwhelming the scale of nearby houses.	Visual impacts at the Western Portal are presented in Section 4.4.5 of the Development Plan.
4.2.3.e.3	Provide a forecourt to the station entry incorporating seating, lighting, bicycle parking, and car parking for JJ Holland Park users.	The public realm design of the Western Portal is presented in Section 4.3.3 of the Development Plan.
4.2.3.e.4	Provide canopy tree planting along the frontage to the rail corridor east of the station entry, to provide shade and visual screening.	The landscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.

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	4.2.3.e.5	Any re-alignment or widening of Childers Street at the station forecourt must resolve relationships between the new street and forecourt levels and sloping levels of intersecting streets, lanes, footpaths, and adjoining properties, to ensure accessibility and safety.	The hardscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
	4.2.3.e.6	Maintain safe bicycle access through the area, arranged to minimise conflicts with pedestrians and car parking manoeuvres.	The hardscaping design response for the future Western Portal precinct will be addressed by RIA (appointed by RPV) and is subject to a separate Development Plan.
	4.2.3.e.7	Investigate opportunities to provide additional green space at the southern end of Ormond Street, while allowing vehicular access to all adjacent properties.	The public realm design of the Western Portal is presented in Section 4.3.3 of the Development Plan.
	4.2.3.e.8	Avoid creating encumbrances upon future medium density residential infill development of remnants of the acquired properties at the northwest of the Childers Street / Tennyson Street intersection.	The architectural design of the Western Portal is presented in Section 4.3.1 of the Development Plan.
4.3	**Precinct 3: Arden Station**		
	4.3.e.1.	The design of Metro Tunnel must create inviting, safe and comfortable conditions that support use of the station before and during any wider redevelopment of the site. - create a station building and associated open space of high design quality that integrates with and serves as a benchmark for surrounding development. - provide temporary hoardings, fencings, screens and plantings of fast-growing trees to provide amenity and shelter for public spaces near the station entry. - protect the station and other Metro Tunnel infrastructure from flooding and ingress of water, while providing for access from existing nearby street levels and allowing for adaptation in response to future new development.	This is not relevant to the Western Portal. Refer to the Arden Precinct Development Plan.
	4.3.e.2.	The new station and future redevelopment of the publicly owned (VicTrack) land must be integrated with surrounding areas, ensuring high levels of accessibility between the station and nearby land uses. - ensure that the station and infrastructure align with the directions of the Arden Framework Plan - minimise the land area occupied by Metro Tunnel infrastructure in order to maximise the potential for future redevelopment on surrounding sites - enable future vertical loading for a mixed-use building above the station - allow for future extension of nearby streets into the site and make provision for future new station entrance(s) connecting to these - upgrade Laurens Street between Queensberry Street and Arden Street to provide a pedestrian friendly environment with improved bike lanes, taxi rank, and limited parking - upgrade Barwise Street to provide a pedestrian friendly environment, and improved access to the new station - ensure a high degree of visual prominence for the station and its public realm to assist with wayfinding.	This is not relevant to the Western Portal. Refer to the Arden Precinct Development Plan.
	4.3.e.3.	Works near Moonee Ponds Creek should: - Create an attractive interface with the shared path. - Minimise disruption or damage to habitat that supports endangered or threatened species. - Protect the corridor's environmental and recreational values.	This is not relevant to the Western Portal. Refer to the Arden Precinct Development Plan.
4.4	**Precinct 4: Parkville Station**		
	4.4.1	**Royal Parade**	
	4.4.1.e.1.	Retain and protect existing trees along Royal Parade.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
	4.4.1.e.2.	Where tree removal is unavoidable, plant new trees in the same locations, creating favourable growing conditions with soil preparation throughout the anticipated root zone.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
	4.4.1.e.3.	Design any aboveground Metro Tunnel structures located within Royal Parade to minimise their visual bulk or solidity, especially for elements at or above eye level.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.

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4.4.1.e.4.	Integrate with the proposed tram super stop in Royal Parade	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2	**Grattan Street**	
4.4.2.e.1	Consider stakeholder requirements for Grattan Street between Flemington Road and Swanston Street, and ensure the potential for integration of works in the project area with future improvements by others beyond the project area.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.2	Minimise the carriageway width while providing for local vehicular traffic and appropriate kerbside space for bus stops, loading, taxis, and emergency vehicles including ambulances (especially but not only in the block west of Royal Parade).	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.3	Provide dedicated bike lanes in each direction, either on street or with separation from motor vehicles and pedestrians.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.4	Relate footpath width to station entries and pedestrian flows.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.5	Provide clear pedestrian circulation space along the building frontages on both sides of the street, preferably wider than is currently provided.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.6	Provide passenger waiting areas and shelters at bus stops.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.7	Include new plantings of large canopy trees.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.8	Widen signalised pedestrian crossings, potentially with carriageway pavement levels flush with footpath levels to improve accessibility near University Square.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.2.e.9	Maintain access and sightlines to all building entries.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3	**University of Melbourne Interface with Grattan Street**	
4.4.3.e.1	Design station entries that orientate towards the wider precinct and its pedestrian movements, including but not limited to the University of Melbourne, and provide a high quality arrival experience and meeting places, adequate footpath areas, and direct legible connections to the north south spine that extends across Grattan Street and which links east and west to other uses and tram connections.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3.e.2	Provide a design response that is respectful of the historic Gatekeeper's Cottage and Vice Chancellor's House, including their landscape settings	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3.e.3	Retain the remnant of the university's historic perimeter fence near Royal Parade.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3.e.4	Allow for future redevelopment of the university's Royal Parade Biosciences Zone to the northeast of the Royal Parade / Grattan Street intersection and between the two proposed station entries.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3.e.5	Ensure that paving and street furniture within the university campus adhere to the university's design standards while those within the Grattan Street road reserve adhere to City of Melbourne standards, and resolve an appropriate interface between these two sets of standards without compromising either one.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.3.e.6	Relate footpath widening to station entrances and pedestrian flows.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.4.4	**University Square, Barry Street and Leicester Street**	

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	4.4.4.e.1	Integrate aboveground Metro Tunnel infrastructure with the proposed design for University Square, Barry Street and Leicester Street, including: - coorindate the location of ventilation shafts with existing ventilation and access structures for the underground car park and with the layout of proposed features in Barry, Leicester and Grattan Streets - integrate aboveground elements of the chiller plant with the proposed design for the area.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
	4.4.4.e.2	Implement the proposed design for University Square, Barry Street and Leicester Street within the project area, and allow for its future complete implementation by others beyond the project area.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
4.5	**Precinct 5: CBD North Station**		
	4.5.1	**La Trobe-Little La Trobe Street Sub Precinct**	
	4.5.1.e.1	Contribute to an integrated network of safe, high quality pedestrian routes: - Locate and design station access stairs, escalators and lifts to distribute pedestrian traffic safely in relation to the capacity of surrounding routes. - Locate and design entry points for over site development to respect pedestrian desire lines and to avoid major congestion points. - Create frontage activation along streets and laneways. - Provide appropriate weather protection to Swanston Street and La Trobe Street footpaths.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.1.e.2	Allow for servicing, deliveries, and waste removal from the station and over site development, so as not to compromise frontage activation objectives.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.1.e.3	Address issues of servicing neighbouring properties.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.1.e.4	Ensure that over-site development is fully integrated into station design to ensure an overall cohesive, safe and functional station precinct.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.1.e.5	Create clear delineation between private-sector building and station infrastructure for ease of maintenance and operation.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2	**Franklin Street**	
	4.5.2.e.1	Consider stakeholder requirements for the length of Franklin Street between Victoria and Queen Streets, and ensure the potential for integration of works in the project area with future improvements beyond the project area.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2.e.2	Maintain clear pedestrian circulation space along the building frontages on both sides of the street, no less than and preferably wider than at present.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2.e.3	Provide expanded pedestrian space for seating and other uses with enhanced amenity including plantings of new canopy trees, upgraded street lighting, etc.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2.e.4	Minimise carriageway widths while accommodating appropriate vehicular access including services access to the City Baths and RMIT.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2.e.5	Create a safe bicycle route along Franklin Street.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.2.e.6	Minimise conflicts between turning vehicular traffic and Swanston Street trams.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.3	**Local Access Network**	
	4.5.3.e.1	Manage local traffic to maintain access to properties, to minimise conflicts with pedestrians, bicyclists and trams, and to safely return traffic to the wider road network.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.

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	4.5.3.e.2	Manage and design Swanston Street between Latrobe and Little Latrobe Streets consistently with areas of Swanston Street south of Latrobe Street, with widened footpaths, improved tree planting, footpath paving, street furniture and lighting.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.3.e.3	Provide clear pedestrian circulation space along building frontages in all streets and laneways, maintaining existing capacity and increasing capacity where possible.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.3.e.4	Maintain on-street kerbside loading and delivery facilities to provide for servicing of adjacent properties.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
	4.5.3.e.5	Above ground elements of the maintenance access and vent structure should be located and designed to ensure optimal flexibility in use of the public open space and to minimise visual impacts: - Minimise aboveground structures' width, breadth and visual bulk, especially with respect to any element higher than 1m above surrounding paving levels. - Use sustainable cladding materials and a high standard of architectural detailing to ensure the structures present well to nearby pedestrians, and are durable and easy to maintain in good condition. - Consider potential integration with other streetscape elements, such as lighting and signage, in order to minimise clutter in the street space.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
4.6	**Precinct 6: CBD South Station**		
	4.6.1	**Cocker Alley Sub Precinct**	
	4.6.1.e.1	Contribute to an integrated network of safe, high quality pedestrian routes: - Locate and design station access stairs, escalators and lifts to distribute pedestrian traffic safely in relation to the capacity of surrounding routes. - Improve pedestrian accessibility, safety and amenity in laneways connecting to the station entry. - Ensure safe conditions in nearby laneways when the station entry is closed. - Create active frontages along streets and laneways connecting to the station entry. - Provide appropriate weather protection along Swanston Street and Flinders Street footpaths. - Provide for safe crossings of Flinders Lane.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.1.e.2	Allow for servicing, deliveries, and waste removal from the station and over site development, so as not to compromise frontage activation objectives.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.1.e.3	Address issues of servicing neighbouring properties.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.1.e.4	Integrate over site development with the station and associated infrastructure.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.1.e.5	Create clear delineation between private-sector building and station infrastructure for ease of maintenance and operation.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.2	**Federation Square: St Paul's Court**	
	4.6.2.e.1	Maintain Federation Square's inter-relationships with Flinders Street, Swanston Street and St Paul's Cathedral: - Protect the framed vista from Federation Square to St Paul's Cathedral from intrusive or disruptive structures. - Ensure permeability, visual links and pedestrian accessibility between the Flinders Street footpath and Federation Square. - Create an architectural element that holds the corner at the intersection of Swanston and Flinders streets.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.2.e.2	Maintain usable and activated open spaces: - Maintain or provide new seating ledges. - Maintain or provide new level areas of a size and character suitable for a range of events and activities.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.

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4.6.2.e.3	Maintain and enhance the civic character and identity of Federation Square: - Achieve design integration with Federation Square as a whole. - Respond positively to the context established by the design of Federation Square. - Consider rebuilding the western shard in keeping with the original design intent, increasing its height in order to reinstate its tall vertical proportions.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.2.e.4	New or modified structures to accommodate above ground infrastructure may be sited within or adjacent to Federation Square provided the additional shadows cast do not unreasonably affect the usage and enjoyment of the broader open space.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.3	**City Square**	
4.6.3.e.1	Maintain a respectful relationship with nearby civic buildings: - Minimise the size and visual prominence of the station entry, so that it does not appear to be disproportionately grand in relation to other civic stairs on Swanston Street. - Maintain uncluttered views to St Paul's Cathedral from the square, in particular to the facade and altar window facing Flinders Lane. Mirror the offset of the Westin Hotel facade from the Cathedral's central axis to define a view corridor along the axis, and avoid locating aboveground infrastructure within this corridor if possible. - Maintain views of the Town Hall clock tower from the square	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.3.e.2	Minimise net loss or fragmentation of public open space: - Locate the entry and other aboveground infrastructure near to Collins Street to minimise impacts on usable public open space. - Where possible, locate lifts and other aboveground infrastructure within the Westin Hotel built form. - Where possible, co-locate aboveground infrastructure that must be in the square with the station entry or with other aboveground structures. - Provide pedestrian access, egress and dispersal from the station via the street, not through the body of the square. - Maintain generous soil depths to allow for tree planting.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.3.e.3	Create a high quality civic open space that accommodates passive recreational use and staged events, and achieves a balance of qualities as a place of respite and a prominent and actively used civic space: - Maintain or increase space for casual use including public seating. - Maintain accessibility for events including a large open level space equivalent to that provided in the square today, with vehicular loading capacities and surface treatment suitable for staging events without damage and / or without costly reinstatement requirements. - Provide vehicle access for events bump in / bump out. - Design so that, the square has a mix of large and more intimate spaces that can be used separately during public events.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.3.e.4	Maintain and enhance active frontages onto and overlooking the square: - Maximise activation of the square by tenancies within the ground floor of the Westin Hotel. - Maintain a level paved frontage along the Westin Hotel, providing access to adjoining tenancies and associated outdoor dining / cafe spaces. - Maintain physical demarcation of outdoor spaces leased or licenced to adjoining hospitality businesses, to assist in their ongoing management (e.g. as with the existing water feature). - Consider options for replacement of the existing cafe tenancy to minimise space occupied within the square. - Maintain views between the Swanston Street footpath and tram stops and the open space within the square.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.6.3.e.5	Maintain a generous shaded pedestrian promenade along Swanston Street: - Maintain circulation space with no less capacity than exists at present. - Maintain accessible tram stop facilities. - Maintain a double row of Plane trees.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.

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	4.6.3.e.6	Locate and design the station entry and the square as a whole to integrate with surrounding footpath levels: - Orient the station entry towards Swanston Street. - Locate and design required aboveground infrastructure to help resolve level transitions between the square and surrounding footpaths.	This is not relevant to the Western Portal Precinct. Refer to the Town Hall Precinct Development Plan.

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	4.6.3.e.7	Protect, relocate and / or restore existing artworks and monuments as appropriate: - Retain the Burke and Wills Monument in its existing location if possible. If not, re-install the monument in its original form at a new site to be approved by the City of Melbourne. Undertake adaptive site works as required to integrate the monument with the new site. - Work with City of Melbourne to maintain or appropriately relocate or reimagine the Mockridge Fountain. - Consult with the City of Melbourne to determine their intent to retain other existing artworks in the City's collection (and reinstall in the City Square or relocate as appropriate) or to de-accession. Incorporate works to be retained at the site into the new design.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.3.e.8	Adapt the remaining space after the provision of the station entry below the City Square for a civic facility: - Minimise the extent of the existing space occupied by station infrastructure, where possible using the lower levels for service functions and allowing for active uses near ground surface level. - Consult with the City of Melbourne to resolve the functional brief for the facility. - Create a more direct and positive relationship between the open space and the new civic facilities in the basement than currently exists between the car park and the square. - Continue to accommodate public amenities and site services as appropriate.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
	4.6.3.e.9	New or modified structures to accommodate above ground infrastructure may be sited within or adjacent to City Square provided the additional shadows cast do not unreasonably affect the usage and enjoyment of the broader open space.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
4.7	**Precinct 7: Domain Station**		
	4.7.1	**St Kilda Road**	
	4.7.1.e.1	Consider stakeholder requirements for St Kilda Road from Toorak Road to Dorcas Street, and ensure the potential for integration of works in the project area with future implementation of streetscape improvements by others beyond the project area.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.7.1.e.2	Provide convenient pedestrian access: - Support pedestrian crossings of St Kilda Road via the proposed station subway and by improving the safety and amenity of street level crossings. - Enhance pedestrian links from St Kilda Road to the Park Street (South Melbourne) tram route.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.7.1.e.3	Provide protected bicycle lanes, connecting safely and conveniently to bike lanes north and south of the project area.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.7.1.e.4	Complement St Kilda Road's formal boulevard character: - Maintain or recreate a generally symmetrically balanced layout, with regular kerb alignments typically set parallel to the road's centreline, and large canopy trees. - Design the island tram stop/interchange as a high quality public space with a formal design character that complements the boulevard setting. - Coordinate or integrate passenger shelters at the tram stop with weather protection for the Metro Tunnel station entry. - Arrange tram overheads to minimise visual clutter and to allow for tree planting. - Minimise commercial advertising except as allowed under current PTV contracts with providers of tram shelters. - Ensure that the design of the Park Street (South Melbourne) tram stop near Wells Street preserves views to the Shrine.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.7.1.e.5	Reconstruct the area of the existing tram interchange, north of the new one, to a design complementing and transitioning back into the typical boulevard layout of St Kilda Road with side service roads separated from the central carriageway by treed medians.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
	4.7.1.e.6	Locate and design vent shafts, the chiller plant and substations to minimise their visual impacts: - Minimise impacts on important views, in particular the Shrine of Remembrance vista. - Ensure safe sightlines at intersections and pedestrian crossings. - Integrate with the design of passenger shelters and weather protection for the Metro Tunnel entries, where possible. - Allow for integration with necessary signage. - Complement the formal design character of St Kilda Road.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.

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4.7.2	**Shrine Reserve and Kings Domain Construction Work Areas**	
4.7.2.e.1	Minimise encroachment into the Shrine of Remembrance Reserve.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.2.e.2	Maintain the vista to the Shrine from St Kilda Road between Domain Road and Park Street as clear of structures as possible, and minimise any new structures that may detract from or compete with views or the experience of existing monuments including the MacPherson Robertson Fountain and Cobbers Memorial: - Locate aboveground structures along Domain Road if possible rather than along the St Kilda Road frontage of the Shrine Reserve. - Locate the entry as low on the slope as possible, i.e. within or adjoining and parallel to the street. - Minimise any structure above balustrade height.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.2.e.3	Minimise impacts on views from within the Shrine Reserve, especially from the forecourts and steps, rooftop viewing terrace, and the 'ring road' at the base of the Shrine: - Minimise visibility of Metro Tunnel structures within the Shrine Reserve. - Minimise advertising visible from the Shrine or within key vistas to the Shrine.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.2.e.4	Minimise impacts on culturally significant features and fabric: - Sensitively reinstate or relocate existing memorials if required. - Retain or replace significant trees - Minimise proximity impacts of the entrance's use on observances at the Battle of the Fromelles memorial.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.2.e.5	Orient and design the entry to direct users towards an accessible route of travel to the main entries of the Shrine of Remembrance and the Royal Botanic Gardens.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.2.e.6	After construction, reestablish the construction work site(s) to existing or improved conditions, including works generally as illustrated in 'Edmund Herring Oval — Kings Domain Parklands,' City of Melbourne City Projects Division, Project No. 903411, Drawing no. LA01, November 2015.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.

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4.7.3	**Albert Road Reserve**		
4.7.3.e.1	Consider stakeholder requirements for Albert Road and ensure the potential for integration of works in the project area with future implementation of streetscape improvements by others beyond the project area.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.3.e.2	Minimise impacts on culturally significant features and fabric: - Minimise the size and prominence of the station entry and ensure that it provides an appropriate setting for the South African Soldiers Memorial. - Maintain the South African Soldiers Memorial's visual links to St Kilda Road and where possible, improves its prominence as the focal point of the reserve. - Retain as many trees as possible, in particular the elms to the north of the South African Soldiers Memorial. - Retain the Windsor Oak in situ, conserve it off site during construction, or propagate replacements from the original tree. - Return the Cockbill Fountain and Windsor Oak (or its replacement) to the site after construction. - Sensitively reinstate or relocate other existing plaques and memorials as required.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.3.e.3	Enhance pedestrian and cyclist access to the new station: - Widen and repave footpaths. - Connect bike paths through the area and provide bicycle parking.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.3.e.4	Create a high quality open space and facilities to support cultural, social, and passive recreational activities: - Provide spaces for seating and casual social interaction. - Avoiding fragmenting useable open spaces with busy pedestrian routes. - Rationalise and reduce trafficable road space and car parking areas and convert to pedestrian use where possible. - Provide a modest congregation area near the South African Soldiers Memorial that provides access for ceremonies	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
4.7.3.e.5	Provide for vehicular access to properties, car parks and for servicing.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.

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4.8	**Precinct 8: Eastern Portal (South Yarra)**		
	4.8.e.1	Provide and improve shared use paths along the rail corridors with generous path widths to support local recreational and commuter use: - Widen Lovers Walk, as appropriate and where possible, to support its role as a major shared path. - Create a shared use path to the south of the rail corridor between Chapel Street, South Yarra Siding Reserve and Osborne Street. - Maintain the eastern Osborne Street footpath.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.
	4.8.e.2	Improve walking and cycling access across the rail lines: - Adopt a high quality integrated architectural and structural engineering design for the new William Street bridge including supporting structure(s), balustrades and lighting, with provision for safety, universal access and high levels of visibility. - Locate and design the new bridge over the Sandringham line to visually and physically connect to the South Yarra Siding Reserve and to maximise its long-term contribution to pedestrian and cycle accessibility. Adopt a high quality integrated architectural and structural engineering design including supporting structure(s), balustrades and lighting, with provision for safety, universal access and high levels of visibility.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.
	4.8.e.3	Maximise permanent usable public open space in the precinct, including: - Construct any required vertical retaining walls to support backfilling to levels that increase the level of useable open space. - Design retaining walls and backfill to provide generous soil depths to support the growth of trees, and to maximise opportunities for future bridging, decking or development above the rail corridors. - Consider future structural demands in the design of retaining walls and any other project infrastructure to support future decking across the railways for a future public plaza adjoining Toorak Road.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.
	4.8.e.4	Provide a direct link through a new pedestrian bridge from the South Yarra Siding Reserve to Osborne Street to connect to Toorak Road.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.
	4.8.e.5	Provide high quality contemporary public open spaces that are accessible, safe and responsive to the needs of current and future local communities: - Provide a balance of hardscaped and green spaces that facilitate a range of passive and active recreation, and are adaptable to varied uses over time. - Maximise the area of green, landscaped open space including canopy trees.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.
	4.8.e.6	Design all structures required for and in association with the project as part of an integrated site design: - Consider the cumulative impact of all structures including emergency access and ventilation structures, retaining walls, bridges, balustrades, vehicular crash barriers, acoustic screens, security fences and privacy screens, and integrate all into a coordinated high quality site design. - Provide a high quality design response to all sensitive interfaces. - Consider the forms, locations, materials and detailing of noise abatement screens, fences and other structures to maximise views into, through and between pedestrian routes and open spaces, and to minimise graffiti and vandalism. - Provide transparency in acoustic screens and fencing above one metre (nominal) height at interfaces with walking routes or actively used public spaces, to improve passive surveillance and personal security.	This is not relevant to the Western Portal. Refer to the Eastern Portal Development Plan.

APPENDIX E: WESTERN PORTAL ENVIRONMENTAL PERFORMANCE REQUIREMENTS ASSESSMENT

Western Portal Development Plan - Environmental Performance Requirement assessment

Author: Jenna Beckett
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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Aquatic ecology and river health	AE1	1. Fully integrate the stormwater treatment system into the design of Melbourne Metro (all precincts) for construction to ensure that stormwater entering a receiving water body complies with SEPP (Waters of Victoria). 2. The best practice performance objectives for achieving compliance with SEPP (Waters of Victoria) during the construction phase are described below: *See table in EPRs for performance objectives.* Note (1) Best practice performance objectives are based on the Best Practice Environmental Management Guidelines for Urban Stormwater – CSIRO.	The Western Portal response to stormwater treatment is presented in Section 4.4.1 of the Development Plan.
Aquatic ecology and river health	AE2	1. Best practice sedimentation and pollution control measures must be applied to protect waterways in accordance with Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites – EPA publication 480 (1996) and in accordance with an approved CEMP. 2. Control measures may include: vehicle wheel wash and rumble bars at worksite egress points, appropriate placement of material stockpiles and chemical storages, covered loads, street sweeping and water quality monitoring, where required.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Surface Water Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Aquatic ecology and river health	AE3	1. During construction, discharge all tunnel, station box and portal construction water to sewer subject to sewer capacity. 2. Where sewer capacity constraints exist at CBD North and CBD South, discharge to surface waters in accordance with SEPP (Waters). Prior to commencement of discharge to surface waters, a plan detailing the monitoring and management measures for the activity must be developed and implemented in consultation with EPA Victoria. (See EPR GW3).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Surface Water Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor. Where discharge to sewer is necessary, this has occurred through a trade waste agreement (or similar) with provision for groundwater disposal.
Aquatic ecology and river health	AE4	1. Where ground treatment works are required in waterways, design and implement methods that prevent discharge of sediments into the water column.	This is not applicable to the Western Portal Development Plan. The Western Portal decline structure is approximately 500m from Maribyrnong River (west). No ground treatment works are required in waterways as part of the Western Portal works.
Aquatic ecology and river health	AE5	1. Design the Arden electrical substation so that it is appropriately protected against floodwaters during operation (see EPR SW1), to prevent the release of contaminants to Moonee Ponds Creek.	This is not relevant to the Western Portal. Refer to the Arden Intake Substation Development Plan.
Aquatic ecology and river health	AE6	1. During operation, discharge tunnel drainage water to sewer, unless otherwise agreed by EPA and Melbourne Water and in compliance with SEPP (Waters of Victoria). 2. Where groundwater interception during operation is predicted to occur, disposal is to be managed so that contaminated water is not released to stormwater or to sensitive surface water bodies (see EPR GW4).	Prior to the operational phase of the project, Cross Yarra Partnership will prepare an Operational Environmental Management Plan, which will provide detail on discharge of tunnel drainage water.
Aquatic ecology and river health	AE7	1. Fully integrate the stormwater treatment system into the design of all precincts and portals to ensure that any stormwater entering a receiving water body complies with SEPP (Waters of Victoria). *See table in EPR* Notes (1) Best practice performance objectives are based on the Best Practice Environmental Management Guidelines for Urban Stormwater – CSIRO. (2) An example using SEPP (Waters of Victoria), general surface waters segment. (3) SEPP Schedule F7 – Yarra Catchment – urban waterways for the Yarra River main stream. (4) Litter is defined as anthropogenic material larger than five millimetres. 2. Sedimentation and pollution control measures must be applied to protect waterways and habitat areas such as periphery surrounding Moonee Ponds Creek in accordance with industry best practice. This must include water quality monitoring, where required.	The Western Portal response to stormwater treatment is presented in Section 4.4.1 of the Development Plan. The integration of the stormwater treatment system into the future built form and public realm of the Western Portal precinct is outside CYP scope and will be addressed by the Rail Infrastructure Alliance. The Rail Infrastructure Alliance design and compliance with State Environment Protection Policy (SEPP) (Waters of Victoria) will be subject to a separate Development Plan.
Aboriginal Cultural Heritage	AH1	1. Comply with a Cultural Heritage Management Plan approved under the *Aboriginal Heritage Act 2006* and prepared in accordance with the Aboriginal Heritage Regulations 2007.	The Western Portal design is within the activity area defined in the Cultural Heritage Management Plans, that have been obtained for the Project. CYP has implemented an Environmental Management System and Construction Environmental Management Plan, which set out processes for ensuring conditions of approvals (including the Cultural Heritage Management Plans) are met. The aspect-specific control measures are identified in the Heritage Management Plan with site specific controls detiled in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Air Quality	AQ1	1. Prior to commencement of Project works, develop and implement plan(s) for dust management and monitoring, to minimise and monitor the impact of construction dust. Develop the plan(s) in consultation with EPA and the owners of key sensitive equipment or locations, and advise the community of the plan, in accordance with the contractors Community and Stakeholder Engagement Plan (see EPR SC4). 2. The plan(s) must: a) Set out air quality criteria and outline the justification for those criteria for above ground construction works. b) Be informed by air modelling of construction activities, which should identify the main dust sources and the location of sensitive land uses. Air modelling for particulate dispersion must include construction ventilation discharges, and assess for both dust particulates and respirable crystalline silica. c) Be informed by a human health risk assessment, conducted by a suitably qualified professional, for high risk construction activities which may generate possible airborne contaminants of potential concern, including: dust, respirable crystalline silica, asbestos, Aspergillus spores (Precinct 4 only) and any other common industrial contaminants within dust (such as metals and polycyclic aromatic hydrocarbons). d) Describe the proposed dust management and monitoring system including (but not necessarily limited to): i Routinely reviewing weather model predictions. ii Continuous monitoring and real-time alert systems in the event of measured exceedances. iii Protocols for record-keeping. iv Protocols to ensure that site personnel advise the site manager if excessive dust emissions are observed. e) Describe the mitigation measures that will be implemented to ensure compliance with air quality criteria. f) Address monitoring requirements for key sensitive receptors, including (but not limited) to: i Residential and commercial properties, including ACMI. ii Hospitals and research facilities within the Parkville precinct. iii Heritage listed places sensitive to dust including St Pauls Cathedral and the Melbourne City Baths. iv Universities, including The University of Melbourne and RMIT. v Schools, including Melbourne Grammar School (South Yarra Campus) and Christ Church Grammar School. vi The Arts Centre Melbourne and National Gallery of Victoria. vii Public parks and outdoor public recreational areas including the Shrine of Remembrance Reserve and JJ Holland Reserve.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Air Quality, Dust & Lighting Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This plan has been reviewed by the project's Independent Reviewer and is audited by the project's Independent Environmental Auditor.
Air Quality	AQ2	1. Manage construction activities to minimise dust and other emissions in accordance with EPA Publication 480, Environmental Guidelines for Major Construction Sites (EPA 1996).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Air Quality, Dust & Lighting Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This plan has been reviewed by the project's Independent Reviewer and is audited by the project's Independent Environmental Auditor.
Air Quality	AQ3	1. Control the emission of smoke, dust, fumes and other pollution into the atmosphere during construction and operation in accordance with the SEPPs for Air Quality Management and Ambient Air Quality.	Cross Yarra Partnership has implemented an Environmental Management System, and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Air Quality, Dust & Lighting Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This plan has been reviewed by the project's Independent Reviewer and is audited by the project's Independent Environmental Auditor. Prior to the operational phase of the project, Cross Yarra Partnership will prepare an Operational Environmental Management Plan, which will provide detail on controlling smoke, dust, fumes and other air pollution matters.
Arboriculture	AR1	1. During detailed design, review any potential tree impacts and achieve the maximum possible tree retention on both public and private land, including retaining all valuable habitat linkages or corridors where practicable. 2. Trees to be removed during early works must only be those associated with early works. 3. Comply with any requirements of Heritage Victoria if the trees are on the VHR. 4. Prior to commencement of Project Works, develop and implement a plan in consultation with the relevant local council that identifies all trees in the Project Area which covers: a) Trees to be removed or retained. b) Condition and significance of the trees to be removed. c) Options for temporary re-location of palms and reinstatement at their former location or another suitable location. d) Options for re-location of all trees and, if feasible for the tree species, reinstatement of the trees at their former location. 5. The plan should include a tree removal protocol established in consultation with the City of Melbourne, the City of Port Phillip, the City of Stonnington, the Shrine of Remembrance and Shrine Trustees, University of Melbourne and Heritage Victoria as applicable that includes a process for RPV approval of trees prior to removal.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan which requires the development of a Tree Protection Plan. The public realm response in regards to tree retention for the Western Portal is presented in Section 4.4.2 of the Development Plan.
Arboriculture	AR2	1. Reinstate quality soils to sufficient volumes to support long-term viable growth of replacement trees. Ensure ongoing supply of water to tree root zones, especially during their establishment stage. Employ water sensitive urban design principles (WSUD) where possible.	The public realm response in regards to tree soil and water supply is presented in Section 4.4.2 of the Western Portal Development Plan.

Western Portal Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Arboriculture	AR3	1. Develop a tree replacement program to re-establish lost canopy cover and achieve canopy size equal to (or greater than) healthy, mature examples of the removed species in Melbourne. 2. Establish protocols to govern the use of advanced and super-advanced trees, where such use is appropriate to re-establish canopy and valued landscape character in a way that balances long term viability of the tree with immediate impact. 3. Consult with the City of Melbourne, the City of Port Phillip, the City of Stonnington, the Shrine of Remembrance and Shrine Trustees, University of Melbourne and Heritage Victoria as applicable. 4. When re-establishing trees, regard should be had to the following documents where relevant: a) The City of Melbourne's Tree Retention and Removal Policy (2012) (excluding sections 8.2 and 8.3) and Urban Forest Strategy, South Yarra Urban Forest Precinct Plan, Central City Urban Forest Precinct Plan, Carlton Urban Forest Precinct Plan and Kensington Urban Forest Precinct Plan. b) The City of Port Phillip's Community Amenity Local Law No. 1 and Greening Port Phillip – An Urban Forest Approach. c) The City of Stonnington's General Local Law 2008 (No 1) and City of Stonnington Street Tree Strategy. d) Any associated precinct plans. e) Specific policies of the Domain Parklands Conservation Management Plan, for trees within Domain Parklands. f) Shrine of Remembrance Conservation Management Plan (Lovell Chen, 2010) or any future review and the Shrine of Remembrance Landscape Improvement Plan (Rush Wright Associates, 2010). g) South African Soldiers Memorial Conservation Management Plan (Context, 2016). h) The preferred future character of the University of Melbourne, for trees in the grounds of the University of Melbourne. 5. The re-establishment of trees must also consider the contribution that the replacement trees can make to the creation of habitat corridors and linkages where this is possible. (See EPRs CH13 and CH18 as appropriate).	The public realm response in regards to tree replacement for the Western Portal is presented in Section 4.4.2 of the Development Plan.
Arboriculture	AR4	1. Prior to commencement of construction of any Project works that could affect trees, prepare and implement Tree Protection Plans for each precinct in accordance with AS4970-2009 Protection of Trees on Development Sites. The plans must respond to the detailed design and construction methodology of the Project and ensure that trees proposed to be retained are adequately protected from the impact of construction or related activities. 2. Where a Tree Protection Plan is required for a heritage place, the plan must be developed in consultation with Heritage Victoria or the relevant council (as applicable).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan which requires the development of a Tree Protection Plan. Where the works fall within a Victorian Heritage Registered site, these Tree Protection Plans will be subject to Heritage Victoria approval.
Arboriculture	AR5	1. For City of Melbourne trees that are to be retained and protected, a bank guarantee or bond of the trees' value will be held against the approved Tree Protection Plan for the duration of the works in accordance with the City of Melbourne Tree Retention and Removal Policy.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan (including a Tree Protection Plan) with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor. A Bank guarantee or bond for the trees' value has been provided to the City of Melbourne for City of Melbourne trees that are to be retained and protected in accordance with the City of Melbourne Tree Retention and Removal Policy.
Business	B1	1. Reduce the disruption to businesses from direct acquisition or temporary occupation of land, and work with business and land owners to endeavour to reach agreement on the terms for possession of the land. 2. Provide businesses with adequate notice (as required under the relevant legislation) of any need for relocation, as a result of the Project including the termination of leases of public or private land where the displacement is a direct consequence of the Project.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Communications and Stakeholder Engagement Management Plan, which includes a Business Disruption Plan, Relocation Management Framework and Special Events sub-plan. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Business	B2	1. Prior to commencement of relevant works, prepare a business disruption plan consistent with the contractors Community and Stakeholder Engagement Management Plan (SC4) to: a) Manage potential impacts to non-acquired businesses, commercial property owners and not-for-profit organisations. b) Ensure appropriate engagement with local councils, businesses, property owners and the community throughout construction. 2. The plan must outline the stakeholder engagement measures for each precinct and include: a) Adequate notice of key Project milestones. b) Details of any changes to traffic and parking conditions and duration of impact. c) A Project construction schedule developed in coordination with transport authorities and local councils and in consultation with businesses to minimise cumulative impacts of this and other projects. d) Plans for notifying customers of proposed changes to business operations, including the setting of suitable timeframes for notification prior to commencement of works. e) Measures to ensure access to businesses is maintained for customers, deliveries and consistent with EPR T10 for waste removal, unless there has been prior engagement with affected businesses (including mutually agreed mitigation measures as required). These measures could include the installation of directional and business signage to assist customers and agreed protocols for engaging with service providers (i.e. deliveries, collections, etc.). f) Process for registering, management and resolution of complaints from affected businesses consistent with Australian Standard AS/NSZ 10002:2014 Guidelines for Complaint Management in Organisations. g) Measures for supporting affected businesses during construction in accordance with the Business Support Guidelines for Construction (BSGC) such as marketing and promotion, local activation, way-finding programs and up skilling opportunities. h) Where implementation of BSGC support measures have been exhausted for a business, provide the opportunity for assistance in preparing a Business Plan to develop a business profile and more detailed understanding of the business and how it operates (where appropriate a financial baseline may form part of the business plan) so that further measures can be factored into Business Disruption Plans.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Communications and Stakeholder Engagement Management Plan, which includes a Business Disruption Plan, Relocation Management Framework and Special Events sub-plan. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

Author: Jenna Beckett
Checker: Caitlin Jackson
Approver: Mat Peel
Date: 28-09-20

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Business	B3	1. Following consultation with potentially affected businesses and prior to commencement of relevant works, prepare management plans and during construction implement those plans to minimise dust, noise and vibration impacts during construction, as per EPRs AQ1, NV5 and NV21.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Communications and Stakeholder Engagement Management Plan as well as the Air Quality, Dust & Lighting Management Plan and Noise and Vibration Management Plan. Site specific controls for Air quality and Noise and Vibration are detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the project's Independent Environmental Auditor.
Business	B4	1. Maintain vehicular and pedestrian access to hospital emergency departments at all times during construction and to other key health and medical facilities, where practicable.	This is not relevant to the Western Portal. There are no hospital emergency departments or medical institutions located in the vicinity of the Western Portal site.
Business	B5	1. Prior to relevant works, develop a stop work contingency plan for Class 1 emergencies (as defined in the Emergency Management Act 2013) in consultation with medical institutions in the Parkville precinct in the event that Melbourne Metro construction works are required to cease as a result of any such emergency.	This is not relevant to the Western Portal. Refer to the Parkville Emergency Management Plan and project-wide Emergency Response and Incident Management Plan.
Business	B6	1. In consultation and agreement with the owners of the Westin Residential Apartments and the owners' corporations in Plan of Subdivision PS428405M, prepare a legacy design for the private car parking, storage units and services below the Westin building to a similar standard as prior to the commencement of the Project (taking into account station infrastructure requirements) or as otherwise agreed with the owners. The legacy design is to be implemented at the earliest opportunity.	This is not relevant to the Western Portal. Refer to the Early Works Managing Contractor's Early Works Plan.
Contaminated Land and Spoil Management	C1	1. Prior to commencement of shaft construction and prior to commencement of main works, prepare and implement a Spoil Management Plan (SMP) for each Works Package. The SMP must be in accordance with RPV's Spoil Management Strategy and any relevant regulations, standards or best practice guidelines. The SMP must be developed in consultation with the EPA. The SMP will include but is not limited to the following: a) Applicable regulatory requirements. b) Identifying nature and extent of spoil (clean fill and contaminated spoil). c) Roles and responsibilities. d) Identification of management measures for handling and transport of spoil for the protection of health and the environment (consistent with the transport management plan(s) as required by EPRs T2 and T3). e) Identification, design and development of specific environmental management plans for temporary stockpile areas f) Identifying potential sites for re-use, management or disposal of any spoil. g) Monitoring and reporting requirements. h) Identifying locations and extent of any prescribed industrial waste (PIW) and the method for characterising PIW spoil prior to excavation. i) Identifying suitable sites for disposal of any PIW. 2. The SMPs must include sub-plans as appropriate, including but not limited to an Acid Sulfate Soil and Rock (ASS/ASR) Management Sub-Plan (see EPR C2).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The Construction Management Plan Sub-plan includes aspect-specific control measures including the Spoil Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Contaminated Land and Spoil Management	C2	1. Prior to commencement of shaft construction and prior to commencement of main works, prepare and implement an Acid Sulfate Soil and Rock (ASS/ASR) Management Sub-Plan as a sub-plan of the overarching SMP for each Works Package. The Sub-Plan must be developed in accordance with the Industrial Waste Management Policy (Waste Acid Sulfate Soils) 1999, EPA Publication 655.1 Acid Sulfate Soil and Rock and relevant (EPA) regulations, standards and best practice guidance and in consultation with the EPA. 2. This Sub-Plan will adopt the general requirements of the SMP and also: a) Identify locations and extent of any potential ASS/ASR. b) Characterise ASS/ASR spoil prior to excavation. c) Identify and implement measures to prevent oxidation of ASS/ASR wherever possible. d) Identify potential sites for re-use, management or disposal of any ASS/ASR.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The Construction Management Plan Sub-plan includes aspect-specific control measures including the Spoil Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Contaminated Land and Spoil Management	C3	1. Prior to commencement of shaft construction and prior to commencement of main works, prepare a Remedial Management Plan (RMP) for each Works Package for contaminated land and groundwater . The RMP must: a) Consider the outcomes of further investigations including the appropriate groundwater investigations and modelling required in EPRs GW1, GW2, GW3 and GW5. b) Interpret groundwater permeation and VOC results. c) Present and take account of the outcomes of risk assessments. d) If required, identify remedial options to be implemented for contaminated land and groundwater in accordance with relevant regulations, standards and best practice guidance and in consultation with the EPA. 2. If required, as an outcome of the RMP, prepare and implement a remedial action plan and integrate the remediation approach into the design of the Project in accordance with relevant regulations, standards and best practice guidance and to the satisfaction of EPA.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The Construction Management Plan Sub-plan includes aspect-specific control measures including a Spoil Management Plan and Health and Safety Management Plan. In addition, a Western Tunnels Groundwater and Remediation Plan has been prepared. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Date: 28-09-20

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Contaminated Land and Spoil Management	C4	1. Prior to commencement of relevant works, prepare and implement a health, safety and environmental plan for the management of hazardous substances. The plan must include but not be limited to: a) Consideration of the risks associated with exposure to hazardous substances for employees, visitors and general public. b) The identification of methods to control such exposure in accordance with relevant regulations, standards and best practice guidance and to the satisfaction of WorkSafe and in consultation with EPA. c) Method statements detailing monitoring and reporting.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan and Health and Safety Management Plan. This includes a Hazardous Materials Procedure to ensure hazardous material are managed in accordance with the Environmental Management Framework. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH1	1. Design permanent and temporary works to avoid or minimise impacts on the cultural heritage values of heritage places. Consult, as required, with Heritage Victoria and/or the relevant local council (as applicable). Note (1) The Project must meet the requirements of the *Heritage Act 2017.*	Historical cultural heritage at the Western Portal is presented in Section 4.4.3 of the Development Plan. The design of the Western Portal (both during temporary and permanent works) seeks to minimise any impacts to the heritage values of the area.
Historical Cultural Heritage	CH2	1. To avoid or minimise impacts on the cultural heritage values of heritage places, prior to commencement of relevant works, prepare and implement a Heritage Management Plan (HMP) in consultation with Heritage Victoria or the relevant local council (as applicable). 2. The HMP must identify the heritage values of the place, the degree of significance of component parts, how proposed works will affect the heritage values, the mitigation measures to be adopted to avoid or minimise impacts on heritage values and any possible heritage benefits.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH3	1. To avoid or minimise impacts on the cultural heritage values of heritage places, prior to commencement of relevant works: a) Perform works in accordance with the following noise and vibration and ground movement EPRs as related to heritage places: NV2, NV3, NV4, NV8, NV9, NV21, GM2, GM3, GM4, GM5, GM6 b) Undertake condition assessments of heritage places prior to commencement of construction of relevant works where located within the identified vibration and ground settlement zones of sensitivity and monitor as per NV8,GM3, GM4 and GM5. 2. Should damage occur to a heritage place as a result of works, undertake rectification works in accordance with accepted conservation practice (with reference to the Australia ICOMOS Burra Charter 2013) with input from a qualified heritage practitioner and in consultation with the land owner and relevant local Council for places in a local Heritage Overlay, or with the written approval of the Executive Director of Heritage Victoria for places included in the Victorian Heritage Register.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan, Noise and Vibration Management Plan and Ground Movement Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH4	1. Prior to commencement of relevant works, undertake archival photographic recording in accordance with Heritage Victoria's specification for the archival photographic recording of heritage places where heritage places are to be demolished or modified or their setting is to be impacted by works. The archival recording is to be provided to Heritage Victoria for places in the VHR and the relevant local council for places included in the Heritage Overlay and approved in writing. Once approved, a copy of the recording is to be lodged with the La Trobe Picture Collection, State Library of Victoria.	This is not relevant to the Western Portal Development Plan. Works at Western Portal will not impact on any Victorian Heritage Registered places.
Historical Cultural Heritage	CH5	1. Prior to the construction of works that affect heritage structures or places, where it is proposed to dismantle, store and reconstruct heritage fabric, develop detailed methodology in accordance with the Australia ICOMOS Burra Charter 2013 and in consultation with Heritage Victoria or the land owner or relevant local council (as applicable). Work is to be documented and overseen by an appropriately qualified heritage practitioner. 2. Prior to dismantling the following heritage places, develop interpretative material for display while the heritage fabric is not visible: a) Burke and Wills Monument. b) University of Melbourne Main Entrance Gate (Gate 6) Pillars and Fence (VHR H918).	This is not relevant to the Western Portal Development Plan. Works at Western Portal will not impact any heritage places.
Historical Cultural Heritage	CH6	1. Prior to commencement of relevant works which may directly or indirectly affect heritage places, develop and implement appropriate protection measures for heritage places and their settings. This is to be done in consultation with the land owner, and Heritage Victoria or relevant council (as applicable).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH7	1. In consultation with Heritage Victoria and as required by the *Heritage Act 2017* : a) Develop archaeological management plans to manage disturbance of archaeological sites and values affected by the Project. b) Undertake investigation in accordance with the Guidelines for Investigating Historical Archaeological Artefacts and Sites, Heritage Victoria 2014 (as amended or updated). 2. Develop and implement a protocol for managing previously unidentified historical archaeological sites discovered during Project works.	While there is no known archaeology located at Western Portal, Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH8	1. In consultation with Heritage Victoria, the relevant local council and/or Aboriginal Victoria (as applicable), develop and implement, a heritage interpretation strategy for places in the VHR and VHI or which explores historical and Aboriginal cultural heritage themes. 2. This must also include the railway workshop buildings in the proposed Railway Reserve Precinct (proposed HO1093) located at 173–199 Laurens Street, North Melbourne in the Arden precinct. 3. The heritage interpretation strategy should consider the RPV Creative Strategy.	In consultation with Heritage Victoria, the City of Melbourne and other relevant councils, a heritage interpretation strategy has been developed for the Project which includes the publicly accessable stations. This strategy takes into consideration the RPV Creative Strategy. Refer to the Station Development Plans for further information on the heritage interpretation strategy for public-facing areas.

Western Portal Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Historical Cultural Heritage	CH9	1. Undertake all underground service works beneath or within heritage places or tree protection zones (TPZs) for trees as part of heritage places to avoid, minimise and mitigate impacts to the heritage fabric.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan and Ecology Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans and Tree Protection Plans. This is subject to stakeholder consultation requirements with Heritage Victoria. The management plans are reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Historical Cultural Heritage	CH10	1. Ensure new development is responsive to heritage places in terms of height, massing, form, façade articulation, materials and impacts on their settings and key views.	Historical cultural heritage at the Western Portal is presented in Section 4.4.3 of the Development Plan. The design of the Western Portal seeks to minimise any impacts to the heritage values of the area.
Historical Cultural Heritage	CH11	1. Ensure no direct impact on heritage buildings on the former Glueworks site in Kensington.	This is not relevant to the Western Portal as CYP will not have a direct impact on the former Glueworks site in Kensington. Refer to the Rail Infrastructure Alliance Western Portal Development Plan.
Historical Cultural Heritage	CH12	1. Retain and protect Langford Street pumping station as part of the design for the new substation.	This is not relevant to the Western Portal. Refer to the Arden Intake Substation Development Plan.
Historical Cultural Heritage	CH13	1. In consultation with VicRoads, Heritage Victoria and/or the relevant local council, replace removed Elm trees in Royal Parade as part of Project delivery using appropriate species and re-establish the boulevard formation and heritage values. 2. Provide suitable soil conditions to facilitate the growth of new trees to reach the size of the existing mature trees in the boulevard. (See EPR AR3).	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
Historical Cultural Heritage	CH14	1. During detailed design ensure the eastern Parkville station entry is set no less than 8-10 metres from the original Gatekeeper's Cottage and an appropriate boundary treatment is retained or re-established for the heritage building.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
Historical Cultural Heritage	CH15	1. During detailed design for the CBD South station, consult with City of Melbourne regarding the incorporation of the Charles Bush sculpture into the design for the new building on the Port Phillip Arcade site, preferably in a prominent position on the Flinders Street façade.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
Historical Cultural Heritage	CH16	1. In the event that temporary or permanent relocation of the Burke and Wills Monument from its current site is required, resolve the final location of the monument in consultation with the City of Melbourne prior to the commencement of relevant works. (See EPR CH5).	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
Historical Cultural Heritage	CH17	1. Integrate the bluestone pillar and cast iron fencing at the corner of Grattan Street and Royal Parade into the design for the station entry and surrounds in consultation with the University of Melbourne.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
Historical Cultural Heritage	CH18	1. Replace removed trees as part of Project delivery in accordance with relevant policy documents and to reinstate heritage values in consultation with the City of Melbourne, the City of Port Phillip, Heritage Victoria, the Shrine of Remembrance and Shrine Trustees (as applicable). Policy documents are as follows. a) Any Conservation Management Plan adopted by those bodies, including: i Domain Parklands Conservation Management Plan (2016) and the Domain Parklands Masterplan (when completed). ii Shrine of Remembrance Conservation Management Plan (Lovell Chen, 2010) or any future review and the Shrine of Remembrance Landscape Improvement Plan (Rush Wright Associates, 2010). iii South African Soldiers Memorial Conservation Management Plan (Context, 2016). (See EPR AR3).	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
Historical Cultural Heritage	CH19	1. In consultation with Heritage Victoria, the City of Melbourne, the Shrine of Remembrance and Shrine Trustees (as applicable), review the siting and design of the eastern Domain station entry during detailed design to ensure it is as recessive as possible in this location and has only a limited presence on the edge of the Shrine of Remembrance Reserve. 2. The design needs to allow for the maintenance of an appropriate setting to the Macpherson Robertson Memorial Fountain.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
Historical Cultural Heritage	CH20	1. Prior to dismantling the South African Soldiers Memorial, in consultation with City of Port Phillip and Heritage Victoria develop interpretive material to display in the precinct until the monument is restored. 2. For detailed design, in consultation with City of Port Phillip and Heritage Victoria review the siting and design of the western Domain station entry to ensure the South African Soldiers Memorial and other components of the Albert Road Reserve retain their heritage values including an appropriate setting. If no appropriate setting can be established, consider options for relocation of the memorial to an alternative site.	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
Historical Cultural Heritage	CH21	1. In consultation with VicRoads, Heritage Victoria and relevant local councils, replace any trees in St Kilda Road that must be removed in a manner which will re-establish the boulevard formation and reinstate heritage values. 2. Resolve the physical and visual impacts of new above ground structures and changes to the functional layout with input from Heritage Victoria, relevant local council, VicRoads, Yarra Trams and PTV/DEDJTR (Transport) in the Heritage Impact Statement (HIS).	This is not relevant to the Western Portal. Refer to the Domain Precinct Development Plan.
Historical Cultural Heritage	CH22	1. Retain and protect the Cross Street Electrical Substation in situ within or abutting proposed construction site.	This is not relevant in the Western Portal. Refer to the Rail Turnback Precinct Development Plan (developed by RIA).
Historical Cultural Heritage	CH23	1. Ensure that, where impacted by Project works, street fabric and infrastructure is conserved and/or accurately reconstructed in consultation with Heritage Victoria and the relevant local council.	Culturally significant street fabric and infrastructure at the Western Portal is presented in Section 4.4.3 of the Development Plan.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Historical Cultural Heritage	CH24	1. Prior to commencement of main works, consider the construction noise and vibration pre-construction surveys and review the ground movement plan required by EPR GM3.On this basis, identify heritage places that may be vulnerable to damage from construction and identify appropriate mitigation measures to prevent damage to heritage places. 2. Prior to the commencement of main works: a) Conduct pre-construction condition surveys of heritage places identified as potentially being vulnerable to damage to record structural condition and structural integrity. b) Implement the identified mitigation measures to prevent damage to heritage places in consultation with Heritage Victoria and the relevant local council (as applicable). c) Conduct vibration monitoring at the heritage places that may be vulnerable to damage to assess the actual impacts from construction works. 3. If the vibration monitoring demonstrates that a heritage place has been, or may be, damaged as a result of vibration, ground vibration must be reduced until the risk of vibration related damage is assessed as acceptable. 4. Construction techniques must also seek to limit, as far as practicable, ground movement to avoid causing damage to heritage places, (see also EPRs GM3, GM4, GM5, GM6, NV4, NV8 and NV2).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Heritage Management Plan, Noise & Vibration Management Plan & Ground Movement Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
EMF	EMF1	1. Prior to commencement of Project works, prepare and implement an Environmental Management System (EMS) that is certified to ISO 14001:2015 Environmental Management Systems – requirements with guidance for use for construction and operation.	Cross Yarra Partnership has implemented an Environmental Management System that is certified to ISO14001:2015, and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. Site specific controls are detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
EMF	EMF2	1. Prepare a Construction Environmental Management Plan (CEMP), Site Environment Implementation Plans (SEIP), Operations Environmental Management Plan (OEMP) and other plans as required by the Environmental Performance Requirements (EPRs) and as relevant to any stage of the Project. 2. Develop a program to set out the process and timing for development of an EMS, CEMP, SEIP, OEMP and other plans as required by the EPRs and as relevant to any stage of the Project. 3. The process for development of and implementation of the CEMP, the SEIP and OEMP must include consultation with Councils, Heritage Victoria, the Roads Corporation, Melbourne Water, Public Transport Victoria (PTV)/DEDJTR (Transport), the Environment Protection Authority (EPA) and other stakeholders as relevant. These consultation processes must be described in the program. Plans are to be reviewed in accordance with the EMF. 4. The CEMP should be prepared in accordance with EPA Publication 480, Environmental Guidelines for Major Construction Sites (EPA 1996).	Cross Yarra Partnership has implemented an Environmental Management System, and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operation phase of the Project. Site specific controls are detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
EMF	EMF3	1. Prior to commencement of Project works, appoint an Independent Environmental Auditor to audit proposed plans, as required in the Incorporated Document, so as to ensure the plans comply with the EPRs and to undertake environmental audits of compliance with the approved CEMP, SEIP, OEMP (the OEMP is for Public Private Partnership (PPP) only), EPRs and approval conditions.	An Independent Environmental Auditor has been appointed to ensure the relevant plans comply with the EPRs and is undertaking environmental audits to satisfy this EPR.
EMF	EMF4	1. Prior to commencement of Project works, develop and implement a process for the recording, management and resolution of complaints from affected stakeholders consistent with Australian Standard AS/NZS 10002: 2014 Guidelines for Complaint Management in Organisations. 2. The complaints management approach will be documented in the Community and Stakeholder Engagement Management Framework required under EPR SC3 and be integrated with the Proponent and Contractors' own EMS'. The complaints management system will address requirements of the Business Support Guidelines for Construction (BSGC). (See EPR B2).	Rail Project's Victoria has implmented a process for the recording, management and resolution of complaints, as documented in the Communications and Stakeholder Engagement Management Framework. CYP's Communications and Stakeholder Engagement Management Plan has been prepared to reflect this process. This plan has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Electro Magnetic Interference	EMI1	1. During detailed design activities for main works: a) Undertake a Project wide Electro Magnetic Interference (EMI) assessment for existing infrastructure, considering: i Baseline conditions. ii Stakeholder requirements. iii Manufacturer specifications of sensitive equipment. iv Any electromagnetic emissions where the magnetic fields are altered by moving metallic objects and which may alter the operation of any electrical or electronic equipment to be used during construction and operation of the Project. b) Undertake baseline monitoring of sensitive equipment in accordance with any relevant manufacturer environmental test requirements, where available. c) Determine operational EMI limits in consultation with sensitive equipment owners having regard to equipment manufacturer environmental specifications where available and background EMI levels. d) If EMI limits are expected to be exceeded, as a result of either the construction and/or operation of the Project, design mitigation measures, in consultation with equipment owners, so as to minimise impact on sensitive equipment in accordance with 'best practice' industry standards. 2. The findings of the assessment undertaken in EPR EMI1 should be summarised and addressed in the Management Plan prepared in response to EPR EMI2.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Design Management Plan (Electro-Magnetic Compatibility Management Plan). These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Electro Magnetic Interference	EMI2	1. Prior to commencement of relevant works, prepare and implement an Electro Magnetic Compatibility (EMC) Management Plan that includes the following (but is not necessarily limited to): a) An assessment of the likely electromagnetic emissions generated by the main works and the operation of the Project. b) Identification of sensitive equipment that might be affected by those electromagnetic emissions and the proposed management measures. c) A testing strategy in accordance with equipment specifications to monitor performance of appropriate management measures. d) Identification of possible works to sensitive equipment to avoid adverse impacts. e) A program for regular auditing of electronic and electrical systems during the construction, testing and commissioning. f) Remedial action to be undertaken if EMI limits are not met during the construction, testing, commissioning and operation of the Project.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Design Management Plan (Electro-Magnetic Compatibility Management Plan). These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Terrestrial flora and fauna	FF1	1. Where the removal of native vegetation is 'unavoidable' (as defined under relevant policy) meet the requirements of the Permitted Clearing of Native Vegetation – Biodiversity Assessment Guidelines.	Works at Western Portal do not necessitate the removal of any native vegetation. Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Terrestrial flora and fauna	FF2	1. Develop and implement measures to avoid the spread or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Terrestrial flora and fauna	FF3	1. Trees identified for removal under EPR AR1, which may be used for breeding by native wildlife, should be removed outside the spring breeding season (August-December inclusive) where practicable. Immediately prior to site clearance for construction, large old trees with habitat hollows must be inspected by a suitably experienced and qualified arborist, to check for fauna occupancy, and native fauna removed and released at a nearby location immediately outside the impact zones.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Greenhouse Gas	G1	1. Prior to commencement of main works, develop and implement a Sustainability Management Plan to meet, as a minimum, the Melbourne Metro sustainability targets, including achieving the specified ratings under the Infrastructure Sustainability Council of Australia's Infrastructure Sustainability Rating Tool and the Green Star Design and As Built Melbourne Metro Rail Tool.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Sustainability Management Plan. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor (this includes audits of performance against the most material aspects each quarter throughout construction).
Greenhouse Gas	G2	1. Monitor and report on how each of the best practice GHG abatement measures and sustainability initiatives identified in the Concept Design is implemented in the detailed design of the Project and whether any additional measures not included in the Concept Design are feasible.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Sustainability Management Plan, which includes sub-plans such as Climate Resilience, Carbon and Energy. These plans are reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor (this includes audits of performance against the most material aspects each quarter throughout construction).
Ground Movement and Land Stability	GM1	1. Prior to commencement of shaft construction and prior to commencement of main works , develop and maintain geological and groundwater model(s) (as per EPR GW2) for each Works Package which: a) Use monitored ground movement and ground water levels prior to construction to identify pre-existing movement. b) Inform tunnel design and the construction techniques to be applied for the various geological and groundwater conditions. c) Assess potential drawdown and identify trigger levels for implementing additional mitigation measures to minimise potential primary consolidation settlement. d) Assess potential ground movement effects from excavation and identify trigger levels for implementing additional mitigation measures to minimise potential ground movement effects.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The management system includes a Groundwater Management Plan and Ground Movement Management Plan which set out the relevant models are managed. These plans have been reviewed by the project's Independent Reviewer and audited by the project's Independent Environmental Auditor.
Ground Movement and Land Stability	GM2	1. Design and construct the permanent structures and temporary works to limit ground movements to within appropriate acceptability criteria (to be determined in consultation with relevant stakeholders, local councils and land managers and which build upon the assumptions for criteria presented in the EES) for vertical, horizontal, and angular deformation as appropriate for Project activities during the construction and operational phase. In the design of the works and the planning of construction and mitigations, incorporate the findings of investigations reported in the EES and subsequent relevant investigations.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ground Movement Management Plan, which has been reviewed by the project's Independent Reviewer. These plans are also audited by the project's Independent Environmental Auditor.
Ground Movement and Land Stability	GM3	1. Prior to commencement of shaft construction and prior to commencement of main works, develop and implement a Ground Movement Plan(s) for each Works Package for construction and operational phases of the Project that: a) Addresses the location of structures/assets which may be susceptible to damage by ground movement resulting from Melbourne Metro works, having particular regard to heritage places and EPR CH2. b) Identifies appropriate ground movement impact acceptability criteria for buildings, utilities, trains, trams and pavement after consultation with the various stakeholders. c) Identifies mitigation measures to ensure acceptability criteria can be met. d) Identifies techniques for limiting settlement of buildings and protecting buildings from damage. Where these may apply to heritage places, they should be developed in consultation with Heritage Victoria and the relevant local council (as applicable). e) Addresses additional measures to be adopted if acceptability criteria are not met such as reinstatement of any property damage. For heritage places, refer to EPR CH2 and CH24. f) Establishes ground movement monitoring requirements for the area surrounding proposed Melbourne Metro works and at the location of various structures/assets to measure consistency with the predicted model. g) Consult with land and assets owners that could be potentially affected and whereby mitigation measures would be required.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ground Movement Management Plan, which has been reviewed by the project's Independent Reviewer. These plans are also audited by the project's Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Date: 28-09-20

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Ground Movement and Land Stability	GM4	1. Conduct pre-construction condition surveys for the assets predicted to be affected by ground movement, including where a property owner reasonably expects to be potentially affected and has requested a pre-construction condition survey. 2. Develop and maintain a data base of as-built and pre-construction condition information for each potentially affected structure identified as being in an area susceptible to damage (see EPR GM3) or where a property owner has requested a pre-construction condition survey, specifically including: a) Identification of structures/assets which may be susceptible to damage resulting from ground movement resulting from Melbourne Metro works. b) Results of condition surveys of structures, pavements, significant utilities and parklands to establish baseline conditions and potential vulnerabilities. c) Records of consultation with landowners in relation to the condition surveys. d) Post-construction stage condition surveys conducted, where required, to ascertain if any damage has been caused as a result of Melbourne Metro. e) Share pre- and post-condition assessments and records of consultation with the property owner proactively. f) Ensure all stakeholder engagement activities are undertaken in accordance with the contractors Community and Stakeholder Engagement Management Plan.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ground Movement Plan and Communications and Stakeholder Engagement Management Plan, which set out the process for undertaking condition surveys. These plans have been reviewed by the project's Independent Reviewer. These plans are also audited by the Independent Environmental Auditor.
Ground Movement and Land Stability	GM5	1. Adopt construction techniques for Melbourne Metro to limit ground movement to within appropriate acceptability criteria (to be determined in consultation with relevant stakeholders).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ground Movement Plan, which is reviewed by the project's Independent Reviewer. These plans are also audited by the Independent Environmental Auditor.
Ground Movement and Land Stability	GM6	1. For properties and assets affected by ground movement, undertake any required repair works or other actions as agreed with the landowner. For places on the VHR, consultation with Heritage Victoria and the relevant local council must occur (as applicable).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ground Movement Plan and Heritage Management Plan, which is reviewed by the project's Independent Reviewer. These plans are also audited by the Independent Environmental Auditor.
Groundwater	GW1	1. Design the tunnel and underground structures so that they minimise changes to groundwater levels during construction and operation to minimise impacts on groundwater dependent values, ground movement and contamination plume migration. 2. In the case of existing, registered groundwater bore users, for the assessment of tolerable groundwater drawdown criteria, drawdown level should not exceed the point where the available saturated aquifer thickness of the bore is reduced by further than 10 per cent.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Groundwater Management Plan and Ground Movement Plan, which have been reviewed by the project's Independent Reviewer. These plans are also audited by the Independent Environmental Auditor.
Groundwater	GW2	1. Develop a groundwater model through a process that involves ongoing referral to the Independent Environmental Auditor consistent with the Australian Groundwater Modelling Guidelines (Barnett et al, 2012). Apply the model for the detailed design phase to predict impacts associated with any changes to construction techniques or operational design features proposed during detailed design, and reconfirm that the EPRs and mitigation measures are sufficient to mitigate impacts from changes in groundwater levels, flow and quality. 2. The groundwater model should be updated to address comprehensively transient calibration, aquifer specific storage parameter values and their justification, prediction of cumulative impacts during construction and uncertainty assessments. 3. Ensure that the model geometry set-up (node and grid network of model and layering definition) is accurately matched into the Project's detailed design excavation geometry. 4. Undertake monitoring during construction to ensure that predictions are accurate and mitigation measures are appropriate, and adjust the model if required.	Cross Yarra Partnership has implemented an Environmental Management System, and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Groundwater Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Groundwater	GW3	1. Prior to commencement of shaft construction and prior to commencement of main works, develop and implement a Groundwater Management Plan (GWMP) for each Works Package detailing groundwater management approaches to address the predicted impacts to groundwater dependent values during construction and to ensure protection of groundwater dependent values. 2. The GWMP must be based on the detailed design phase groundwater model, and should include the following details: a) Approach to collection, treatment and disposal of groundwater collected during construction in accordance with the RPV Groundwater Disposal Strategy. b) Identifying and if necessary, specifying mitigation measures to protect groundwater dependent vegetation during periods of drawdown. c) An approach identified in consultation with the EPA so that contaminant migration causes no significant impacts on beneficial uses or vapour intrusion into underground structures, and establish appropriate monitoring networks to measure the effectiveness of the approach. d) Methods for minimising drawdown in areas of known PASS and establishing appropriate monitoring networks to confirm effectiveness of approach. e) Methods for minimising drawdown at any existing recharge bores, and establishing appropriate monitoring networks to measure the effectiveness of mitigation. f) Groundwater drawdown trigger levels for groundwater dependent values at which additional mitigation measures must be adopted. g) Design, operation and management of groundwater injection bore fields. h) Contingency measures if impacts occur at existing active groundwater bores and surface water bodies. i) Contingency measures should unexpected groundwater conditions be encountered. 3. The GWMP must be developed in consultation with EPA and relevant water authorities. 4. The GWMP should also address RPV's sustainability requirements where appropriate.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Groundwater Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Groundwater	GW4	1. Use the Groundwater Disposal Strategy and GWMP to obtain a Trade Waste Agreement with the relevant Water Retailers for groundwater disposal.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Groundwater Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans set out the process for identifiying and obtaining relevant approvals. CYP have obtained required Trade Waste Agreements for works at Western Portal. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Groundwater	GW5	1. Prior to commencement of shaft construction and prior to commencement of main works, develop and implement a groundwater monitoring plan as part of the GWMP for each Works Package that details sufficient monitoring of groundwater levels to verify that no significant impacts occur from potential: a) Contaminant migration on the beneficial uses of groundwater at third party properties caused by drawdown or vapour intrusion to underground structures b) Activation of PASS and groundwater acidification c) Reduction in access to water for bore owners in the area around the Project d) Reduction in access to groundwater for trees – particularly in the Tunnels precinct between CBD South and Domain stations, and the CBD South station and eastern portal precincts e) Change in injection rates in any existing recharge bores that may be present in the area around the Project.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Groundwater Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plan. This has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Land Use and Planning	LU1	1. Prior to commencement of relevant works, develop and implement a plan for construction and operation of the Project that has as its purpose minimising impacts on existing land uses during both early works and main works, including by: a) Limiting the extent of any permanent change of use within existing public open space. b) Minimising the footprints of construction sites and any permanent infrastructure which is to be located on public land. c) Locating and designing all Project works to avoid, to the extent practicable, any temporary and permanent loss of public open space to maximise the re-instatement potential of that land. d) Minimising impacts to existing public open spaces and recreational facilities and the users of these facilities, including (but not limited to): JJ Holland Park, University Square, the Melbourne City Baths, City Square, Federation Square, the Shrine of Remembrance and the Shrine Reserve, Domain Parklands, Edmund Herring Memorial Oval, and the Albert Road Reserve. e) Minimising the impacts to existing residential areas by locating new above ground infrastructure, such as electrical substations in appropriate locations considering adjoining properties and exploring the co-location of rail infrastructure facilities where practicable. f) Ensuring residents are notified in advance of works in accordance with EPRs SC4 and SC10. 2. Such measures must be developed in consultation with affected land managers for public land, local councils and key stakeholders, as applicable. Note (1) The approach to defining key stakeholders is to be outlined in the Community and Stakeholder Engagement Management Framework (see EPR SC3).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Land Use Management Plan. This has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor. Land use and planning, in particular the impact on existing land use, is presented in Section 4.4.4 of the Western Portal Development Plan. Legacy works associated with the Western Portal do not impact JJ Holland Park.
Land Use and Planning	LU2	1. Development of the Project must be generally in accordance with the relevant Open Space Master Plans (including but not limited to, the Domain Parklands, and University Square Master Plans and Chapel ReVision Structure Plan), and be consistent with the Melbourne Metro Urban Design Strategy and EPR SC8 in designing and constructing above ground infrastructure for the tunnels. 2. Consultation must occur with land managers and/or agencies responsible for the implementation of the relevant Open Space Master Plans, including local councils and key stakeholders. The outputs must be consistent with EPR SC8.	The design of the Western Portal is being developed in consultation with City of Melbourne. Although not an established Master Plan, the Metro Tunnel does not impact on the implementation of the *JJ Holland Park Concept Plan 2008.* This is presented in Section 4.4.4 of the Development Plan.
Land Use and Planning	LU3	1. Prior to commencement of relevant works, develop and implement a plan for the design and construction of Arden station that adopts an integrated approach to urban design and planning of the station and which is generally in accordance with the Vision and Framework Plan for Arden. This must include consultation with the Victorian Planning Authority, City of Melbourne and any other relevant agencies such as Melbourne Water and the plan must be referred to the Urban Design and Architectural Advice Panel (UDAAP). 2. The design must include integrated water sensitive urban design (EPR SW2) and management of the extent of flooding across the site.	This is not relevant to the Western Portal. Refer to the Arden Precinct Development Plan.
Land Use and Planning	LU4	1. Prior to commencement of relevant works, develop and implement a plan in consultation with the Urban Design and Architectural Advice Panel (UDAAP) to ensure the design of the Project meets the Melbourne Metro Urban Design Strategy and relevant planning schemes that considers: a) Permanent above ground structures. b) Temporary structures adopting principles of the Growing Green Guide 2014 including green walls, roofs and facades, where practicable. c) The RPV Creative Strategy. d) Wayfinding, signage and advertising for above ground elements of the Project. 2. The strategies must be developed in consultation with relevant local councils and land managers. (See EPR LV1).	This Development Plan and the design of the Western Poral was developed in consultation with the UDAPP to ensure it meets the Urban Design Strategy. This is presented in Section 4.4.4 of the Development Plan. The future built form of the wider Western Portal precinct, including the landscaping and hardscaping design response, will be developed and addressed by the Rail Infrastructure Alliance. This is addressed in a separate Development Plan.
Landscape and visual	LV1	1. Prior to commencement of relevant works, develop and implement a plan for the design of permanent and temporary works, including temporary landscaping, in consultation with relevant local councils and the Office of Victorian Government Architect to comply with the Melbourne Metro Urban Design Strategy. Avoid or minimise, to the extent practicable, visual impacts in both duration and intensity on sensitive receptors and heritage places, and maintain broader landscape character and heritage precinct values, particularly in relation to: a) Tunnels: Queen Victoria Gardens, Tom's Block. b) Western Portal: JJ Holland Park. c) Parkville Station: University of Melbourne, Victorian Comprehensive Cancer Centre, Royal Melbourne Hospital, University Square. d) CBD North Station: RMIT University, the State Library and State Library Forecourt, City Baths, and A'Beckett Street open space. e) CBD South Station: St Paul's Cathedral, Federation Square, City Square, Flinders Street Station, Young and Jackson Hotel. f) Domain Station: The Shrine of Remembrance, Shrine of Remembrance Reserve, St Kilda Road, Albert Road Reserve, Domain Parklands. g) Eastern Portal: South Yarra Sidings Reserve, Osborne Street, Lovers Walk Pedestrian Walk. h) Existing habitat corridors within and proximate to Moonee Ponds Creek, if the alternate substation site adjacent to the Moonee Ponds Creek is selected. 2. Consult with University of Melbourne in relation to location and design of station entries on University land.	Landscape and visual impacts at the Western Portal are presented in Section 4.4.5 of the Development Plan. The design of the Western Portal is being addressed in consultation with the Office of the Victorian Government and City of Melbourne. As part of construction works, temporary hoarding has been installed (including on Childers Street) with artwork consistent with the Creative Strategy.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Landscape and visual	LV2	1. Develop and implement a plan in consultation with the Office of Victorian Government Architect, local councils and other land managers to comply with the Melbourne Metro Urban Design Strategy to re-establish and enhance public open space, recreation reserves and other valued places disturbed by temporary works. Some of these are heritage places and further consultation will be required. 2. The plan must include, but not be limited to, a methodology and timeframe for storage, reinstatement or replacement of existing public art, monuments and public infrastructure such as poles (including banner poles), bins, and other street furniture such as wayfinding signage (including signage hubs). 3. Where temporary works on public open space, recreation reserves and other valued places disturb trees in these locations, the plan must be consistent with measures proposed under plans and actions required under EPR AR1, AR2 and AR3 regarding reinstatement of trees. 4. The plan should include a timeframe for re-establishment of public open space, recreation reserves and other valued places disturbed by temporary works and should also include exploring opportunities for renewal of public spaces for the benefit of communities beyond resident groups, including visitors, business owners and commuters.	The re-establishment of public open space is presented in Section 4.4.5 of the Western Portal Development Plan. The wider landscaping and public realm design response for the future built form of the Western Portal precinct is addressed by the Rail Infrastructure Alliance and has been subject to a separate Development Plan.
Landscape and visual	LV3	1. Prior to commencement of relevant works where temporary lighting is required, develop measures to minimise light spillage during construction to protect the amenity of adjacent neighbourhoods, parks and community facilities. Lighting for operation must be designed in accordance with council requirements and relevant standards.	Cross Yarra Partnership has implemented an Environmental Management System, and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Air Quality, Dust & Lighting Management Plan and the Urban Design Management Plan, which have all been reviewed by the project's Independent Reviewer. The Independent Environmental Auditor has audited these plans, noting the Urban Design process is outlined in the Construction Environmental Management Plan.
Landscape and visual	LV4	1. Develop and implement a plan to consider the use of temporary landscape and other temporary features or structures during construction. Temporary landscape treatments or features should be reused across the Project, where appropriate.	Cross Yarra Partnership has implemented an Environmental Management System, and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Urban Design Management Plan, which has been reviewed by the project's Independent Reviewer. The Independent Environmental Auditor has audited these plans, noting the Urban Design process is outlined in the Construction Environmental Management Plan.
Noise and Vibration	NV1	1. Manage construction noise in accordance with EPA Publication 1254 Noise Control Guidelines and as specified in the Construction Noise and Vibration Management Plan (CNVMP) prepared under EPR NV21. The CNVMP must not prescribe standards or practices which are less rigorous than recommended by EPA Publication 1254.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV2	1. For construction works conducted between CBD South station and Domain station, comply with the requirements of the Notification of Referral Decision for the Melbourne Metro Rail Project (EPBC 2015/7549, dated 22 September 2015) under the EPBC Act for vibration monitoring and measurement, as follows: a) Conduct pre-construction dilapidation surveys of the nearest Commonwealth Heritage listed structures to the construction activity, including the Former Guardhouse (Block B), to record structural condition and structural integrity prior to commencement of tunnelling. b) Conduct vibration monitoring at the commencement of tunnelling in geological conditions that are similar to those at Victoria Barracks in order to quantify the actual tunnel boring machine vibration characteristics (level and frequency) for comparison to the values derived from the literature and the German DIN (DIN 4150) target. c) Conduct continuous vibration monitoring at the nearest Victoria Barracks heritage structures to the construction activity, including the Former Guardhouse (B Block), to assess the actual tunnelling vibration for acceptability, taking into account both the vibration frequency and condition of structures, until monitoring of vibration at the Former Guardhouse (B Block) shows measurements equivalent to preconstruction vibration readings at the Former Guardhouse (B Block). d) If monitoring conducted according to the above demonstrates the condition of heritage structures may be degraded as a result of vibration, ground vibration must be reduced by adjusting the advance rate of the tunnel boring machine until monitoring of vibration at the Former Guardhouse (B Block) shows consistent measurements equivalent to preconstruction vibration readings at the Former Guardhouse (B Block). Other management actions to ensure the integrity of the heritage building may be employed if considered to be appropriate. (See EPR CH24).	This is not relevant to the Western Portal. Refer to the Town Hall and Domain Precinct Development Plans.
Noise and Vibration	NV3	**Noise and Vibration Modelling – Design** 1. Prior to commencement of shaft construction and prior to commencement of main works, each Works Package contractor must appoint a suitably qualified acoustic and vibration consultant to predict construction noise and vibration (through modelling) and update the modelling to reflect current construction methodology, site conditions and specific equipment noise and vibration levels (this will require noise and vibration measurements). The model is to be used to determine appropriate mitigation to achieve the EPRs. 2. The acoustic and vibration consultant must document the modelling and mitigation investigation in a Construction Noise and Vibration Assessment Report for review by the Independent Environmental Auditor. This report must provide the basis for the development of the construction noise and vibration management plan required under EPR NV21. 3. The model must consider airborne noise to residential and non-residential receivers, ground-borne noise at residences, blasting vibration and ground-borne vibration. (For heritage places see EPR CH24).	This Development Plan presents the built form of the Western Portal. Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Western Portal Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Noise and Vibration	NV4	**Noise and Vibration Monitoring - Construction** 1. Prior to commencement of shaft construction and prior to commencement of main works, each Works Package contractor must appoint a suitably qualified acoustic and vibration consultant to undertake noise and vibration monitoring. 2. The acoustic and vibration consultant must undertake noise and vibration monitoring to assess levels with respect to any Guideline Targets specified in the EPRs. Where monitoring indicates exceedences of Guideline Targets, appropriate management actions must be implemented as soon as possible. 3. The model developed during the Design Stage should be updated / calibrated using the results of the noise and vibration monitoring to provide more accurate predictions of the noise and vibration levels associated with ongoing and future construction works. It may be appropriate to adjust management measures as a result of the more accurate predictions. (For heritage places see EPR CH24).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV5	1. Prior to commencement of project works, each Works Package contractor must prepare and implement a communications plan to liaise with potentially affected community stakeholders and land owners regarding potential noise and vibration impacts. The plan must include procedures for complaint management as per SC3. In developing the plan, consult with relevant local councils, EPA Victoria, the Parkville Precinct Reference Group and RMIT University and other precinct reference groups, as appropriate. (See EPRs SC4 and SC11).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Construction Noise and Vibration Communications Management Plan. This has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV6	**Airborne Construction Noise Guideline Targets (External)** 1. Implement management actions if construction noise is predicted to or does exceed the Guideline Noise Levels at residential locations as specified in EPA Publication 1254. *See table in EPRs* Note (1) During Normal Working Hours, the CNVMP must address noise levels that exceed the Management Levels specified in Table EPR NV21A.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV7	**Airborne Construction Noise Guideline Targets (Internal)** 1. Implement management actions if construction noise: a) Is predicted to or does exceed the internal noise levels below for Sensitive Areas (based on AS/NZS 2107:2000); and b) Adversely impacts a noise sensitive receptor within the Sensitive Area. *See EPR for table* 2. If construction exceeds the internal noise levels above: a) Consider the duration of construction noise b) Consider the relevant ambient noise levels c) Consult with the owner or operator of the noise sensitive receptor d) Consider any specific acoustic requirements of specialist space to determine whether a noise sensitive receptor within a Sensitive Area is adversely impacted and, if so, whether further management actions are required. (See EPR NV21, subclause B).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV8	**Vibration Guideline Targets for Structures** 1. Implement management actions if, due to construction activity, the following DIN 4150 Guideline Targets for structural damage to buildings (for short-term vibration or long-term vibration) are not achieved. *See EPR for table NV8-1: Short-term vibration on structures* Notes *(1) It may be appropriate to modify the guideline targets for particular structures following the completion of pre-construction condition surveys.* *(2) At frequencies above 100 Hz, the values given in this column may be used as minimum values.* *(3) Vibration levels marginally exceeding the DIN4150 guideline targets in the table above would not necessarily result in damage to buildings and structures, but warrant further investigation to determine if higher vibration levels can be accommodated without risk of damage.* *(4) For civil engineering structures (e.g. with reinforced concrete constructions used as abutments or foundation pads) the DIN 4150 guideline targets for Type 1 buildings in the table above may be increased by a factor of 2.* *(5) Short-term vibration is defined as vibration which does not occur often enough to cause structural fatigue and which does not produce resonance in the structure being evaluated.* (6) Where land owners agree, pre-construction condition surveys must be performed at all properties located within designated Project Area where it is predicted that DIN 4150 guideline targets will be exceeded. *See EPR for table NV8-2 Long-term vibration on structures* Notes *(1) It may be appropriate to modify the guidelines targets described in the table above for particular structures following the completion of pre-construction condition surveys.* *(2) Vibration levels marginally exceeding those in the Table would not necessarily mean that damage would occur and further investigation would be required to determine if higher vibration levels can be accommodated without risk of damage.* *(3) Long-term vibration means vibration events that may result in a resonant structural response.* *(4) Where land owners agree, pre-construction condition surveys must be performed at all properties located within designated Project Area where it is predicted that the Guideline Targets described in the Table above will be exceeded.*	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These has been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Noise and Vibration	NV9	**Vibration Guideline Targets for Above-ground Utility Assets and Infrastructure** 1. Prior to commencement of relevant works, undertake condition assessments of above ground utility assets and infrastructure, including (but not limited to) the Arden Street Bridge and Princes Bridge, to establish construction vibration limits in consultation with asset owners. 2. Monitor vibration during construction to demonstrate compliance with the relevant vibration guideline targets under NV8 or those agreed with the asset owners. Take remedial action if limits are not met. (See EPRs CH3 and CH24).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV10	**Vibration Guideline Targets for Below-ground Infrastructure** 1. Prior to commencement of relevant works, undertake condition assessments of below-ground infrastructure, including (but not limited to) Swanston Street Brick Drain and Flinders Street Drain, to establish construction vibration targets with the asset owner. 2. Implement management actions if agreed construction vibration targets (or if no specific targets have been established the following DIN 4150 Guideline Targets for buried pipework/underground infrastructure) from construction are not achieved. *See EPR table* Notes *(1) The DIN 4150 Guideline Targets may be reduced by 50% when evaluating the effects of long-term vibration on buried pipework.* *(2) The DIN 4150 Guideline Targets are based on the assumption that pipes have been manufactured and laid using current technology (however it is noted that this is not the case for the majority of buried pipework potentially affected by Melbourne Metro).* *(3) Compliance with asset owner's Utility Standards is to be achieved.*	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. This is reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV11	**Vibration Dose Values (VDVs) (Human Comfort)** 1. Implement management actions if the following Guideline Targets (VDVs) (based on Table 1 in BS6472-1:2008) for continuous (as for TBMs and road headers), intermittent, or impulsive vibration are not achieved. See EPR table Notes (1) The Guideline Targets are non-mandatory; they are goals that should be sought to be achieved through the application of feasible and reasonable mitigation measures. If exceeded then management actions would be required. (2) The VDVs may be converted to PPVs within a future noise and vibration construction management plan under EPR NV21.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV12	**Sensitive Equipment Guideline Targets** 1. For Construction: Implement management actions (which may include source mitigation) if equipment manufacturer specifications, measured background levels or other agreed levels (after consultation with the affected organisation) whichever are higher, are expected to be or are exceeded for vibration sensitive equipment at the Parkville and CBD North precincts. 2. For Operation: If the manufacturer's specification or measured background levels (whichever are higher) or other agreed levels (after consultation and agreement from the affected organisation) are predicted to be exceeded, assess practicable mitigation to reduce the vibration levels to the relevant target.. 3. Where equipment manufacturer specifications are not available for vibration, adopt the applicable ASHRAE Equipment Vibration Guideline Targets: *See EPR Table* Notes (1) Background vibration and noise must be measured in accordance with equipment environmental test requirements. (2) Monitoring must be undertaken in accordance with equipment specifications to demonstrate compliance, and monitoring locations determined in consultation with operators of sensitive equipment (See EPR NV21). (3) The proponent may undertake consultation with the users and agree alternative Guideline Targets for Construction and/or Operation phases. (4) Subject to being given the asset owner's consent, during the construction phase, a continuous monitoring program must be adopted (to the asset owner's agreement), with asset owner access to monitoring data using an alert with respect to a 'limit' approach.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV13	**Ground-borne (internal) Noise Guideline Targets for Amenity** 1. Implement management actions as agreed with potentially affected land owners to protect amenity at residences, sleeping areas in hospital wards, student accommodation and hotel rooms where the following ground-borne noise Guideline Targets are exceeded during construction (See Table below based on NSW Interim Construction Noise Guidelines 2009) Implement management actions, as determined in consultation with potentially affected land owners, where ground-bone noise levels unreasonably limit usage in education institutions such as lecture theatres. See table in EPRs for targets. Notes (1) Levels are only applicable when ground-borne noise levels are higher than airborne noise levels. (2) The noise levels are assessed at the centre of the most affected habitable room. (3) Management actions include extensive community consultation to determine acceptable level of disruption and provision of respite accommodation in some circumstances. (4) The levels of the Night and Evening periods are shown to protect amenity and sleep. Alternative and day time targets may be determined in consultation with potentially affected non-residential users where ground-borne noise levels many reasonably limit the usage of the spaces (e.g. lecture theatres).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These are reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Noise and Vibration	NV14	**Blasting** 1. Comply with Australian Standard AS2187.2-2006, Explosives –Storage and use Part 2 – Use of explosives for all blasting. 2. For intensive care wards, hospital wards, operating theatres, surgeries and Bio-resources and areas with vibration sensitive equipment which are not covered in AS2187.2-2006, agree a plan with facilities owners that: a) Avoids damage to vibration sensitive equipment. b) Minimises adverse impact on Sensitive Areas and limits adverse impacts on Bio-resources.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These are reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV15	**Bio-Resources and Sensitive Research** 1. Implement management actions where the following guideline targets (based on Code of Practice for the Housing and Care of Laboratory, Mice and Rats – Department of Primary Industries, Victoria, 2004) are expected to be or are exceeded for areas housing bio-resources: a) Background noise should be below 50 dBL (internal) and should be free of distinct tones. b) Short exposure should be less than 85 dBL (internal). c) Any alternative noise level agreed with the owner of the bio-resources. Notes (1) The nominated levels are guideline targets for both construction and operation. (2) The levels above should take into consideration the limited frequency range associated with hearing for the Bio-resource under consideration. (3) Higher levels may be acceptable if it can be shown that the Bio-resource under consideration is exposed to higher levels and is not adversely impacted by them. (4) Noise includes airborne and ground-borne noise at the sensitive receptors. (5) Consider the existing ambient noise levels when assessing predicted exceedences. (6) During the construction phase, a continuous monitoring program must be implemented in accordance with EPR NV21 . (7) Consideration should be given to adopting a vibration limit in agreement with the RPV and stakeholders.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV16	**Noise and Vibration Modelling** 1. Design Phase a) Appoint a suitably qualified acoustic and vibration consultant to predict and assess operational noise and vibration and determine practicable mitigation measures necessary to achieve the EPRs. b) The acoustic and vibration consultant must prepare an Operation Noise and Vibration Report for review by the Independent Environmental Auditor, which documents the predictions and mitigation measures. 3. Commissioning / Operation a) Appoint a suitably qualified acoustic and vibration consultant to undertake commissioning noise and vibration measurements to assess levels with respect to the EPRs.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV17	**Victorian Passenger Rail Infrastructure Noise Policy (PRINP)** 1. Avoid, minimise or mitigate rail noise where the following PRINP (April 2013) Investigation Thresholds are exceeded during operation: *See table in EPRs for targets* *Notes* *(1) If an investigation shows that the Investigation Thresholds are not exceeded, then no further action is considered under the PRINP.* *(2) The barrier thresholds of the PRINP are to be used as the design targets for the barrier heights and configuration.* *(3) If the Investigation Thresholds cannot be achieved with the installation of barriers or other on-reservation treatment then off-reservation treatment such as upgrades to residential building facades must be considered. Such* *treatments should be designed to meet the following internal noise levels where practicable to do so and subject to landowner consent:* *a. Maximum noise levels of trains should not exceed 50 dB LAMax in bedrooms.* *b. Maximum noise level of trains should not exceed 60 dB LAMAx in living areas.* *(4) LAmax, is defined as maximum A-weighted sound pressure level and is the 95 percentile of the highest value of the A-weighed sound pressure level reached within the day or night* *(5) For Melbourne Metro the location of assessment is at 1m from the centre of the window of the most exposed external façade.*	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV18	**Noise from Fixed Plant** 1. For operation, noise from fixed plant associated with Melbourne Metro must: a) Comply with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1). b) Where SEPP N-1 does not apply, comply with the internal Satisfactory Recommended Design Sound Levels as defined in AS/NZS 2107 for the following sensitive areas: i Teaching spaces ii Laboratories iii Conference rooms iv Libraries v Music studios vi Operating Theatres / Surgeries vii Wards / Recliners viii Performance spaces / Galleries ix Places of worship 2. If the existing internal background noise level within any of the above areas exceeds the Maximum Recommended Design Sound Level in AS/NZS 2107, then noise from the fixed plant associated with the Melbourne Metro Project must not exceed the existing background levels within these spaces at the commencement of operation. 3. This does not apply to noise generated by trains and/or trams.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Noise and Vibration	NV19	**Ground-borne Noise Guideline Targets for Operation** 1. Where operational ground-borne noise Guideline Target levels, as shown in the table below (based on NSW EPA Rail Infrastructure Noise Guideline, May 2013), are exceeded for a sensitive land use, assess and implement practicable mitigation to reduce the noise level so that it either meets or achieves noise levels as close as practicable to the Guideline Target. *See table in EPR for trigger levels.* *Notes* *(1) Specified noise levels refer to noise from heavy or light rail transportation only (not ambient noise from other sources).* *(2) Assessment location is internal near to the centre of the most affected habitable room.* *(3) LASmax refers to the maximum noise level not exceeded for 95% of the rail pass-by events.* *(4) For schools, educational institutions, places of worship the lower value of the range is most applicable where low internal noise levels is expected.* *(5) The values for performing arts spaces may need to be reassessed to address the specific requirements of a venue.*	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV20	**Vibration Guideline Targets for Operation** 1. During operation, achieve the following guideline targets (based on Table 1 in BS6472-1:2008) or background levels (whichever is higher) for vibration as follows: See EPR for table Notes (1) The Guideline Targets are non-mandatory; they are goals that should be sought to be achieved through the application of feasible and reasonable mitigation measures. (2) Compliance with these values implies no structural damage due to operation.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans are reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV21	**Construction Noise and Vibration Management Plan** 1. Prior to commencement of project works, each Works Package contractor must develop and implement a Construction Noise and Vibration Management Plan (CNVMP) in consultation with EPA Victoria and the relevant councils. The CNVMP must comply with and address Noise and Vibration EPRs, be informed by the modelling undertaken by the acoustic and vibration consultant in accordance with EPR NV3 and must include (but not be limited to): a) Identification of sensitive receivers along Melbourne Metro's alignment. b) Details of construction activities and an indicative schedule for construction works, including the identification of key noise and/or vibration generating construction activities (based on representative construction scenarios, including at ancillary facilities) that have the potential to generate noise and/or vibration impacts on surrounding sensitive receivers. 2. The CNVMP must include the following: A. Airborne Noise Management Levels during Normal Working Hours A1. The CVNMP must adopt daytime Management Levels for airborne noise at residences during Normal Working Hours (as defined in EPR NV6) in accordance with Table NV21-A. The Management Level in Table NV21-A is not a noise limit or target, but represents noise levels above which community reaction may be adverse and which should trigger management actions to minimize the noise impact. *See EPR for table NV21-A Airborne Noise Management Levels during Normal Working Hours* *Note* *(1) Outside of Normal Working Hours, the Guideline Noise Levels in NV6 (which are adopted from EPA Publication 1254) apply.* *(2) Noise levels based on the NSW Interim Construction Noise Guidelines 2009.* A2. In addition to the Management Levels shown in Table NV21-A, the Guideline Targets shown in EPRs NV6 and NV7 are to be adopted and addressed in the CNVMP.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV21	B. Airborne Noise Mitigation Measures B1. Identification of reasonable and practicable measures to be implemented to manage construction noise impacts in accordance with : i EPA Publication 1254 Noise Control Guidelines ii NSW ICNG (excluding Part 5, and Part 7.2.1 which relates to pre-approval documentation relevant to NSW) and TfNSW Construction Noise Strategy (but with Section 7 construction hours as per EPA1254 as shown in EPR NV6). B2. Any management actions to be implemented if predicted noise levels exceed, for an extended period of time, the guideline targets specified in EPRs NV6 or NV7 or the Management Levels in Table NV21-A. B3. Measures to be implemented in accordance with the RPV Residential Impact Mitigation Guidelines including (but not limited to) mitigation measures for out of hours works (including unavoidable works) where predicted noise levels exceed the noise levels specified in the Residential Impact Mitigation Guidelines. C. Vibration: Structures C1. Identification of any alternative vibration guideline targets to those specified in EPRs NV8, NV9 or NV10 deemed necessary and/or appropriate to protect the structural integrity of structures based on pre-construction condition surveys, undertaken in accordance with CH24, GM4 and NV9 (or as otherwise required to assess the impact of vibration on structures along the alignment). C2. Identification of practicable measures to be implemented to manage construction vibration impacts in accordance with the: i Vibration guideline targets for structures specified in, or otherwise determined in accordance with, EPR NV8 ii Construction vibration limits for above ground utility assets determined in accordance with EPR NV9 iii Vibration guideline targets for below ground infrastructure specified in, or as otherwise determined in accordance with NV10. C3. Any management actions to be implemented if predicted vibration levels exceed the guideline targets specified in EPRs NV8, NV9, or NV10. C4. Specific heritage measures where relevant in accordance with EPRs CH2 and CH24.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Noise and Vibration	NV21	D. Vibration and Ground-borne Noise: Human Comfort D1. Identification of reasonable and practicable measures to be implemented to manage construction vibration and ground borne noise impacts in accordance with the: i Vibration dose values for human comfort specified in EPR NV11 (which may be expressed as peak particle velocity rates for the purposes of the CVNMP). ii Ground-borne (internal) noise guideline targets for amenity specified in EPR NV13. D2. Any management actions to be implemented if predicted vibration or ground-borne noise levels exceed, for an extended period of time, the guideline targets identified in EPRs NV11 or NV13. D3. Any measures to be implemented in accordance with the Residential Impact Mitigation Guidelines including (but not limited to) mitigation measures for out of hours works (including unavoidable works) where ground-borne noise levels are predicted to exceed the ground-borne noise construction targets specified in the Residential Impact Mitigation Guidelines. E. Vibration and Ground-borne Noise: Sensitive Equipment and Bio-resources E1. Identification of reasonable and practicable measures, to be determined following consultation with the Parkville Precinct Reference Group and RMIT University, to be implemented to manage construction vibration and ground-borne noise impacts in accordance with the: i Vibration sensitive equipment guidelines specified in, or as otherwise determined in accordance with EPR NV12 ii Bio-resource guideline targets specified in, or as otherwise determined in accordance with EPR NV15. E2. Any management actions to be implemented if predicted vibration or ground-borne noise levels exceed the guideline targets identified in EPRs NV12 or NV15. F. Blasting F1. If blasting is proposed, an assessment of the potential noise and vibration impacts associated with blasting activities, and the identification of measures to ensure compliance with Australian Standard AS2187.2-2006 as specified in EPR NV14. F2. Any measures to be implemented in accordance with the Residential Impact Mitigation Guidelines.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Noise and Vibration	NV21	G. Community Consultation G1. Details of all community consultation measures to be implemented in accordance with NV5 and SC3 including: i Any precinct-specific community consultation measures; and ii The establishment of measures concerning complaints management. H. Haulage H1. Operational procedures and controls that minimise truck noise, including, but not limited to, consideration of the following: i Where reasonable and practicable, limit heavy construction vehicle movements to Normal Working Hours (as defined by the EPA) providing this limitation does not include vehicles essential to maintaining construction operations ii Where practicable, select traffic routes to limit the amount of accelerating and braking, prioritise routes with existing heavy vehicle usage where possible, and avoid local roads (e.g. residential streets), particularly for 24- hour activities iii Install 'no engine braking' signs on designated routes iv Ensure trucks are fitted with mufflers that comply with the original equipment manufacturer specifications and relevant EPA in-service noise requirements v Enforce speed restrictions on all construction vehicles vi Complete regular maintenance checks of road surfaces and trucks vii Implement temporary changes to traffic light sequences on designated routes to minimise trucks starting and stopping at junctions viii Monitor construction vehicle driver behaviour ix Identify suitable locations for trucks to idle pending arrival at construction sites x Minimise the need for trucks to reverse and require the use of broadband reverse alarms xi Address to the extent practicable noise from any truck wash required for vehicles leaving construction sites (particularly at night).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan and Construction Noise and Vibration Communications Management Plan. Site specific controls are detailed in the precinct-specific Site Environmental Implementation Plans. These plans will be reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Noise and Vibration	NV21	I. Monitoring I1. Mechanisms to ensure effective monitoring of noise and vibration associated with construction in accordance with EPR NV4, including: i Vibration and noise measurement methodologies for monitoring both baseline and construction levels, including details of the parameters to be obtained, the measurement equipment, and relevant standards to be adhered to for the collection and analysis of data ii Baseline and construction noise and vibration monitoring locations iii The most critical periods, whether determined separating distance or ground conditions, and the duration of monitoring periods iv Specific measures, to be determined following consultation with relevant stakeholders, with respect to sensitive equipment and biological resources (which must, where practicable, include continuous monitoring during construction) v How the results of monitoring would be recorded, reported, and interpreted. J. Unavoidable Work J1. The following Unavoidable Works may need to be undertaken outside of Normal Working Hours: i The delivery of oversized plant or structures that police or other authorities determine require special arrangements to transport along public roads ii Emergency work to avoid the loss of life or damage to property, or to prevent environmental harm iii Maintenance and repair of public infrastructure where disruption to essential services and/or considerations of worker safety do not allow work within standard hours iv Tunnelling works including mined excavation elements and the activities that are required to support tunnelling works (i.e. spoil treatment facilities) v Rail occupations or works that would cause a major traffic hazard vi Works where a proponent demonstrates and justifies a need to operate outside normal working hours such as work that once started cannot practically be stopped until completed such as a concrete pour or construction of diaphragm walls. J2. Prior approval must be obtained for the above work to be undertaken outside of Normal Working Hours (except for item ii). In all cases management actions would need to be applied as per the Residential Impact Mitigation Guidelines and practicable mitigation measures employed to reduce the impact of the noise. All other works must comply with the Guideline Noise Levels in EPR NV6. J3. For unavoidable work: i Approval for planned unavoidable works can only be granted by the Independent Environmental Auditor ii Details of unavoidable works including the type of work, equipment to be used and duration of works must be made publicly available iii For emergency unavoidable work, the proponent must provide a rationale to the satisfaction of the Independent Environmental Auditor as soon as practicable.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. An Operational Environmental Management Plan will be prepared prior to the operational phase of the Project. The aspect-specific control measures are identified in the Noise and Vibration Management Plan and Construction Noise and Vibration Communications Management Plan. Site specific controls are detailed in the precinct-specific Site Environmental Implementation Plans. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Social and Community	SC1	1. Reduce as far as is practicable the disruption to residences from direct acquisition or temporary occupation through measures such as: a) Using a case management approach for all Project interactions with affected landowners b) Appointing a social worker, buyers' advocate or equivalent to assist households with special needs to manage the transition c) Taking into account relative vulnerability and special needs of occupants d) Purchasing properties early when supported by the landowner.	Disruption to residences from direct acquisition or temporary occupation and measures to reduce disruption is managed by RPV.
Social and Community	SC2	1. Prior to commencement of relevant works in areas affected, develop a relocation management framework that responds to the Residential Impact Mitigation Guidelines to ensure a consistent approach across the Project for the voluntary (temporary) relocation of households subject to: a) Construction activities likely to unduly affect their amenity (e.g. out of hours works or sustained loss of amenity during the day for residences with special circumstances such as shift workers) b) Loss of access.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Communications and Stakeholder Engagement Management Plan including the Business Disruption Plan, Relocation Management Framework and Special Events sub-plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Social and Community	SC3	**Community and Stakeholder Engagement Management Framework (CSEMF)** 1. RPV must develop a Community and Stakeholder Engagement Framework to outline the principles and approach to advising key stakeholders and other potentially affected stakeholders across the Project of the construction activities. a) The CSEMF will cover all stages of work including early works and mains works for all contract works packages. b) The CSEMF will inform the CSEMP prepared by each contract works package. 2. The CSEMF must provide for any interested stakeholder to be able to register their contact details to the Project webpage to ensure they are included and automatically advised of planned construction activities, Project progress, mitigation measures and intended reinstatement measures where applicable. 3. The CSEMF must document a complaints management process in accordance with EPR EMF4. 4. The CSEMF must be approved by the Minister for Planning prior to the commencement of early works.	The Community and Stakeholder Engagement Management Framework has been prepared by RPV and will be implemented where required, during construction works. The Community and Stakeholder Management Framework has informed the Communications and Stakeholder Engagement Management Plan, and has been reviewed by the project's Independent Reviewer. These plans have also been audited by the Independent Environmental Auditor.

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Social and Community	SC4	**Community and Stakeholder Engagement Management Plan (CSEMP)** 1. Prior to the commencement of Project works, each works package contractor must develop and implement a Community and Stakeholder Engagement Management Plan (CSEMP) in accordance with the CSEMF, to engage potentially affected stakeholders individually or through groups such as the Precinct Reference Groups. The CSEMP should advise potentially affected stakeholders of the planned construction activities, Project progress, mitigation measures and intended reinstatement measures where applicable. 2. The CSEMP should integrate all Project activities that potentially impact on community and business operations as well as provide for and direct a well-coordinated communication and engagement process. The plan must include: a) Measures to minimise impacts to the development and/or operation of existing facilities including ensuring replacement power, network or other utility services are provided, if necessary and where practicable, where any disruption to such service is likely. b) Measures for providing advance notice of significant milestones, changed traffic conditions, interruptions to utility services, changed access and parking conditions, periods of predicted high noise and vibration activities. c) Measures for communicating the design of and results from environmental monitoring programs (e.g. vibration, noise, dust, ground movement). d) Process for informing landowners about pre-condition property surveys (as stated in EPRs GM4 and NV5). e) Process for notifying key stakeholders and the public of the release of early works plans or development plans for public inspection and comment. f) Process for registering, managing and resolving complaints consistent with Australian Standard AS/NSZ 10002:2014 Guidelines for Complaint Management in Organisations. g) Measures to address any other matters which are of concern to potentially affected stakeholders through the construction of the Project. 3. The plan must consider each precinct and station location in detail. Stakeholders to be consulted relevant to each precinct and considered in the plan include: a) Local councils b) Land managers c) Potentially affected residents d) Potentially affected businesses e) Recreation, sporting and community groups and facilities f) Royal Melbourne Hospital, Victorian Comprehensive Cancer Centre, Peter Doherty Institute and other health and medical facilities g) The University of Melbourne h) RMIT University i) Melbourne Grammar School j) Other public facilities in proximity.	Cross Yarra Partnership has prepared a Communications and Stakeholder Engagement Management Plan, including the Business Disruption Plan, Relocation Management Framework and Special Events sub-plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Social and Community	SC5	1. Prior to commencement of shaft construction, work with the City of Melbourne to identify if there are any suitable areas for use as alternative public open space, incorporating vegetation, and establish for community use during the construction phase to minimise the impacts of loss of the City Square.	This is not relevant to the Western Portal. Refer to the Town Hall Precinct Development Plan.
Social and Community	SC6	1. Work with relevant local councils to plan for and coordinate with key stakeholders during major public events. This should include, but not be limited to: a) Timely provision of construction schedules to allow for appropriate event planning. b) Timely notification of schedule changes that may impact upon major public events. c) Consideration of appropriate alternative sites and routes for events and parades.	Cross Yarra Partnership has prepared a Communications and Stakeholder Engagement Management Plan, which include sub-plans, such as Special Events sub-plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Social and Community	SC7	1. In consultation with the relevant local councils, develop a relocation strategy for sports clubs and other formal users of directly impacted recreational facilities. This strategy should aim to identify available local alternative facilities for formal recreational users displaced from recreational facilities by the Project. This strategy should avoid displacing existing users at alternative facilities and provide adequate notification to clubs to minimise the impact of relocation.	This is not relevant to the Western Portal Development Plan. CYP are not occupying JJ Holland Park for construction works.
Social and Community	SC8	1. In consultation with relevant local Councils and key stakeholders, and in accordance with the Melbourne Metro Urban Design Strategy, relevant statutory approvals and other relevant requirements: a) Improve community access to open or recreational space within the CBD by identifying potential opportunities to return as much land as possible used for construction to permanent public open space at City Square and Federation Square b) Re-establish sites impacted by construction works, to be generally in accordance with adopted open space master plans, and conservation management plans (where appropriate), including (but not limited to): i Childers Street, Kensington ii JJ Holland Park iii Royal Parade and Grattan Street, Parkville iv City Square v Federation Square vi The south western entrance of the proposed CBD South station vii St Kilda Road boulevard viii Edmund Herring Memorial Oval ix Osborne Street Reserve x South Yarra Sidings Reserve xi Lovers Walk xii A'Beckett Street open space xiii The South African Soldiers Memorial. (See EPRs LV1, LV2 and LU2).	Public open space at the Western Portal is presented in Section 4.3.3 and 4.4.6 of the Development Plan. The landscaping design response for the future built-form of the Western Portal precinct, including the re-establishment of public open space, is addressed by the Rail Infrastructure Alliance and has been subject to a separate Development Plan.

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Social and Community	SC9	1. In consultation with the City of Melbourne, develop a plan to utilise part of the Franklin Street road reserve for public open space post-construction. Plans must be in accordance with the Melbourne Metro Urban Design Strategy.	This is not relevant to the Western Portal. Refer to the State Library Precinct Development Plan.
Social and Community	SC10	1. Prior to commencement of relevant works, provide written notice to adjoining landholders of any works to be carried out in a precinct. Such notice must advise of the works to be undertaken, the duration of those works, what local impacts might occur and contact details for further information.	Cross Yarra Partnership has prepared a Communications and Stakeholder Engagement Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
Social and Community	SC11	1. Prior to commencement of relevant works, establish a Parkville Reference Group comprising an independent chair, relevant government agencies including RPV, PTV/ DEDJTR (Transport), VicRoads, the Victorian Department of Health and Human Services, Ambulance Victoria, Yarra Trams, and key institutions in the Parkville Precinct as detailed in RPV Technical Note 044 Parkville Precinct Reference Group (19 August 2016) document number 21 and tabled 22 August 2016.	This is not relevant to the Western Portal. Refer to the Parkville Precinct Development Plan.
Social and Community	SC12	1. In addition to EPR SC11, RPV to establish Precinct Reference Groups as required for all other Project precincts, which collectively provide for representation of interested and relevant stakeholders. 2. These groups should be configured in a way that broadly satisfies the recommendation in the Minister's Assessment and which also allows each Group to function coherently and effectively. Each Precinct Reference Group should have an independent chair.	RPV has established the Western Portal Community Reference Group, which is being consulted throughout the design development and construction phase of the Project.
Surface Water	SW1	1. Prior to commencement of relevant works, for all Precincts (with the exception of the western turnback) design permanent and temporary works and, if necessary, develop and implement emergency flood management measures for the tunnels, tunnel portals, access shafts, station entrances and Arden electrical substation to provide appropriate protection against floodwaters and overland stormwater flows. 2. The design of these works must be informed by a flood immunity risk assessment that considers a range of events, and to the requirements and satisfaction of Melbourne Water and/or the relevant council. 3. The flood immunity risk assessment referred to above must address all portal areas (or other flood entry points) for the existing Melbourne Underground Rail Loop, or similar secondary infrastructure items that may allow for flood entry into the Project.	Flood design and water sensitive urban design for the Western Portal is presented in Section 4.4.7 of the Development Plan.
Surface Water	SW2	1. For all precincts, to the satisfaction of the responsible waterway management authority: a) Undertake modelling of the design of permanent and temporary works to demonstrate the resultant flood levels and risk profile b) Maintain existing flood plain storage capacity potentially impacted by the Project c) Ensure that permanent and associated temporary construction works do not increase flood levels to result in additional flood risk d) Ensure permanent and associated temporary works do not increase flow velocities that would potentially affect the stability of property, structures or assets, and/or result in erosion during operation or construction e) Undertake stormwater modelling of the design of permanent and temporary works to demonstrate the resultant stormwater quantity and quality response to the Project. 2. For all Precincts adopt WSUD and integrated water management principles in the stormwater design, as required through the Melbourne Metro Urban Design Strategy, and to the requirements of the relevant local council.	Flood design and water sensitive urban design for the Western Portal is presented in Section 4.4.7 of the Development Plan.
Transport	T1	**Traffic and Transport Working Group** 1. RPV must establish and maintain a Traffic and Transport Working Group (TTWG), working under a terms of reference determined by RPV, and comprising relevant representatives from RPV, PTV / DEDJTR (Transport), road management authorities, relevant councils, relevant public transport providers and other relevant agencies as required. 2. The TTWG will be responsible for reviewing and providing feedback on: a) Transport management plans. b) Relevant designs and methodologies for monitoring implementation of transport management plans. c) Transport modelling and proposed transport network upgrades to mitigate the transport effects of constructing the Project. 3. The TTWG must also: a) Invite other key affected stakeholders to present or attend where matters specific to those stakeholders in the relevant precincts are being discussed or addressed, carried out consistent with the Community and Stakeholder Engagement Management Plan/s under EPR SC4; b) Provide feedback to the key affected stakeholders on how their comments or matters of interest or concern are addressed in transport management plans; and c) Advise those key affected stakeholders of potential impacts and proposed traffic and transport mitigations, and consider stakeholders' responses on these matters in providing feedback on the transport management plans required under EPRs T2 and T3.	A Traffic and Transport Working Group (TTWG) has been established (by RPV) and includes the listed stakeholders. The TTWG is operating in accordance with the terms of reference determined by RPV and as per EPR T1.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Transport	T2	**Transport Management Plans** 1. Prior to commencement of relevant works, each Works Package contractor must develop a transport management plan(s) in consultation with the Traffic and Transport Working Group and implement the plan(s) to minimise disruption to affected local land uses, traffic, car parking, on-road public transport, pedestrian and bicycle movements and existing public facilities during all stages of construction. 2. The transport management plan(s) must be prepared for each precinct, and also be coordinated across the whole Project to provide an overall transport management plan for the Project. 3. The transport management plan(s) must be informed and supported by an appropriate level of transport modelling, as agreed by the TTWG, and must include, but not be limited, to: a) Management of any temporary or permanent full or partial closure of traffic lanes including (but not limited to): i Childers Street, Tennyson Street and Lloyd Street, Kensington. ii Arden Street, Langford Street and Laurens Street, North Melbourne. iii Royal Parade, Grattan Street, Barry Street and Leicester Street, Parkville. iv Franklin Street, A'Beckett Street and Little La Trobe Street, at CBD North. v Flinders Street, Flinders Lane and Swanston Street, at CBD South. vi Linlithgow Avenue, St Kilda Road, Domain Road, Albert Road, Bowen Crescent and Bowen Lane, at Domain. vii Toorak Road West at Fawkner Park (and the surrounding road network) during construction of the route 8 tram diversion along Toorak Road West between St Kilda Road and Park Street, South Yarra. viii Osborne Street and William Street, South Yarra. b) A monitoring methodology and a program for monitoring results of the implementation of transport management plans to be reported to the TTWG. If unanticipated adverse effects are further identified, practicable mitigation measures must be developed and implemented. c) Monitoring of: i Travel behaviour changes caused by construction works, including pre-construction baseline data and periodic reporting on behaviour change. Use this data as an input to the design of transport networks following construction and for review of the transport management plan(s), which should occur at least annually. ii Traffic, public transport, pedestrian and bicycle movements throughout the construction period. 4. The transport management plan(s) must be developed recognising other Projects operating concurrently and transient businesses such as bus/walking/cycling tours and airport transfers, where relevant. Note - Typically called a traffic management plan, for Melbourne Metro, it is referred to as a transport management plan to ensure all modes of active and passive transport are considered.	Cross Yarra Partnership has prepared a Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. These plans have also been audited by the Independent Environmental Auditor.
Transport	T3	**Road Transport (Construction Phase)** 1. Road Network Management: As appropriate, transport management plan(s) must include/address the following issues: a) In consultation with emergency services, develop suitable measures to ensure emergency service access is not inhibited as a result of Melbourne Metro construction worksites. b) Provision for two-way traffic on St Kilda Road through the construction period within the Domain station precinct. c) Domain Road should be kept open from the east up to the existing entrance of Edmund Herring Memorial Oval, with provision for a local turnaround. d) Develop and implement Network Enhancement Projects (NEPs) in consultation with the TTWG for locations including, but not limited, to: i College Crescent, Gatehouse Street, Cemetery Road and other east-west roads in the Parkville Precinct, to accommodate traffic that may use these roads as a result of the Grattan Street closure for Parkville station. ii Kings Way, Canterbury Road and other roads and intersections to accommodate traffic that may use these roads as a result of the St Kilda Road lane reduction for Domain station construction. These NEPs should have the objective of balancing impacts across the transport network and must consider the VicRoads Road Users Hierarchy principles set out in SmartRoads to ensure the needs of vehicle traffic and on-road public transport are appropriately accommodated during disruptions. e) Provision of suitable routes for vehicles to maintain connectivity for road users to JJ Holland Park, South Kensington station, to medical facilities in the Domain Precinct and to the medical and educational facilities adjacent to the Parkville construction work site. f) Provision of alternative routes for trucks accessing the 50 Lloyd Street Business Estate, Kensington. 2. Construction trucks: As appropriate, transport management plan(s) must include/address the following issues: a) Potential routes for construction vehicles travelling to and from all Melbourne Metro construction work sites, recognising sensitive receptors and minimising the use of local streets where practicable (refer to EPR NV21).	Cross Yarra Partnership has prepared a Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. These plans have also been audited by the Independent Environmental Auditor.

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Transport	T3	Approved truck routes in the Arden precinct must not include the use of Miller Street, North Melbourne. b) Provision of construction vehicle staging areas and/or construction methodologies to minimise the potential impacts of truck call-forward options on residents and businesses. c) Special arrangements for delivery or removal of large loads. 3. Parking: As appropriate, transport management plan(s) must include/address the following issues: a) Provision of alternative parking where possible to replace public and commuter parking lots from West Footscray Station, Childers Street, Laurens Street, Grattan Street, Domain Road, St Kilda Road and Albert Road during construction and preventing parking at undesignated locations on local roads. b) The need to minimise the loss of public parking and replace or reinstate parking at the earliest opportunity. c) Provision of suitable alternative parking and associated facilities to replace private parking and facilities lost or inaccessible during construction for any significant time, in consultation with the relevant stakeholders. The private parking is to be replaced or reinstated at the earliest opportunity. d) A parking management plan prepared in consultation with and approved by the relevant road authority to manage parking in and around the construction zones. The plan must: i Include parking controls to support other relevant EPR requirements. ii Maintain Police Only parking bays in Swanston Street and Flinders Lane to the satisfaction of Victoria Police. iii Minimise impacts on existing users, particularly those with special needs. iv Provide a suitable level of accessibility to loading zones. e) Provision of car parking for construction workers where practicable and in this regard: i Use of off-street car parks for construction workers must be by prior agreement with the relevant management body; and ii Measures must be implemented to prevent, to the extent practicable, construction workers parking in on-street spaces, unless it can be demonstrated by car-parking surveys that there is adequate on-street supply. f) A green travel strategy to encourage construction workers to travel to / from worksites by means other than private vehicle and / or outside peak times. This should include provision for on-site tool storage where practicable and consideration given to the use of shuttle buses to ferry workers to and from off-site car parks.	Cross Yarra Partnership has prepared a Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. These plans have also been audited by the Independent Environmental Auditor.
Transport	T4	**Public Transport (Construction Phase)** 1. Prior to commencement of relevant works, develop and implement a plan for occupying railway land and tracks at the western portal, eastern portal and western turnback that minimises the disruption to railway services during construction. The plan must be developed to the satisfaction of VicTrack, PTV, DEDJTR (transport) and MTM, as relevant. 2. In consultation with the TTWG, provide suitable routes for pedestrians to maintain connectivity where access is altered by the contractor, including DDA access where practicable, for users of South Kensington Station, Melbourne Central Station, Flinders Street Station, new tram and bus stops relocated or constructed during the construction period, and around all construction sites generally. 3. In consultation with the TTWG, investigate and implement intersection modifications where practicable, including public transport priority measures for affected bus and tram routes. 4. Develop and implement measures to minimise disruption to the tram and bus networks resulting from the construction of Melbourne Metro in consultation with the relevant road management authorities, and to the satisfaction of PTV / DEDJTR (Transport), including (but not limited to): a) Options to divert the 401, 402, 403, 505 and 546 bus services. b) Tram routes on La Trobe Street and Swanston Street. c) Tram routes on Flinders Street and Swanston Street. d) Tram operations on Toorak Road West and the diversion of the No. 8 tram route. e) Periodic closures of Royal Parade tram route. f) Tram routes on St Kilda Road. g) Disruption to other tram routes through Domain tram stop. h) Bus replacement services for disrupted rail passengers.	Cross Yarra Partnership has prepared a Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. This has been subject to separate stakeholder consultation requirements with Transport for Victoria, VicTrack, Public Transport Victoria, Department of Economic Development, Jobs, Transport and Resources, Metro Trains Melbourne and the Traffic and Transport Working Group. These plans have also been audited by the Independent Environmental Auditor. Where rail occupations are identified and required to facilitate construction activities, CYP and MTM / Yarra Trams have agreed on the Base Track Occupation Schedule (BTOS). The BTOS record all foreseeable occupations required to support CYP construction activities.
Transport	T5	**Active Transport (Construction Phase)** 1. Develop and implement transport management measures in consultation with the TTWG and relevant road management authorities for cyclists and pedestrians to maintain connectivity and reasonable performance levels throughout construction for road and shared path users including (but not limited to): JJ Holland Park, South Kensington station, Laurens Street, Grattan Street, Swanston Street adjacent to Gate 4 at University of Melbourne, Franklin Street (including RMIT facilities), Swanston Street, Flinders Street, St Kilda Road, Domain Road, Domain Parklands, Albert Road, Toorak Road, Fawkner Park, Osborne Street, William Street and Chapel Street. 2. Implement active control and wayfinding information at construction work site access points to maintain safety by avoiding potential conflicts between trucks, pedestrians and cyclists. 3. In consultation with the City of Melbourne, provide a suitable route for pedestrians to maintain connectivity and connection between Domain Road and the diverted number 8 tram on Toorak Road West. 4. In consultation with the City of Melbourne, provide suitable routes for cyclists and pedestrians throughout construction to maintain connectivity for road and shared path users around JJ Holland Park and South Kensington station. 5. In consultation with the City of Stonnington, provide suitable routes for cyclists and pedestrians to maintain connectivity and connection, having regard to the removal of the William Street Bridge and Lovers Walk pedestrian path during the construction phase. 6. If surface works are required at Linlithgow Avenue or nearby for temporary construction access shafts, provide for movement along the Tan Track in the Botanical Gardens near the Linlithgow Avenue construction sites, or provide a suitable alternative pedestrian path during construction. 7. Maintain appropriate pedestrian access to public car parks and adjoining properties adjacent to or within construction areas including the car park beneath University Square.	Cross Yarra Partnership has prepared a Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. These plans have also been audited by the Independent Environmental Auditor.

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Transport	T6	**Travel Demand Management Strategy** 1. Prior to commencement of construction works, RPV is to develop and implement a Travel Demand Management Strategy and appropriate tools to promote specific transport behaviour changes in response to road, bicycle and pedestrian paths closures/modifications and to reduce traffic congestion around construction sites, particularly in the vicinity of the Parkville and Domain precincts where road closures and restrictions are proposed. The strategy must be consistent with the RPV Community and Stakeholder Engagement Management Framework (under EPR SC3) and, where practicable, include a mechanism for collecting and disseminating real-time travel time information to the public. Existing traffic and public transport information channels should be used wherever possible. 2. Engage with key stakeholders in the development, implementation and monitoring of the Travel Demand Management Strategy including, but not limited to, councils, road management authorities, PTV and relevant public transport providers, educational facilities, research institutions, businesses, impacted community groups and other affected key stakeholders in each precinct.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. A Travel Demand Management Strategy has been developed by RPV and will inform the development of the Transport Management Plan (including relevant sub-plans, such as the Precinct Transport Management Plan and Worksite Traffic Management Plans), which have been reviewed by the project's Independent Reviewer. The Transport Management Plan has been subject to separate stakeholder consultation requirements with councils, road management authorities, Transport for Victoria, Public Transport Victoria and relevant public transport providers, educational facilities, research institutions, businesses and impacted community groups. These plans have also been reviewed by Independent Environmental Auditor.
Transport	T7	**Road Transport (Operational Phase)** 1. Design all roadworks and shared path works to relevant design standards to maintain safety of movement in consultation with the relevant road management authorities and TTWG, as required. Designs should be underpinned by appropriate transport modelling and have an objective to facilitate public transport and minimise carpark loss to the extent practicable. 2. Develop and implement a plan to reinstate car parking on Childers Street, Kensington and Laurens Street, North Melbourne in consultation with the relevant road management authorities that: a) Minimises the permanent loss of parking where possible. b) Ensures re-instated car parking does not encroach on JJ Holland Park. c) Considers opportunities for replacement of any net loss of parking at nearby locations. d) Reduces the risk of overflow parking in local streets from South Kensington station and activities at JJ Holland Park. e) Replaces loading zones to service the needs of the existing businesses in the precinct where disrupted during construction. 3. Develop and implement a plan for the Arden Precinct in consultation with the relevant road management authorities to manage parking generated by the new Arden Station. 4. Develop and implement a plan for the reinstatement of Grattan Street, Parkville in consultation with the relevant road management authorities that includes: a) Optimal replacement of car parking spaces along Grattan Street to service the needs of the hospitals and the University of Melbourne, including the retention or replacement of specific short-term and DDA compliant parking. b) Optimal design of the road network around Grattan Street associated with the changed demands and network changes on Grattan Street and Royal Parade / Elizabeth Street. 5. Develop and implement a plan for the future use of Franklin Street in consultation with the relevant road management authorities that includes: a) Optimising the design of Franklin Street in the Project Area. b) Regard to the future function of Franklin Street envisaged in the Queen Victoria Market Precinct Renewal Master Plan. c) Monitoring the change in travel patterns around the area associated with the revised design of Franklin Street. 6. Develop and implement a plan for the design of A'Beckett Street, Little La Trobe Street and Swanston Street in consultation with relevant road management authorities that includes: a) Optimising the design of A'Beckett Street and location of station infrastructure. b) Consideration of pedestrian and vehicle movements on Swanston Street between La Trobe and A'Beckett Streets and on Little La Trobe Street. 7. Optimise the design of the reinstated St.Kilda Road and apply the road user hierarchy in consultation with the relevant road management authorities to: a) Reduce delays and congestion b) Maintain safe operations through the precinct. c) Determine the optimal parking provision in the area and replace any lost parking where possible.	Operational road transport for the Western Portal is presented in Section 4.4.8 of the Development Plan.
Transport	T8	**Public Transport (Operational Phase)** 1. Review, with PTV /DEDJTR (Transport), the bus services in the areas around Arden, Parkville, CBD North, CBD South and Domain stations, including a review of the route 401 bus frequency that is expected to have reduced demand following implementation of Melbourne Metro. 2. In consultation with PTV / DEDJTR (Transport), optimise the design of Melbourne Metro stations to ensure integration with existing and planned future uses and so that they will provide connections: a) Between the Parkville station and the new tram stop on Royal Parade. b) For interchange between the CBD North station and the existing tram and bus services along La Trobe Street and Swanston Street. c) For interchange between the CBD South station and the existing tram services along Flinders Street, Swanston Street and Collins Street. d) Between the Domain station and the new island platform tram stop in the centre of St Kilda Road and connections to the tram network. 3. In consultation with the relevant road management authorities, implement measures to address pedestrian congestion at and around station entrances where they interface with the Precincts, to the extent practicable. 4. Provide adequate wayfinding to facilitate passenger transfers (see EPR LU4). 5. Review, with PTV/ DEDJTR (Transport) and Yarra Trams, the bus and tram services in the area to optimise the functionality of the CBD North and CBD South stations and to reduce the reliance on the Swanston Street tram corridor.	Operational public transport for the Western Portal is presented in Section 4.4.8 of the Development Plan.

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Transport	T9	**Active Transport (Operational phase)** 1. Develop and implement a permanent pedestrian footpath and on-road bicycle design for Childers Street, Kensington with the relevant road management authority, relevant local council, and the land manager prior to the removal of the shared use path on the southern side of the street. 2. In cooperation with the relevant road management authority and local council, and where practicable to do so, re-instate on-road bicycle lanes and bicycle parking provisions removed during construction. 3. In consultation with PTV / DEDJTR (Transport) and relevant local councils undertake a study of bicycle parking demands for the new stations. 4. Provide appropriate bicycle parking at each station adopting a flexible design that would allow for future expansion of capacity in consultation with relevant local councils and user groups, if required. 5. Review the reinstatement and provision of safe and effective bicycle lanes and pedestrian access in and around the Melbourne Metro station sites in cooperation with the relevant road management authorities and the relevant local council. 6. Provide wayfinding information to enhance connectivity for pedestrians and public transport users, in consultation with relevant local councils and user groups, including (but not limited to) the following locations: a) Between Melbourne Central Station and CBD North Station. b) The underground connection between Flinders Street Station and CBD South Station. c) At modal interchanges between new Melbourne Metro stations and other transport modes. 7. Consult with the TTWG on active transport, where required. 8. In consultation with the Parkville Reference Group, established under EPR SC11, review future pedestrian movement and conditions at the Parkville Precinct in order to optimise the number and location of station entries and the surrounding footpath environment.	Operational active transport for the Western Portal is presented in Section 4.4.8 of the Development Plan.
Transport	T10	**Waste collection** 1. Prior to commencement of relevant works, develop and implement a plan or plans, in consultation with local councils and private waste collection services, to manage changes to waste collection and waste storage in the areas affected by construction activity. The plan/s should include, but not be limited to: a) Providing for minimal change in waste collection times where the change might affect the capacity of residents to sleep. b) Providing access for existing waste collection services from existing properties considering the extent of the construction areas and road network changes. c) Providing access to alternative waste collection locations for properties during Project construction and operation where existing waste disposal locations are removed or obstructed. d) Design for re-instatement of appropriate access for existing waste services during Project operation. e) Consultation with affected businesses, land owners and residents to be undertaken jointly with local councils to encourage alternative waste management options to be adopted.	Waste collection for the Western Portal is presented in Section 4.4.8 of the Development Plan. The implementation of a waste collection plan in the Western Portal precinct will be addressed during the detailed design phase of the Project by the Rail Infrastructure Alliance. Ongoing consultation between CYP and the RIA will take place to ensure an integrated design response.