INTAKE SUBSTATION DEVELOPMENT PLAN

REV G MINOR AMENDMENT - MINISTERIAL SUBMISSION

TAS-CYP-ARD-AIS-PLA-XLP-AEN-X0864

Monday, 4 September 2024

Design&
Construction

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

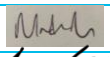
The current reviewed and approved version of this Plan is available on IMS for all project personnel to access. Downloaded Plans are deemed uncontrolled and it is the responsibility of the user to ensure they are using the latest revision. The responsibility for maintenance, review, update and approval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

Document Number	
Document Title	Intake Substation Development Plan
Document Path	Cross Yarra Partnership
Document Template	Development Plan Template

REVISION RECORD

A	21/10/19	Draft for Stakeholders	Sabrina Chapman
B	18/11/19	Draft for Public Display	Sabrina Chapman
C	21/01/20	Review by Victorian Government DPRC	Sabrina Chapman
D	10/02/20	Ministerial Submission	Sabrina Chapman
E	06/07/21	Minor Amendment: Stakeholder Draft	Sabrina Chapman
F	28/07/22	Minor Amendment: Ministerial Submission	Elif Aygun
G	04/09/24	Minor Amendment: Ministerial Submission	Camila Eviston

APPROVALS

Name	Signature	Date
Camila Eviston		04/09/2024
Mat Peel		04/09/2024
Caitlin Jackson		04/09/2024

DEFINITIONS

STANDARD TERMS AND DEFINITIONS

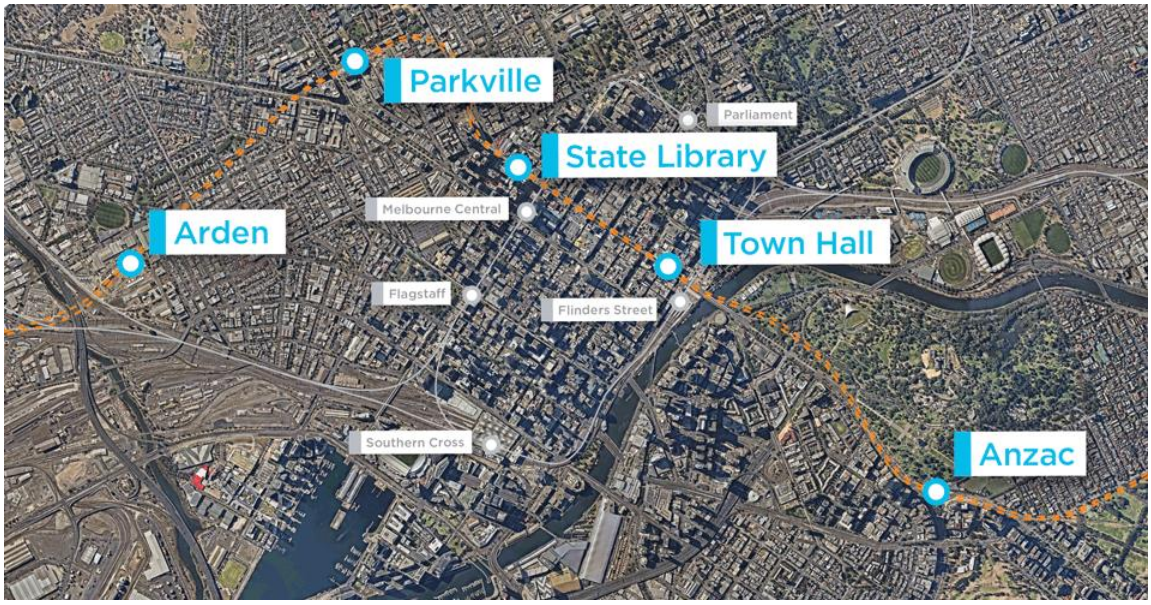
Term	Definition
Project	The Metro Tunnel Project (MTP)
Company	Cross Yarra Partnership (CYP)
Client	Metro Tunnel Project Office (MTPO)
Package Contractors	Contractors for the Early Works, TAS PPP, RSA and RIA work Packages in the Metro Tunnel Project
TAS Package	The Tunnel and Stations PPP Package (CYP's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

ABBREVIATIONS

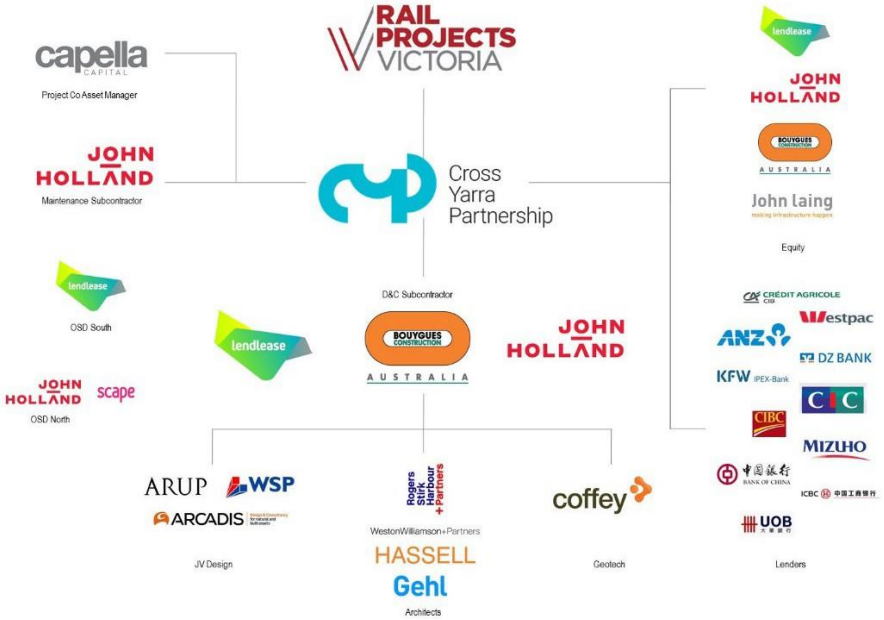
Term	Definition
ARI	Average Recurrence Interval
CBD	Central Business District
CPTED	Crime Prevention Through Environmental Design
CYP	Cross Yarra Partnership
EES	Environment Effects Statement
EPR	Environmental Performance Requirements
OVGA	Office of Victorian Government Architect
PS&TR	Project Scope and Technical Requirements
PSA	Planning Scheme Amendment
PTV	Public Transport Victoria
MTPO	Metro Tunnel Project Office
UDAAP	Urban Design Architectural Advice 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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EXECUTIVE SUMMARY

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

- Two 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 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 two tunnel portals at South Yarra (Eastern Portal) and South Kensington (Western Portal).

The Intake Substation is located within the rail corridor in the Macaulay depot area, directly adjacent to the Arden Station precinct. The Environment Effects Statement (EES) identified a concept design on Langford Street, however the Macaulay depot area has been chosen to allow for future land use opportunities at Langford Street and to mitigate impacts on the Langford Street Pumping Station. This location was also selected based on its immediate proximity to the North Melbourne Traction Substation, the West Melbourne Terminal Substation, and the availability of land. The Intake Substation will be positioned adjacent to the Craigieburn and Sunbury line active rail corridors, the CityLink toll road bridge and the Moonee Ponds Creek Trail. The Intake Substation is an essential piece of infrastructure which will provide power for the operation of the tunnels and stations.

This Intake Substation Development Plan presents the scope and extent of CYP's works for the Intake Substation. This Development Plan is a requirement of Clause 4.7 of the *Melbourne Metro Rail Project Incorporated Document May 2018* (Incorporated Document) (introduced via Planning Scheme Amendment GC82), 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, MTPO published an 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, MTPO 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 GC82 (Amendment GC82) for the Project, which inserted the Incorporated Document into the Melbourne, Port Phillip, Stonnington and Maribyrnong Planning Schemes. Amendment GC82 amended the Project Land to which the *Melbourne Metro Rail Project Incorporated Document May 2018* applies.

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

- Site layout plan (refer to Appendix A)
- Architectural plans and elevations (refer to Appendix B)
- Landscape and public realm plans (refer to Appendix C)
- An explanation demonstrating how this Development Plan is in accordance with the approved Urban Design Strategy (refer to Section 4.3 and Appendix D)

- 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).

The CYP design for the Intake Substation has incorporated feedback from a range of stakeholders including those identified in the Incorporated Document; namely the Office of the Victorian Government Architect, City of Melbourne, Heritage Victoria, the Department of Transport (formerly Transport for Victoria, VicRoads and Public Transport Victoria) and Melbourne Water.

As part of preparing the previous version of this Intake Substation Development Plan, consultation occurred with the community and stakeholders including a 15 business day public inspection period from Monday 18 November 2019 until Friday 6 December 2019. During this time the Development Plan was available on the Metro Tunnel website providing an opportunity for written comments.

The previous version of this Intake Substation Development Plan was approved by the Minister for Planning on Thursday 26 March 2020. 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 have been made to improve the architectural and landscape design of the Intake Substation. Those amendments relate to the cable route alignment shifting further south to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, erection of a feature fence alongside the existing Moonee Ponds Creek Trail, and an amended refined associated works area as a result of the revised cable routes alignment. 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 Intake Substation, with associated construction works to occur within the Project Land boundary and construction impacts to be managed in accordance with the approved MTPO 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 Intake Substation Development Plan. This report has been updated to reflect changes to the cable route alignment to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, erection of a feature fence alongside the existing Moonee Ponds Creek Trail, and an amended associated works area as a result of the revised cable routes alignment.

Table 1: Amendments to the Intake Substation Development Plan, since Ministerial Approval Thursday 26 March 2020

Section	Amendment
Executive Summary	Detail added to outline that this 'Intake Substation Development Plan' was approved by the Minister for Planning on Thursday 26 March 2020 and that CYP are now seeking a minor amendment related to the cable route alignment shifting further south to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, erection of a feature fence alongside the existing Moonee Ponds Creek Trail., and an amended associated works area as a result of the revised cable routes alignment
1. Introduction	Detail added to outline that the Intake Substation Development Plan was previously approved by the Minister for Planning on Thursday 26 March 2020. 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 Intake Substation 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 Intake Substation Development Plan, and during detailed design
Figure 1	Updated to include the additional consultation process post-Ministerial Approval of the Intake Substation Development Plan
Figure 2	Updated to reflect the amended associated works area
3. Scope of works	Updated to reflect the removal of 21 trees in the amended design and this is 20 less trees than the previously approved Development Plan submission.
4.1 Design development	Additional detail added to explain the design development process post-Ministerial Approval
4.3.1 Architectural response	Updated to outline screening of the mechanical plant on the roof of the Intake Substation building
4.3.2 Landscape response	Updated to reflect the changes to the tree removal, retention and planting figures.
4.3.4 User experience and surrounding environment	Updated to outline the proposed feature fence adjacent to the Moonee Ponds Creek Trail
4.3.7 Ancillary features	Updated to outline screening of the mechanical plant on the roof of the Intake Substation building

4.4.2 Arboriculture	Table 5 updated to reflect the changes to the tree removal, retention and planting figures
4.4.6 Social and community	Updated to outline the proposed feature fence adjacent to the Moonee Ponds Creek Trail
5 Conclusion	Updated to reflect changes throughout the Intake Substation 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

CYP has been contracted by MTPO to design, build and maintain the tunnels and stations for the Metro Tunnel Project. The Project includes:

- Two 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 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 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, MTPO 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, MTPO 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 GC82 for the Project, which inserted the *Melbourne Metro Rail Project Incorporated Document* into the Melbourne, Port Phillip, Stonnington and Maribyrnong Planning Schemes. Amendment GC82 amended the Project Land to which the *Melbourne Metro Rail Project Incorporated Document May 2018* applies.

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 portals, rail turnback at West Footscray Station and any other above ground works or structures that are part of the Project.

This Intake Substation Development Plan was approved by the Minister for Planning on Thursday 26 March 2020. Under the Project's Incorporated Document, and in accordance with Clause 4.7.8, CYP are seeking an amendment to this Intake Substation Development Plan.

1.1. PURPOSE OF THIS DEVELOPMENT PLAN

This Development Plan presents the scope and extent of the built form of CYP's proposed Intake Substation at North Melbourne. 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, noting that CYP are seeking an amendment to this Intake Substation Development Plan in accordance with Clause 4.7.8, and approval will be sought from the Minister for Planning.

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 Development Plan presents the scope and built form of CYP's proposed Intake Substation at North Melbourne, as per the requirements of Clause 4.7.1.i). of the Project Incorporated Document.
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.	Surface works associated with the Intake Substation are described in Section 3 and shown on drawings in Appendix A – C.
4.7.3	A Development Plan must include:	
	a) A site layout plan/s	Site layout plans in Appendix A.
	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. Landscape and public realm plans in Appendix C.
	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. Consistency with the Environmental Management Framework in Section 4.4 and Appendix E.
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:	Stakeholder and community consultation is outlined in Section 1.3.

Clause	Condition	Response
	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).	
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 Intake Substation Development Plan. As part of the amendment to the Intake Substation 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 Intake Substation Development Plan was approved by the Minister for Planning on Thursday 26 March 2020. Following approval of this Development Plan, CYP commenced works on the Intake Substation. Early Works was undertaken in accordance with Clause 4.10 and Preparatory Works was undertaken in

Clause	Condition	Response
		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 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.	This Development Plan presents the scope and extent of the built form of CYP's Intake Substation works. CYP are seeking an amendment to the Intake Substation 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 Intake Substation 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 Intake Development Plan on Thursday 26 March 2020, 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 1. In addressing these it is important to note that MTPO 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 Intake Substation 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
- Department of Transport (formerly Transport for Victoria, VicRoads, Public Transport Victoria)
- Melbourne Water.

In accordance with the Incorporated Document requirements, the previous version of this Intake Substation Development Plan was made available for public inspection for 15 business days from Monday 18 November 2019 until Friday 6 December 2019. 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 and Herald Sun newspapers to inform the community on Monday 18 November 2019.

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

- Arden Communications Coordination Working group
  - City of Melbourne
  - Victorian Planning Authority
  - Development Victoria
  - Department of Jobs, Precincts and Regions
  - VicTrack
  - Melbourne Water
- Bicycle Network Victoria
- Friends of Moonee Ponds Creek
- Kensington Association
- North and West Melbourne Association
- Metro Trains Melbourne (MTM)
- Kensington and Arden & Parkville Community Reference Groups.

Overall, five public submissions were received on this Intake Substation Development Plan.

As part of the submission to the Minister for Planning, CYP provided 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 Intake Substation Development Plan on Thursday 26 March 2020. Since approval, the design for the Intake Substation has progressed through detailed design in consultation with key stakeholders. In accordance with Clause 4.7.8 of the Incorporated Document, the Intake Substation 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 Intake Substation Development Plan submission highlighted that CYP would seek to reduce tree impacts were possible during detailed design.

In response to comments from the OVGA, CYP has shifted the cable route alignment further south to reduce impact on the western bank of Moonee Ponds Creek. CYP has also collaborated with the City of Melbourne, Melbourne Water, Friends of Moonee Ponds Creek, Bicycle Network Victoria and MTPO through meetings as well as the project design review process.

CYP has amended the design including changes to the cable route alignment to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, and erection of a feature fence alongside the existing Moonee Ponds Creek Trail, and an amended associated works area as a result of the revised cable routes alignment. The final design is based on comments received from these key stakeholders. Further detail is provided in Sections 4.3.1, 4.3.2, 4.3.3, 4.3.4 and 4.3.7.

Following approval of the minor amendment on Monday 19 September 2022. The detailed design process has progressed and led to minor amendments to the landscape plans and elevations. As part of this process, consultation has taken place with key stakeholders on the amended landscape plans including City of Melbourne, OVGA, Friends of Moonee Ponds Creek and Metro Trains Melbourne.

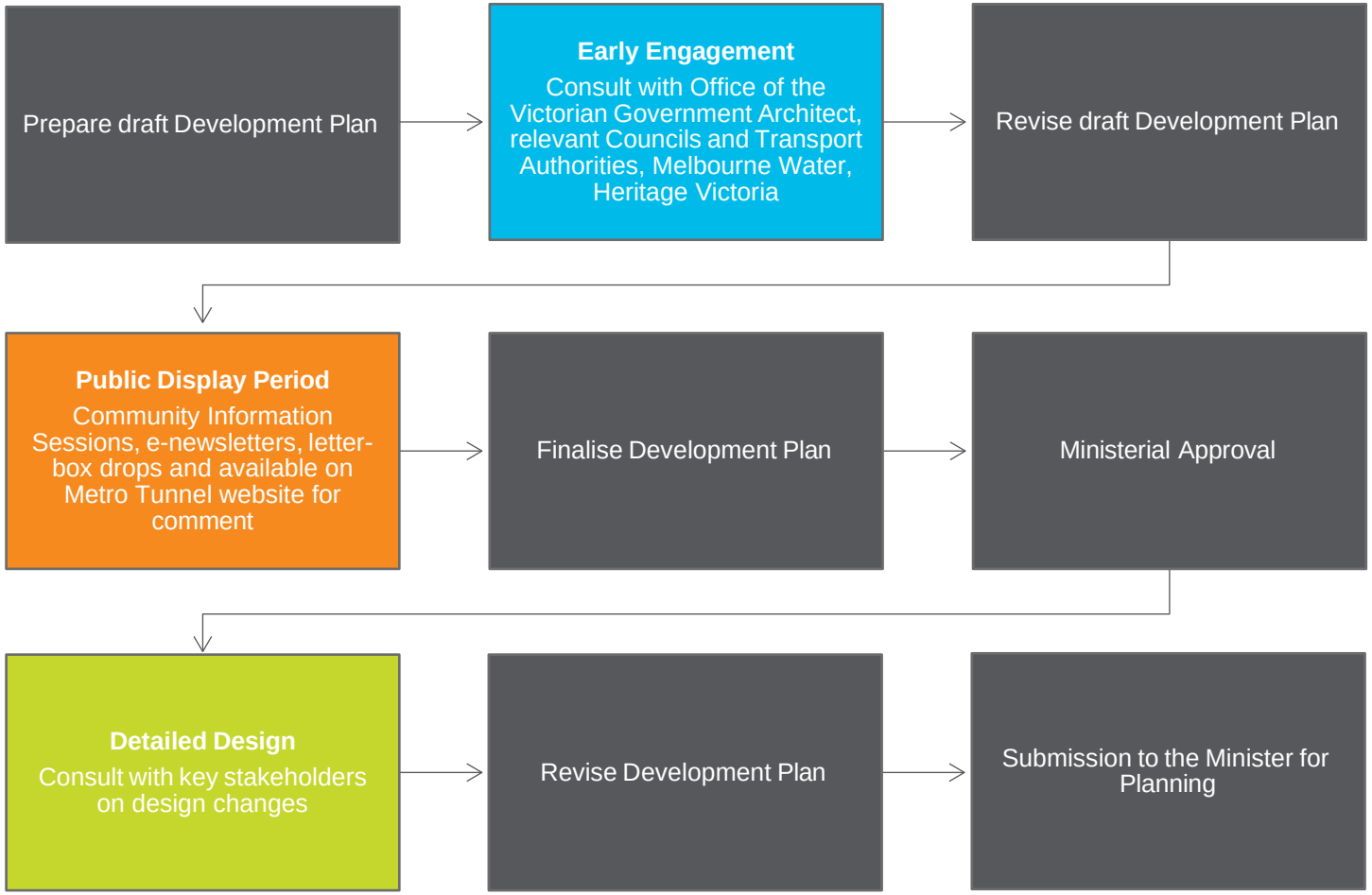

Figure 1: Development Plan consultation process (blue refers to Early Engagement, orange refers to Public Display Period, and green refers to Stakeholder Engagement during detailed design)

2. SITE CONTEXT

This section describes how the strategic, physical and natural context of the Intake Substation has been considered in the design development process. The Intake Substation is an essential piece of project infrastructure, located in proximity to the North Melbourne Traction Substation and West Melbourne Terminal Substation (refer to Figure 2), and will provide operational power to the Project's tunnels and stations. The site of the Intake Substation is owned by VicTrack and leased by MTM.

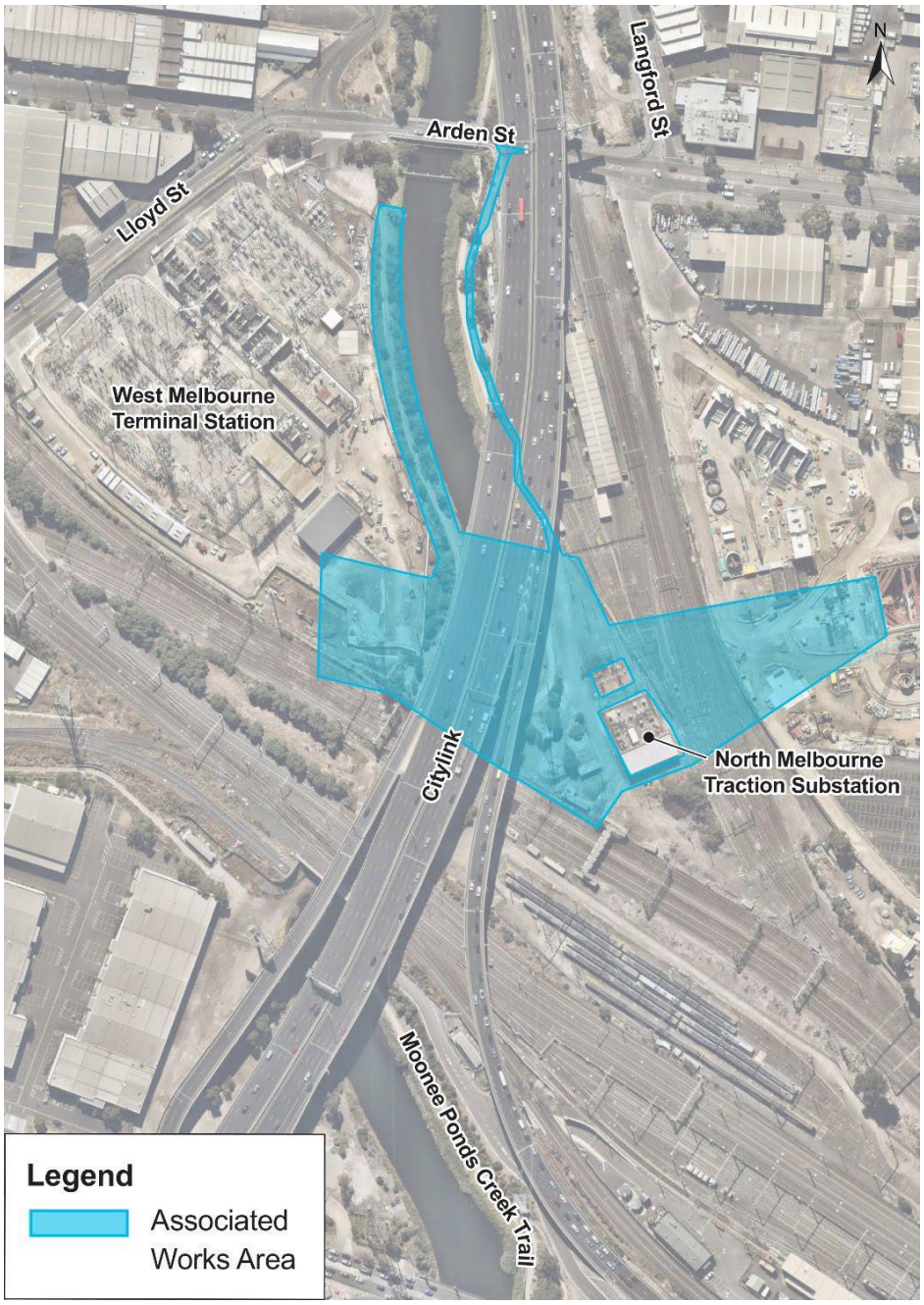

Figure 2: Intake Substation location map

2.1. BROADER CONTEXT AND STRATEGIC POSITIONING

City of Melbourne and the Victorian Planning Authority recently developed the *Moonee Ponds Creek Strategic Opportunities Plan* which was subject to public consultation during March and April 2019. The proposed Intake Substation site is marked as an area of 'Expanded Creek Environs', with an aim to 'merge existing open spaces with the waterway, create a new pedestrian connection along the western edge of the creek and expanding the creek environs to facilitate recreation opportunities and extensive tree planting'.

Tree planting and recreational opportunities proposed by the *Moonee Ponds Creek Strategic Opportunities Plan* are not possible due to the existing railway utility infrastructure in the area, hence why CYP consider this location to be suitable for the Intake Substation.

The EES concept design proposed the Intake Substation be located on Langford Street, north of Arden Street. The EES also proposed three alternative locations, including the proposed site subject to this Development Plan. This alternative site was chosen due to its existing rail corridor use, its proximity to existing substation infrastructure and the suitability of land within the Craigieburn and Sunbury rail corridors.

Planting will be reinstated by CYP where impacted by construction to contribute to improvement of the area and help achieve MTPO's project goal of doubling tree canopy coverage. Ongoing consultation has occurred with the City of Melbourne and Victorian Planning Authority regarding this, as part of the Development Plan process.

The Intake Substation will otherwise not impact on the implementation of the *Moonee Ponds Creek Strategic Opportunities Plan*.

2.2. HISTORICAL AND NATURAL CONTEXT

An understanding of the natural features in the vicinity of the Intake Substation, as referenced in the EES, has informed the design response.

The Intake Substation site is highly disturbed and modified, due to the current site conditions. Vegetation removal for the Intake Substation is addressed in the amended Early Works Plan, as such, there will be no expected impact on native flora and fauna associated with the above ground development of the Intake Substation.

In addition to the land being exposed to direct rainfall, the Intake Substation site area is covered by a Land Subject to Inundation Overlay (LSIO), associated with the Moonee Ponds Creek floodplain.

No Aboriginal Places have been recorded, although the Intake Substation is within an area of cultural heritage sensitivity associated with the Moonee Ponds Creek. Despite the moderate-high Aboriginal archaeological sensitivity of the site, the archaeological potential has been assessed as low, due to the area being subject to significant ground disturbing activities associated with extensive rail infrastructure.

If archaeological excavations occur within this area, contingency plans within Cultural Heritage Management Plan 13967 would be followed for the discovery of Aboriginal cultural heritage material.

CYP's planning approach has sought to limit effects on heritage values. This has included selecting an alternative location for the design of the Intake Substation, negating any impact on the Langford Street Pumping Station and associated heritage values.

2.3. EXISTING SITE CONDITIONS

The Intake Substation is located within the rail corridor in the Macaulay depot area, directly adjacent to the Arden precinct. This location was chosen to allow for future land use opportunities of the

proposed EES concept design on Langford Street and to mitigate impacts on the Langford Street Pumping Station. The Intake Substation location is also based on its immediate proximity to the North Melbourne Traction Substation, the West Melbourne Terminal Substation and the availability of land. The Intake Substation will be located between the Craigieburn and Sunbury rail corridors (where they deviate), beneath CityLink toll road and adjacent the Moonee Ponds Creek and shared use path.

The site is owned by VicTrack and leased by MTM. The existing rail corridor is highly disturbed and degraded, as such any permanent works associated with the Intake Substation will have a limited impact on surrounding land use and built form.

3. SCOPE OF WORKS

This Intake Substation Development Plan presents the scope and extent of the built form of CYP's works for the Intake Substation, which include:

- An Intake Substation providing power for the operation of the tunnels and stations associated with the Project. There will be maintenance access and emergency egress provided from the Intake Substation, however it will not be accessible by the public and local community
- A total of 41 trees were identified for removal on the plans presented in the approved Intake Substation Development Plan. The amended design presented in this Development Plan proposes to remove 21 trees, and this is 20 less trees than the previously approved Development Plan submission.
- Reinstatement of the public realm, including approximately 68 trees associated with the Intake Substation built form and associated cable routes (installed as part of Early Works), located along the Moonee Ponds Creek and Trail. CYP also propose to reinstate low level growth planting and Water Sensitive Urban Design (WSUD) planting.

The Intake Substation associated works area generally includes a pocket of VicTrack land adjacent to Moonee Ponds Creek, North Melbourne Traction Substation and the existing rail corridor, south of Arden Street. The associated works area also includes land extending across the rail line to the Arden precinct and across and alongside Moonee Ponds Creek to allow for reinstatement of the public realm following the completion of the Project. This area will be used for access purposes during construction.

Associated construction works and impacts to occur within the Project Land boundary (refer to plans in Appendix A) will be managed in accordance with the approved Environmental Management Framework (refer to Section 4.4 and Appendix E). The associated works area is shown on the plan included in Appendix A.

As considered in the EES, the nature of works within the Intake Substation associated works area will change over time and will be characterised by the following CYP activities:

- Site establishment: Site establishment at the Intake Substation includes set-up of site offices, laydown areas, and plant and equipment required for managing construction
- Civil / Structural: Construction of the Intake Substation building and installation of security fencing
- Fit out: This phase of the Project includes the fit out of Intake Substation infrastructure, including emergency egress and equipment rooms
- Testing and commissioning: These works ensure that all new Intake Substation 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 Intake Substation.

To manage potential impacts, CYP has implemented an Environmental Management System including a Construction Environmental Management Plan and will prepare an Operations Environmental Management Plan prior to the operations phases 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 MTPO 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.

Early works activities including demolition of existing infrastructure, site preparation and clearing, installation of hoarding / temporary fencing, utilities service connection, ground excavation, piling and footprint preparation have been covered under the amended Early Works Plan.

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, MTPO 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:

- MTPO's Urban Design Strategy – the Project must be designed in accordance with the approved Urban Design Strategy. Developed by MTPO with input from the Office of Victorian Government Architect (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
- MTPO'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 Intake Substation Development Plan with the following sections explaining how this design is 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 Intake Substation Development Plan was approved by the Minister for Planning on Thursday 26 March 2020. Following an iterative consultation period during detailed design, there have been amendments that relate to changes to the cable route alignment to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, erection of a feature fence alongside the existing Moonee Ponds Creek Trail, and an amended associated works area as a result of the revised cable routes alignment. In accordance with Clause 4.7.8 of the Incorporated Document, CYP is now seeking approval for this revised Intake Substation Development Plan which incorporates these minor amendments.

4.2. DESIGN PRINCIPLES FOR METRO TUNNEL PROJECT

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 INTAKE SUBSTATION

The Urban Design Strategy identifies precinct-specific design issues for the Intake Substation. This Intake Substation Development Plan has addressed and met the objectives of associated design guidelines to inform the design response.

Spatial provision has been allocated at the Intake Substation site as required under Project Scope and Technical Requirements (PS&TR) Clause 10.2.2 (r). The allocated land for the future expansion allows for cable routing that will not cross or interfere with the 66 or 22 kV Cables installed for the Normal Bulk Supply. The space provided also allows for adequate space to install transformers and prefabricated switch rooms with a similar installation methodology as the Metro Tunnel Bulk Supply.

4.3. CONSISTENCY WITH THE URBAN DESIGN STRATEGY

This Development Plan presents the scope and extent of the built form of CYP's Intake Substation works, which include an Intake Substation building with emergency access and egress, and reinstatement of public realm along Moonee Ponds Creek.

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

- Site layout plan (Appendix A)
- Architectural plans and elevations (Appendix B)
- Landscape and public realm plans (Appendix C).

Additionally, Appendix D 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

The functional requirements of the Intake Substation and its non-public nature and isolation largely dictate the form and scale of the building and demand a robust and enduring materiality. The building footprint is approximately 35.4 metres long, 18.8 metres wide and 11.0 metres high. The amended design proposes to screen the mechanical plant on the roof of the Intake Substation building. This placement makes the plant less visibly obtrusive, and reduces the potential to impede on sightlines.

The Intake Substation is an essential piece of infrastructure required to provide power for the operation of the tunnels and stations. The Intake Substation will provide a simple functional design with appropriate landscaping. The orientation of the Intake Substation building in its current alternative location is defined by the following constraints:

- Access required for construction and future maintenance / replacement activities
- Clearance requirements to the existing North Melbourne Traction Substation and existing railway and associated infrastructure
- Desire to avoid impacts to the existing Moonee Ponds Creek Trail
- Technical constraints of underground infrastructure that will be installed to / from the Intake Substation, which has electrical segregation and separation clearance requirements.

As part of the overall project works, a flood immunity risk assessment has been undertaken for the design of the Intake Substation, as part of the Arden precinct where it is located.

In response to the susceptibility of flooding, the Intake Substation has been designed to provide flood immunity through elevating all rooms above ground level to protect the Intake Substation in a 1 in 100-year Average Recurrence Interval (ARI) flood event level, in accordance with the Melbourne Water Guidelines. Selected equipment located outdoors will be positioned such as to ensure their components sensitive to flooding are clear of flood height.

The Intake Substation materials and finishes are detailed in Section 4.3.8.

Further detailed flood modelling has been undertaken in consultation with Melbourne Water to confirm appropriate flood storage is maintained.

Relevant architectural drawings showing the proposed Intake Substation from north and south and east and west elevations are shown in Appendix B:

- TAS-HWW-ARD-AIS-DRG-ARC-AEN-A4300
- TAS-HWW-ARD-AIS-DRG-ARC-AEN-A4301.

4.3.2. LANDSCAPE RESPONSE

The Intake Substation is a suitable use of the existing land, due to its generally pre-disturbed nature and predominantly rail corridor surrounds. The approved Intake Substation Development Plan identified 41 trees for removal which were approved for removal as part of CYP's amended Early Works Plan. In total, 21 trees are proposed for removal in the amended design. This is 20 less trees than the previously approved Development Plan submission.

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

All tree removal is subject to EPR AR1, under the provisions of the Project EMF. Trees will be reinstated where impacted by construction along Moonee Ponds Creek and Trail to contribute to MTPO's project goal of doubling tree canopy coverage and providing landscaped areas within the public realm. Tree reinstatement will also help facilitate implementation of the City of Melbourne and the Victorian Planning Authority *Moonee Ponds Creek Strategic Opportunities Plan.*

In addition to the reinstatement of 64 trees, CYP propose to reinstate low level growth and WSUD plantings to deliver positive visual benefits to the area. Details regarding plant species are subject to ongoing investigation and will be decided prior to project completion.

The relevant landscape drawings are shown in Appendix C:

- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-000002-DP
- TAS-HWW-ARD-AIS-VAR-AGE-AEN-A3300
- TAS-HWW-ARD-AIS-VAR-AGE-AEN-A3301
- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-002203-DP
- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-002204-DP.

4.3.3. PUBLIC REALM RESPONSE

The Intake Substation public realm design response will provide an Intake Substation building, an essential piece of infrastructure required to provide power for the operation of the Project tunnels and stations. The Intake Substation will not be accessible by the public and will discourage trespassing by individuals. CYP design will seek to maintain or improve the security of the existing site.

The Intake Substation is located within a rail corridor in immediate proximity to the North Melbourne Traction Substation, West Melbourne Terminal Substation, Craigieburn and Sunbury line rail corridors, CityLink toll road bridge and the Moonee Ponds Creek and Trail.

Due to the proximity of the proposed Intake Substation and the Moonee Ponds Creek and Trail, CYP design seeks to reduce impacts on surrounding land uses. The architectural design seeks to minimise both the visual and any social impact of the building in the public realm, providing a consolidated structure to house all the required equipment. The majority of permanent works associated with the Intake Substation will be undertaken within the existing rail corridor, with relatively limited impact on land outside the corridor. Works beyond the existing rail corridor will involve reinstatement of the public realm by CYP. The site itself is removed from existing trafficways, and therefore there will be no impact to existing traffic lanes or vehicular parking.

CYP design will include the reinstatement of trees and planting where impacted by construction along Moonee Ponds Creek and Trail. CYP propose low level growth planting along the Moonee Ponds Creek trail to maximise visibility in line with Crime Prevention through Environmental Design (CPTED) principles.

The relevant public realm plans are shown in Appendix C:

- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-000002-DP
- TAS-HWW-ARD-AIS-VAR-AGE-AEN-A3300
- TAS-HWW-ARD-AIS-VAR-AGE-AEN-A3301
- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-002203-DP
- TAS-CYP-AR-AIS-00-DRG-AUD-AEN-002204-DP.

4.3.4. USER EXPERIENCE AND SURROUNDING ENVIRONMENT

The Intake Substation will not be accessible by the public and local community during operation. The building is fully enclosed by walls to the north, east and west, and by a security fence to the south. Hoarding will be installed as part of the amended Early Works Plan during the construction phase of the Project. Therefore, the user experience is limited to the functional requirements of the Intake Substation and emergency access and egress. Two exits via stairs will provide emergency egress and maintenance access from the eastern and western sides of the Intake Substation building. Access to the substation will only be for maintenance and workers associated with the functioning of the rail network.

The surrounding environment is primarily a rail corridor and not accessed by the public, with the exception of the Moonee Ponds Creek Trail. Moonee Ponds Creek Trail is located adjacent to the Intake Substation and offers an important cycling link for commuters. Cyclists may temporarily be diverted along Moonee Ponds Creek Trail during the construction phase, however CYP will seek to minimise any impacts to the existing Trail and will reinstate access at the completion of works. The Moonee Ponds Creek Trail will continue to be used as an active transport link during the Intake Substation operation.

As part of the detailed design, CYP investigated options to further minimise impacts to the potential users of the Moonee Ponds Creek Trail. The amended design proposes a high feature fence adjacent to the trail. The fence is proposed in an irregular form with a pink/purple colour and white chevron finish. The proposed fence will promote permeability and provide clear sightlines to the

Intake Substation. The location of the proposed feature fence is shown in red on Figure 3. Further fence details are shown in Appendix C:

- TAS-HWW-ARD-AIS-DRG-AUD-AEN-A3800
- TAS-HWW-ARD-AIS-DRG-AUD-AEN-A3801.

CYP will also reinstate trees and planting along Moonee Ponds Creek where impacted by construction.

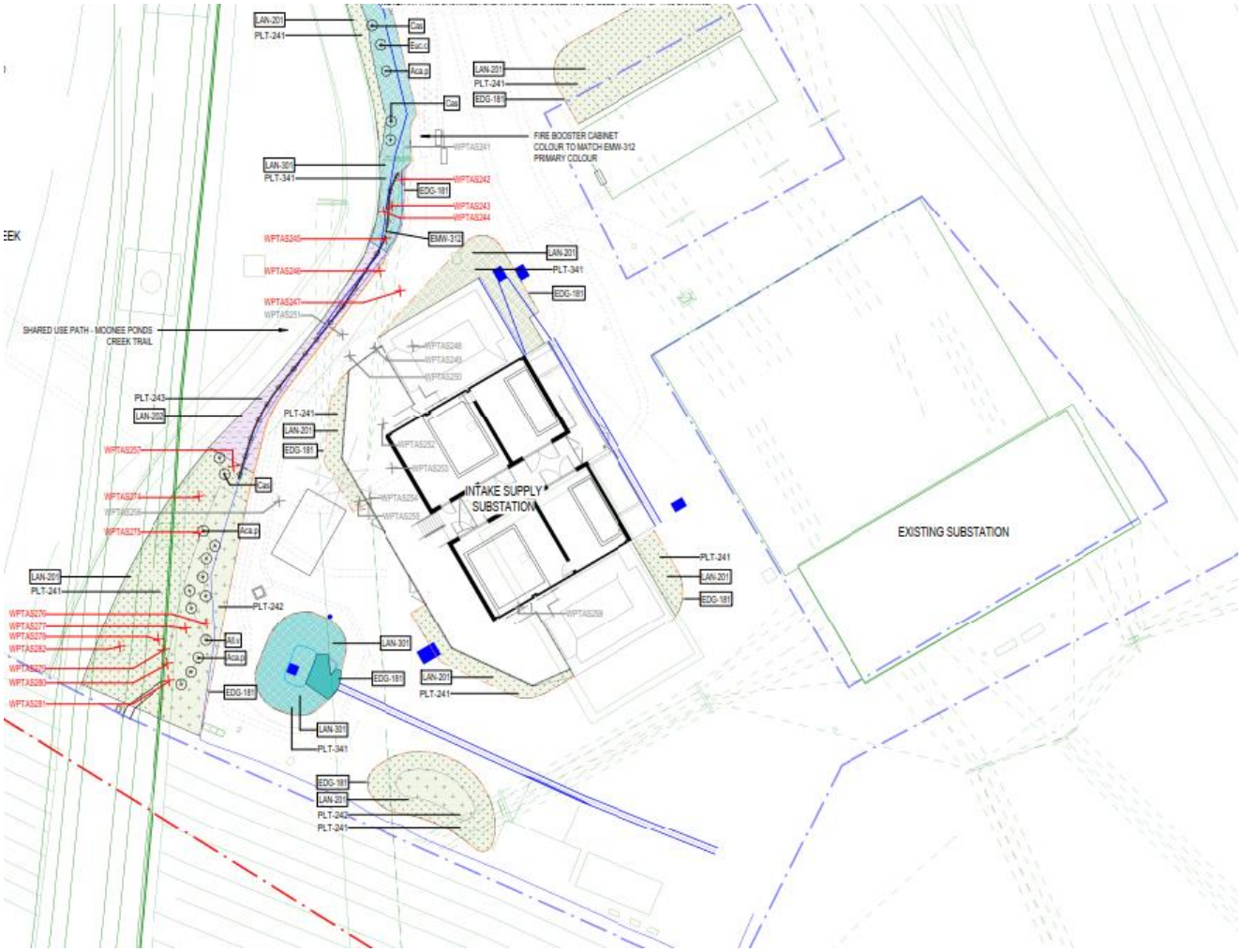

Figure 3: Location of the proposed feature fence

4.3.5. LIGHTING

Lighting will be for the sole purpose of operating the Intake Substation. Operational lighting will be designed in accordance with relevant standards as per EPR LV3.

4.3.6. SIGNAGE

Any signage required for the Intake Substation will be in accordance with Department of Transport, 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 Intake Substation. CYP design has strategically consolidated plant within the two-storey Intake Substation building, with the exception of an oil separator located externally, south of the building. Further, the amended design proposes to screen the mechanical plant on the roof of the Intake Substation building. This placement makes the plant less visibly obtrusive, and reduces the potential to impede on sightlines.

4.3.8. MATERIALS AND FINISHES

A schedule of indicative materials and finishes has been prepared to highlight the intended colour tones and textures of the Intake Substation to fit into the existing surrounds of the rail corridor.

The indicative materials and finishes have been significantly dictated by security and technical constraints.

Figure 4 provides indicative materials and finishes for the Intake Substation. A copy of the materials schedule is provided in Appendix B, refer to schedule:

- TAS-CYP-ARD-AIS-SKT-CRD-ARC-C4211.

Figure 4: Materials and finishes at the Intake Substation

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 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 Intake Substation which aim to accomplish this include the use of walls, footpaths and lighting to:

- Restrict public access to, or from, the Intake Substation (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. Design features of the Intake Substation which have been employed to increase natural and passive surveillance include low level growth planting to maximise visibility.

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.

Simple design measures have been employed to reduce the potential for anti-social behaviour including the installation of a security fence to the south. The building is also fully enclosed by walls to the north, east and west. The A/C condenser units facing north will be enclosed in secure mesh.

4.4. CONSISTENCY WITH THE 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 MTPO Environmental Management Framework

Topic	Summary
Contract structure	Outlines the MTPO 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, MTPO, 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 Intake Substation works. 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 Intake Substation 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. 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 and river health EPRs

EPR	Design response
EPR AE1: Stormwater treatment EPR AE7: Stormwater treatment	The design of the Intake Substation has been developed in consultation with Melbourne Water, City of Melbourne and the Victorian Planning Authority. The Intake Substation is in close proximity to Moonee Ponds Creek, therefore stormwater runoff has the potential to impact on water quality in Moonee Ponds Creek. The Moonee Ponds Creek floodplain has been considered during design, with appropriate pollutant control measures integrated into stormwater design. WSUD principles have also been utilised, whereby WSUD planting will capture stormwater, provide passive irrigation to plants, and ensure that stormwater entering bodies of water complies with State Environment Protection Policy (Waters).
EPR AE5: Floodwaters	The Intake Substation is located within the Moonee Ponds Creek floodplain. There is potential for impacts on the aquatic health of the Moonee Ponds Creek if flooding or equipment failure results in a leak of toxic substances from the Intake Substation. Flood prevention measures will help to reduce the risk to aquatic ecosystem values arising from flooding events. As part of the overall project works, a flood immunity risk assessment has been undertaken for the Arden precinct where it is located. Further detailed flood modelling has been undertaken in consultation with Melbourne Water to confirm that appropriate flood storage is maintained. In response to the susceptibility of flooding, the Intake Substation design provides flood immunity through elevating all rooms above ground level above the 1 in 100-year ARI flood event level, in accordance with Melbourne Water Guidelines. Selected equipment located outdoors will be positioned such as to ensure their components sensitive to flooding are clear of flood height.

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 Intake Substation has been 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 along Moonee Ponds Creek.

	Trees are required to be removed for the construction of the Intake Substation. The approved Intake Substation Development Plan identified 41 trees for removal which were approved for removal as part of CYP's amended Early Works Plan. In total, 21 trees are proposed for removal in the amended design. This is 20 less trees than the previously approved Development Plan submission. Overall, CYP propose to reinstate approximately 68 new trees, as well as low level growth planting and WSUD planting. The retained and removed trees are shown on the landscape plans in Appendix C.
EPR AR2: Tree soil and water supply	CYP propose to reinstate low level growth and WSUD planting along Moonee Ponds Creek to improve the stormwater discharge quality from the Intake Substation site and to support the healthy and resilient establishment and growth of trees and vegetation. Details regarding plant species are subject to ongoing investigation and consultation with relevant land managers, and will be decided prior to project completion. CYP have worked with a specialist soil scientist to develop a high-performance soil specification and profile that balances the optimal soil requirements for storm water drainage, as well as for long term tree growth. WSUD is shown on the landscape and public realm plans in Appendix C.
EPR AR3: Tree replacement	The design of the Intake Substation has been developed in consultation with City of Melbourne. The design for the Intake Substation includes reinstating trees impacted by construction along Moonee Ponds Creek and Trail. Overall, CYP propose to reinstate approximately 68 new trees, as well as low level growth planting. This will help achieve MTPO's project goal of doubling tree canopy coverage and providing landscaped areas within the public realm. Tree reinstatement will also help facilitate implementation of the City of Melbourne and the Victorian Planning Authority *Moonee Ponds Creek Strategic Opportunities Plan.* A tree replacement program has been developed in further consultation with City of Melbourne to ensure tree replacement is carried out in alignment with council strategies. The reinstated trees are shown on the landscape plans in Appendix C.

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 Intake Substation has been developed in consultation with the City of Melbourne. There is no known heritage fabric in the vicinity of the Intake Substation, and as such, there will be no impact on heritage places. Heritage impacts on the Langford Street Pumping Station have been avoided through the selection of an alternative location to the concept design option, as outlined in the EES.
EPR CH12: Langford Street Pumping Station	The Langford Street Pumping Station forms part of the Moonee Ponds Creek and Infrastructure Precinct. The Intake Substation is located at an alternative location to the concept design option proposed in the EES and will therefore have no heritage impact on the Langford Street Pumping Station.

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 Intake Substation has been developed in consultation with the City of Melbourne. The location for the Intake Substation adjacent to the Arden precinct is due to its proximity to the North Melbourne Traction Substation, West Melbourne Terminal Substation and availability of land. The existing land use is primarily rail oriented, and the proposed location is adjacent to the CityLink toll road bridge, existing rail corridor and Moonee Ponds Creek Trail. Impacts on existing land use are therefore minimised.
EPR LU2: Master plans	City of Melbourne and the Victorian Planning Authority recently developed a *Moonee Ponds Creek Strategic Opportunities Plan* (2019). The proposed Intake Substation site is marked as an area of 'Expanded Creek Environs', with an aim to 'merge existing open spaces with the waterway, create a new pedestrian connection along the western edge of the creek and expanding the creek environs to facilitate recreation opportunities and extensive tree planting'. Tree planting and recreational opportunities proposed by the *Moonee Ponds Creek Strategic Opportunities Plan* are not possible due to the existing railway utility infrastructure in the area, hence why CYP are proposing that this location is suitable for the Intake Substation. The Intake Substation has been strategically positioned at an alternative location to the concept design proposed in the EES. This strategic positioning is due to the existing North Melbourne Traction Substation and West Melbourne Terminal Substation, and the suitability of placing a rail asset within the Craigieburn and Sunbury line existing rail corridors. Planting will be reinstated by CYP where impacted by construction. City of Melbourne and Victorian Planning Authority will be consulted as part of the Development Plan process. The Metro Tunnel will otherwise not impact on the implementation of the *Moonee Ponds Creek Strategic Opportunities Plan*.
EPR LU4: Urban Design Strategy	The design of the Intake Substation has been developed in consultation with Urban Design and Architectural Advice Panel (UDAAP). A detailed assessment of consistency with the Urban Design Strategy is provided in Appendix D 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 Intake Substation has been developed in consultation with the Office of the Victorian Government Architect and City of Melbourne. The Intake Substation location was selected as it is within an existing rail corridor, away from residences, and will therefore have a minimal visual impact on surrounding amenities. Existing habitat corridors will be maintained as public realm along Moonee Ponds Creek. Any construction impacts to the existing habitat corridor will be reinstated by CYP, where possible.

	Diversions along the Moonee Ponds Creek Trail may occur for a limited duration during the construction period, however CYP will re-establish this public open space on completion of the works.

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 Intake Substation has been developed in consultation with City of Melbourne and the Victorian Planning Authority. The Intake Substation has been located in an existing rail corridor away from residences and amenities in order to avoid social and community impacts. Where there will likely be construction impacts to Moonee Ponds Creek and Trail, CYP propose to reinstate low level growth and WSUD planting to deliver positive visual benefits to the area. As part of the detailed design, CYP investigated options to further minimise impacts to the potential users of the Moonee Ponds Creek Trail. The amended design proposes a high feature fence adjacent to the trail. The fence is proposed in an irregular form with a pink/purple colour and white chevron finish. The proposed fence will promote permeability and provide clear sightlines to the Intake Substation. The landscape and public realm drawings are shown in Appendix C.

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 Intake Substation has been developed in consultation with Melbourne Water, City of Melbourne and the Victorian Planning Authority. In response to the susceptibility of flooding, the Intake Substation has been designed to provide flood immunity through elevating all rooms above ground level to protect the Intake Substation from being flooded from the 1 in 100-year ARI flood event level, in accordance with the Melbourne Water Guidelines. Selected equipment located outdoors will be positioned to ensure their components sensitive to flooding are clear of flood height. The adoption of a WSUD will also help to manage local stormwater and allow for stormwater infiltration. A detailed assessment of consistency with the Urban Design Strategy is provided in Appendix D 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 T9: Operational active transport	The design of the Intake Substation was developed in consultation with City of Melbourne. Construction activity may require cyclists to be temporarily diverted during construction, while works are undertaken along Moonee Ponds Creek Trail. CYP will work with City of Melbourne to ensure appropriate alternative access is arranged during this time. CYP will work with City of Melbourne following construction, to ensure reinstatement of the cycle path following the completion of works.

5. CONCLUSION

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

- Site layout plan (refer to Appendix A)
- Architectural plans and elevations (refer to Appendix B)
- Landscape and public realm plans (refer to Appendix C)
- 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)
- 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).

MTPO'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 Intake Substation is located within the rail corridor in the Macaulay depot area, directly adjacent to the Arden precinct. The EES identified a concept design on Langford Street, however the Macaulay depot area was chosen to allow for future land use opportunities at Langford Street and to mitigate impacts on the Langford Street Pumping Station. This location was also determined based on its immediate proximity to the North Melbourne Traction Substation, the West Melbourne Terminal Substation, and the availability of land. The Intake Substation will be positioned adjacent to the Craigieburn and Sunbury line active rail corridors, the CityLink toll road bridge and the Moonee Ponds Creek Trail. The Intake Substation is an essential piece of infrastructure which will provide power for the operation of the tunnels and stations.

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

As part of preparing the previous version of this Intake Substation Development Plan, consultation occurred with the community and stakeholders including a 15 business day public inspection period from Monday 18 November 2019 until Friday 6 December 2019. During this time it was available on the Metro Tunnel website along with an opportunity to provide written comments.

The previous version of this Intake Substation Development Plan was approved by the Minister for Planning on Thursday 26 March 2020. 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 have been made to improve the architectural and landscape design of the Intake Substation. Those amendments relate to changes to the cable route alignment to avoid tree removal on the western bank of Moonee Ponds Creek, screening of the mechanical plant on the Intake Substation roof, erection of a feature fence alongside the existing Moonee Ponds Creek Trail, and an amended associated works area as a result of the revised cable routes alignment. 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 Intake Substation works 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: INTAKE SUBSTATION SITE LAYOUT PLAN

Legend	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-000001-DP
Precinct Plan	TAS-CYP-AR-AIS-00-DRG-AUD-AEN-000002-DP
Associated Works Area	TAS-CYP-ARD-AIS-SKT-CRD-AEN-C4203

LEGEND

GENERAL

- PROJECT LAND BOUNDARY
- PROJECT LAND FOR ASSOCIATED WORKS
- LANDSCAPE REINSTATEMENT (PRECINCT PLAN ONLY)
- STRUCTURE ABOVE
- STRUCTURE BELOW
- TUNNEL BELOW
- SHEET LAYOUT
- MATCHLINE
- EL +15.123 — EXISTING LEVEL REFER TO SURVEYORS INFORMATION
- RL +15.123 — CIVIL FINISHED LEVEL REFER TO CIVIL DOCUMENTATION

EDGE/ WALL

- EDG-181 TIMBER EDGE -TYPE 01

EXTERNAL METALWORK

- EMW-312 FENCE - STEEL PEDESTRIAN - TYPE 02

SOIL PREPARATION TYPE

- LAN-201: GARDEN BED ON GRADE - TYPE 01
- LAN-202: GARDEN BED ON GRADE - EMBANKMENT - TYPE 02
- LAN-301: WSUD GARDEN BED ON GRADE - TYPE 01
- LAN-401: REVEGETATION ON GRADE- TYPE 01

PLANT MIX TYPE

- PLT-241: GARDEN BED GROUND COVER MIX
- PLT-242: GARDEN BED SCREENING MIX
- PLT-243: GARDEN BED EMBANKMENT MIX
- PLT-341: WSUD RAINGARDEN MIX
- PLT-441: REVEGETATION - MARSH INFILL MIX
- PLT-442: REVEGETATION - PLANTING INFILL MIX
- PLT-443: REVEGETATION - TRACK PLANTING MIX
- PLT-444: REVEGETATION - HERB INFILL MIX
- PLT-445: REVEGETATION - WOODLAND MIX

TREE

- EXISTING TREE - REFER TO ARBORIST TREE IMPACT ASSESSMENT REPORTS
- LAN-501 PROPOSED TREE IN SOFTSCAPE DAY 01 EXTENT OF CANOPY
- EXISTING TREE TO BE REMOVED: AS PER THE CYP MELBOURNE METRO GIS
- EXISTING TREE REMOVED BY CYP EARLY WORKS
- WPTASXX / WPTASXX / WPTASXX — EXISTING TREE ID

CIVIL ROADS

- FACE OF KERB
- SEMI MOUNTABLE / MOUNTABLE KERB REFER TO CIVIL DOCUMENTATION
- BACK OF KERB

SERVICES

- DRAIN PIT REFER TO CIVIL - STORM WATER DRAINAGE PACKAGE
- DRAINAGE WALL & ROCK BEACHING REFER TO CIVIL - STORM WATER DRAINAGE PACKAGE
- ELECTRICAL PIT LID REFER TO CIVIL WORKS PACKAGE TAS-D-2339-0485
- ELECTRICAL CONDUIT REFER TO CIVIL WORKS PACKAGE TAS-D-2339-0485

EXISTING FIXTURE

- EXISTING PIT
- EXISTING SURVEY

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		A.2	28/08/2024	ISSUED FOR DEVELOPMENT PLAN	YS	CG		
		A.1	22/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT LEGEND & NOTES

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

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-000001-DP

Revision: A.2

PUBLIC TRANSPORT VICTORIA PT

File Name:

Sheet No.:

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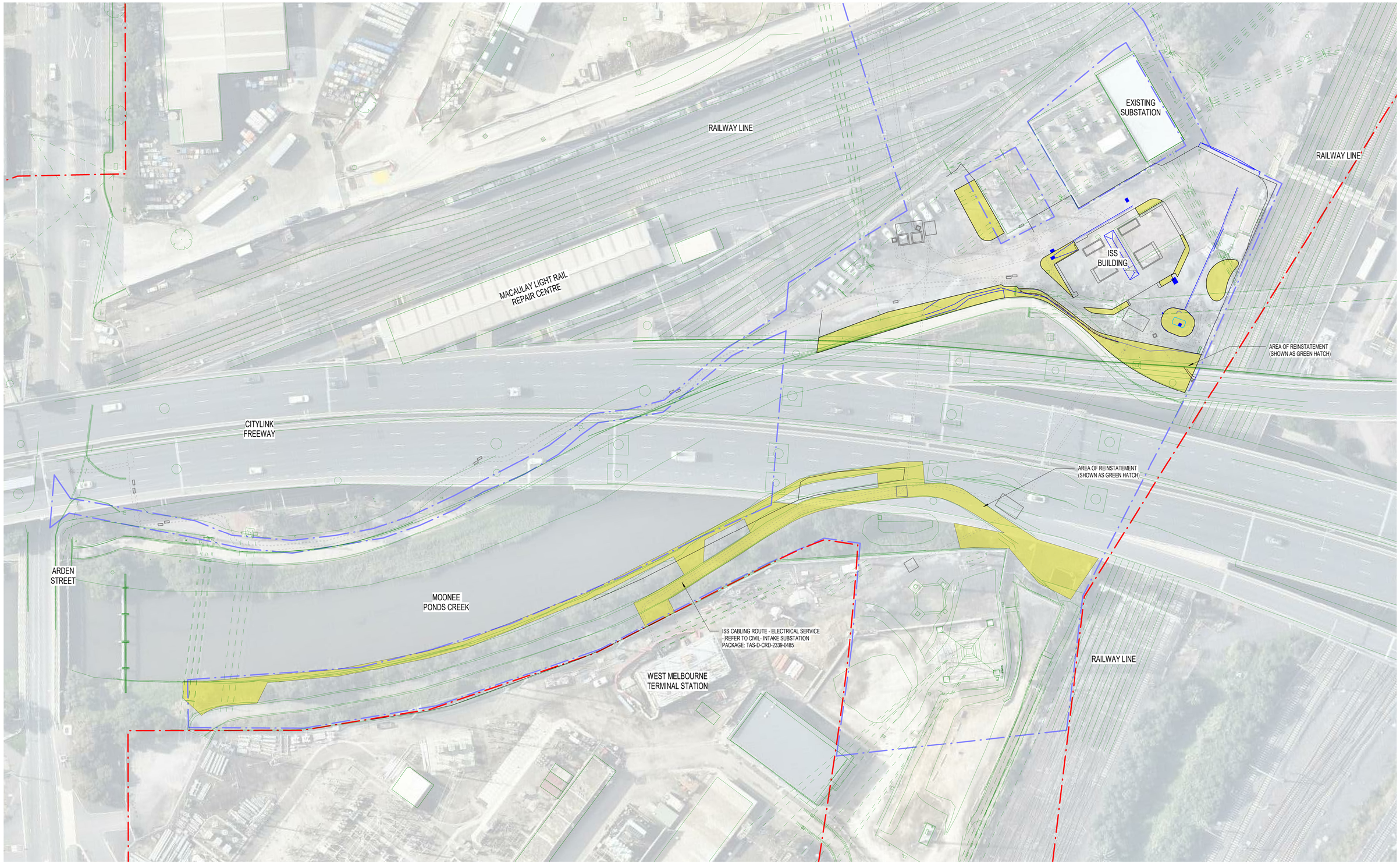
Scale: As indicated

Sheet Size: A1

Drawn By	Designed By
M.WATSON	Y.SONG
Checked By	Ind. Review
C.GUTHRIE	
Approved	Approval Date
Drawing Number	Revision



DEVELOPMENT PLAN SUBMISSION

LEGEND

PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

0 10 20 40m

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
		A.3	30/07/2024	ISSUED FOR DEVELOPMENT PLAN	YS	CG		
		A.2	26/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		
		A.1	06/07/2021	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT PRECINCT PLAN

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

PUBLIC TRANSPORT VICTORIA PT

Drawn By: M.WATSON	Designed By: Y.SONG
Checked By: C.GUTHRIE	Ind. Review
Approved	Approval Date

File Name

Sheet No.

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Scale: As indicated

Sheet Size: A1

Drawing Number

Revision

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-000002-DP

Revision: A.3

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Legend

- ISS Associated Works Area
- Project Land
- Vicmap Property Parcel

N

0 57.33 114.7 Meters

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Project Drawing No TAS-CYP-ARD-AIS-SKT-CRD-AEN-C4203 | A2

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
AAW		A2	05/07/21	AMENDED DEVELOPMENT PLAN	S.E	S.C		
AAW		A1	17/10/19	CERTIFIED DESIGN FOR REVIEW - INTERNAL	S.C.	J.B.		

18/10/2019 12:07:50 PM

Consultant: Cross Yarra Partnership

Franchisee: RAIL PROJECTS VICTORIA

OTHER

INTAKE SUBSTATION

DEVELOPMENT PLAN

Up Location	Down Location	Datum
East. North. ID#	East. North. ID#	MGA Z55

PUBLIC TRANSPORT VICTORIA PT

Drawn By N. CAVALLO	Designed By S CHAPMAN
Checked By S. CHAPMAN	Ind. Review
Approved	Approval Date
File Name	
Sheet No. 01 of 01	
In Serv.	
Scale 1:2000	Sheet Size A3
Drawing Number	Revision

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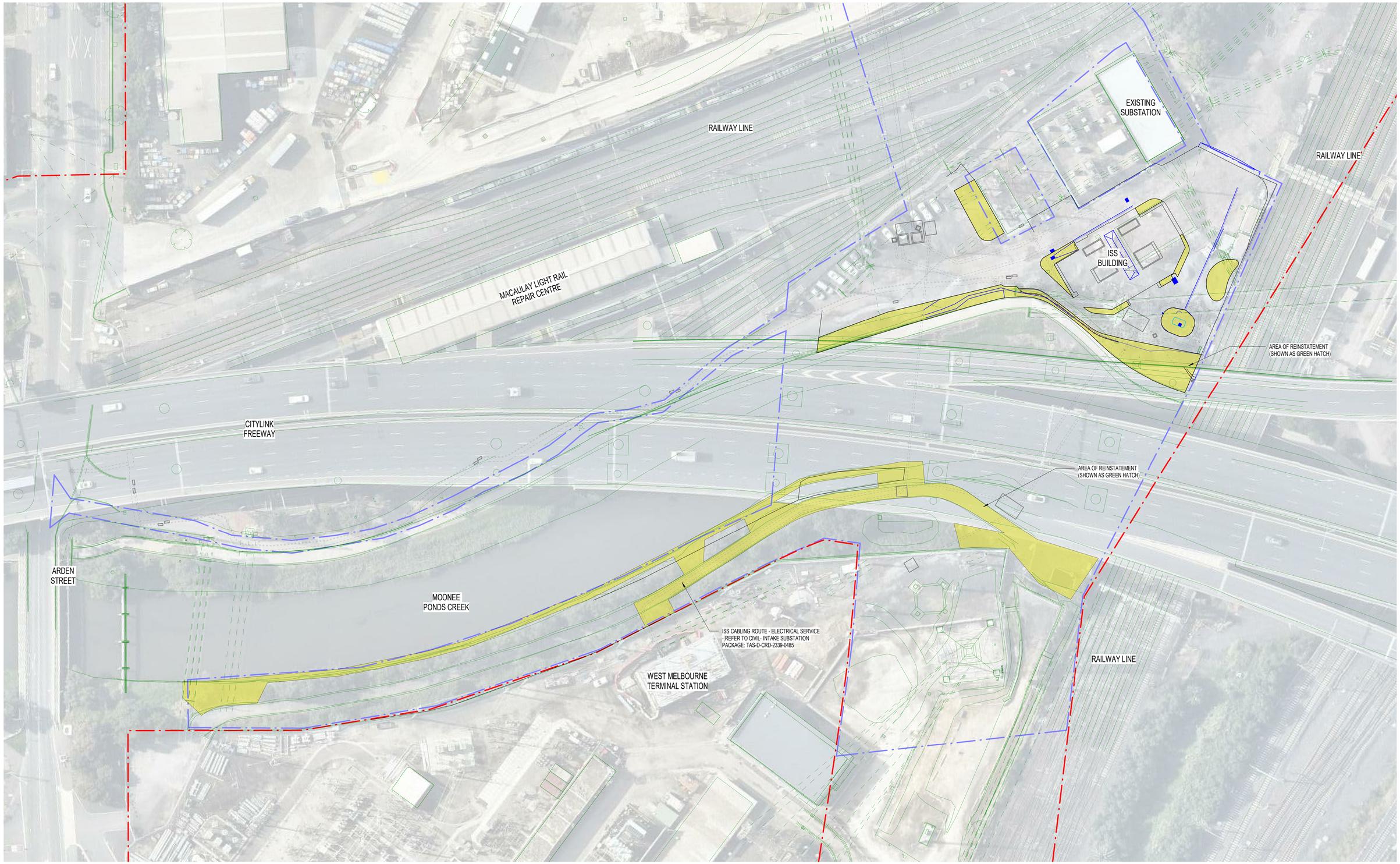
APPENDIX B: INTAKE SUBSTATION ARCHITECTURAL PLANS AND ELEVATIONS

Precinct Plan	TAS-CYP-AR-AIS-00-DRG-AUD-AEN-000002-DP
Sections	TAS-CYP-ARD-AIS-SKT-CRD-ARC-C4208
Materials Schedule	TAS-CYP-ARD-AIS-SKT-CRD-ARC-C4211



DEVELOPMENT PLAN SUBMISSION

LEGEND

PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
		A.3	30/07/2024	ISSUED FOR DEVELOPMENT PLAN	YS	CG		
		A.2	26/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		
		A.1	06/07/2021	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT PRECINCT PLAN

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

PUBLIC TRANSPORT VICTORIA PT

Drawn By: M.WATSON	Designed By: Y.SONG
Checked By: C.GUTHRIE	Ind. Review
Approved	Approval Date

File Name

Sheet No.

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Scale: As indicated

Sheet Size: A1

Drawing Number

Revision

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-000002-DP

Revision: A.3

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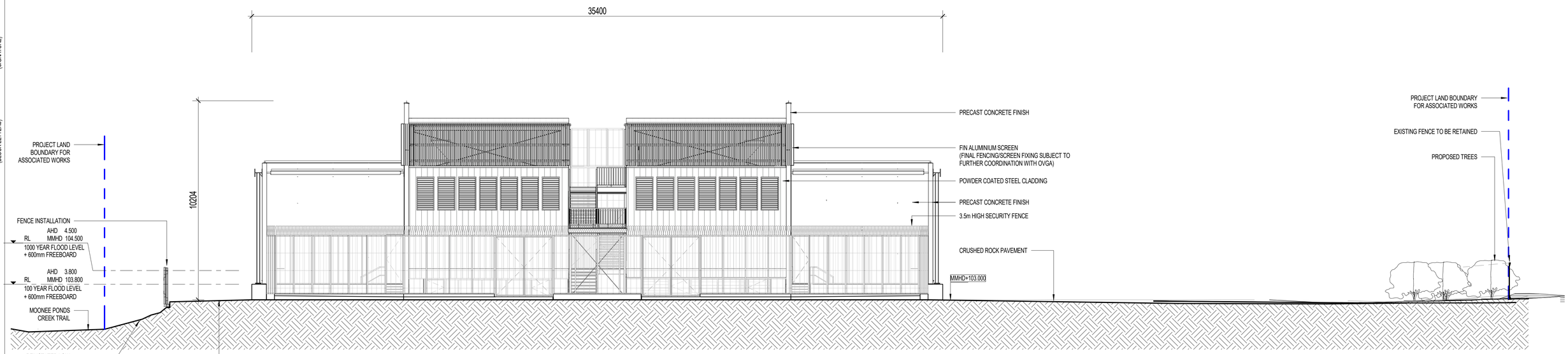
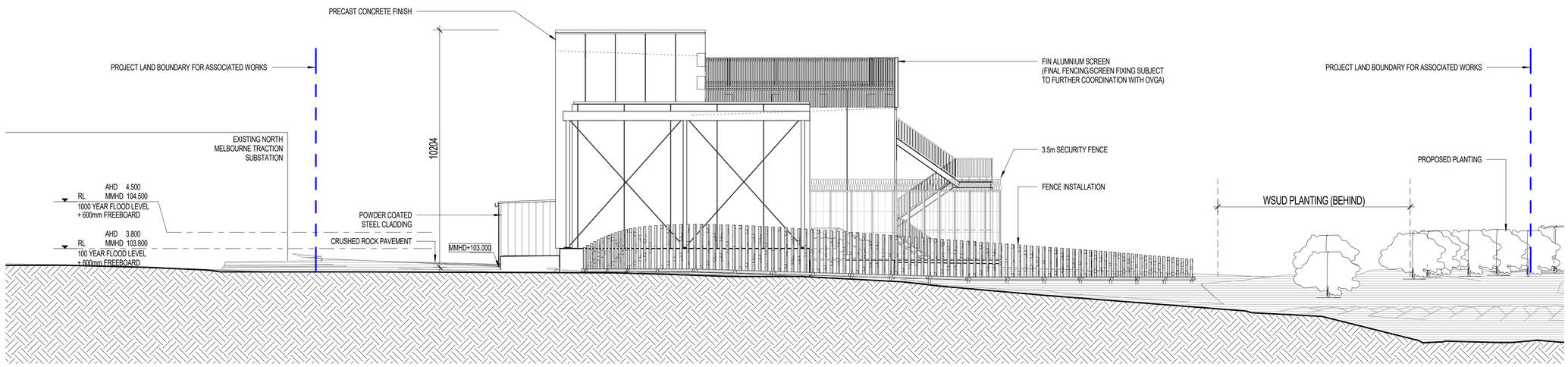


1 ISS - WEST ELEVATION
1 : 100



2 ISS - NORTH ELEVATION
1 : 100

SCALE BAR
0 2 4 8m
1:100

DEVELOPMENT PLAN SUBMISSION

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
HWW		C	28/07/22	ISSUED FOR DEVELOPMENT PLAN	CL	PS		
AAW		B	20/09/19	ISSUED FOR DEVELOPMENT PLAN	T.E.	L.A.R.		A.H.
AAW		A	30/08/19	ISSUED FOR DEVELOPMENT PLAN	T.E.	L.A.R.		A.H.

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

DEVELOPMENT PLAN

ARDEN

INTAKE SUPPLY SUB-STATION

ARCHITECTURE, LANDSCAPE AND HARDSCAPE SECTIONS

Up Location	Down Location	Datum
East.	East.	
North.	North.	MGA Z55
ID#	ID#	

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number	TAS-CYP-ARD-AIS-SKT-CRD-ARC-C4208
Revision	C
File Name	
Sheet No.	
Drawn By	P GODOY
Designed By	C LAMBORN
Checked By	P STEVENS
Ind. Review	
Approved	
Approval Date	
Scale	1 : 100
Sheet Size	A1
Drawing Number	
Revision	

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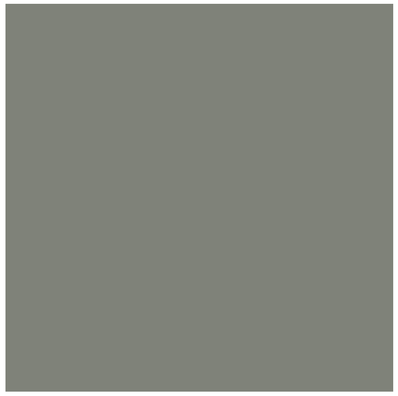
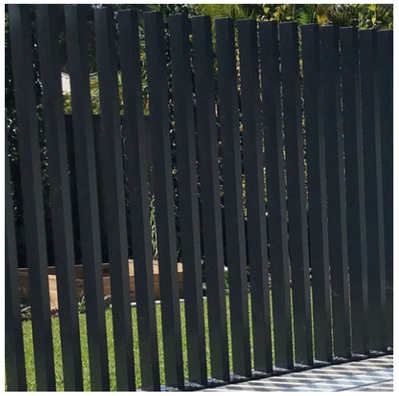
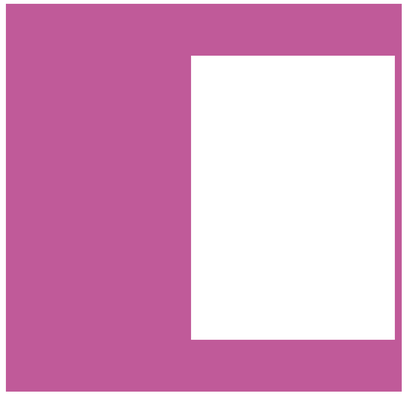
WALL CLADDING
COLOR COATED STEEL PANEL.
FINISH: POWDER COATED
IMAGE AND COLOUR INDICATIVE ONLY.



PRECAST CONCRETE PANELS.
CONCRETE GREY.
IMAGE INDICATIVE ONLY.



VERTICAL UNEQUAL ALUMINIUM ANGLES (FINS)
POWDER COATED, DARK GREY
IMAGE AND COLOUR INDICATIVE ONLY



PAINTED STEEL FENCE WITH CHEVRON PATTERN.
IMAGE AND COLOURS INDICATIVE ONLY

DEVELOPMENT PLAN SUBMISSION

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
		B	22/07/22	ISSUED FOR DEVELOPMENT PLAN	CL	PS		
		A	02/07/19	ISSUED FOR DEVELOPMENT PLAN	CL	PS		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

METRO TUNNEL
ARDEN
AIS
INDICATIVE MATERIAL

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

PUBLIC TRANSPORT VICTORIA PT

Project Drawing Number: TAS-CYP-ARD-AIS-SKT-CRD-ARC-C4211
Revision: B

File Name:
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Scale:
Sheet Size: A1

Drawn By	Designed By
P GODOY	C LAMBORN
Checked By	Ind. Review
P STEVENS	
Approved	Approval Date
Drawing Number	Revision

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APPENDIX C: INTAKE SUBSTATION LANDSCAPE AND PUBLIC REALM PLANS

Legend	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-000001-DP
Planting Schedule	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-000011-DP
Precinct Plan	TAS-CYP-AR-AIS-00-DRG-AUD-AEN-000002-DP
Landscape Plan – Sheet 01	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-002203-DP
Landscape Plan – Sheet 02	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-002204-DP
Landscape Plan – Sheet 03	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-002205-DP
Landscape Plan – Sheet 04	TAS-CYP-ARD-AIS-00-DRG-AUD-AEN-002206-DP

LEGEND

GENERAL

- PROJECT LAND BOUNDARY
- PROJECT LAND FOR ASSOCIATED WORKS
- LANDSCAPE REINSTATEMENT (PRECINCT PLAN ONLY)
- STRUCTURE ABOVE
- STRUCTURE BELOW
- TUNNEL BELOW
- SHEET LAYOUT
- MATCHLINE
- EL +15.123 — EXISTING LEVEL REFER TO SURVEYORS INFORMATION
- RL +15.123 — CIVIL FINISHED LEVEL REFER TO CIVIL DOCUMENTATION

EDGE/ WALL

- EDG-181 TIMBER EDGE -TYPE 01

EXTERNAL METALWORK

- EMW-312 FENCE - STEEL PEDESTRIAN - TYPE 02

SOIL PREPARATION TYPE

- LAN-201: GARDEN BED ON GRADE - TYPE 01
- LAN-202: GARDEN BED ON GRADE - EMBANKMENT - TYPE 02
- LAN-301: WSUD GARDEN BED ON GRADE - TYPE 01
- LAN-401: REVEGETATION ON GRADE- TYPE 01

PLANT MIX TYPE

- PLT-241: GARDEN BED GROUND COVER MIX
- PLT-242: GARDEN BED SCREENING MIX
- PLT-243: GARDEN BED EMBANKMENT MIX
- PLT-341: WSUD RAINGARDEN MIX
- PLT-441: REVEGETATION - MARSH INFILL MIX
- PLT-442: REVEGETATION - PLANTING INFILL MIX
- PLT-443: REVEGETATION - TRACK PLANTING MIX
- PLT-444: REVEGETATION - HERB INFILL MIX
- PLT-445: REVEGETATION - WOODLAND MIX

TREE

- EXISTING TREE - REFER TO ARBORIST TREE IMPACT ASSESSMENT REPORTS
- LAN-501 PROPOSED TREE IN SOFTSCAPE DAY 01 EXTENT OF CANOPY
- EXISTING TREE TO BE REMOVED: AS PER THE CYP MELBOURNE METRO GIS
- EXISTING TREE REMOVED BY CYP EARLY WORKS
- WPTASXX / WPTASXX / WPTASXX — EXISTING TREE ID

CIVIL ROADS

- FACE OF KERB
- SEMI MOUNTABLE / MOUNTABLE KERB REFER TO CIVIL DOCUMENTATION
- BACK OF KERB

SERVICES

- DRAIN PIT REFER TO CIVIL - STORM WATER DRAINAGE PACKAGE
- DRAINAGE WALL & ROCK BEACHING REFER TO CIVIL - STORM WATER DRAINAGE PACKAGE
- ELECTRICAL PIT LID REFER TO CIVIL WORKS PACKAGE TAS-D-2339-0485
- ELECTRICAL CONDUIT REFER TO CIVIL WORKS PACKAGE TAS-D-2339-0485

EXISTING FIXTURE

- EXISTING PIT
- EXISTING SURVEY

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Rev.	Approv.
		A.2	28/08/2024	ISSUED FOR DEVELOPMENT PLAN	YS	CG		
		A.1	22/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT LEGEND & NOTES

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

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-000001-DP

Revision: A.2

PUBLIC TRANSPORT VICTORIA PT

File Name:

Sheet No.:

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Scale: As indicated

Sheet Size: A1

Drawn By	Designed By
M.WATSON	Y.SONG
Checked By	Ind. Review
C.GUTHRIE	
Approved	Approval Date
Drawing Number	Revision

TREE SCHEDULE							
Abbrebiation	Botanic_Name	Common Name	Tree Size	Approx. Mature Height x Width	Pot Size	Quantity	Native/Exotic
Aca.p	*Acacia pycnantha*	Golden Wattle	Small	8 x 4m	45L	45	Native
All.v	*Allocasuarina verticillata*	Drooping Sheoak	Small	9 x 5m	45L	5	Native
Cas	*Callistemon sieberi*	River Bottlebrush	Small	3 x 2m	45L	12	Native
Euc.c	*Eucalyptus camaldulensis*	River Red Gum	Large	30 x 15m	45L	6	Native
Grand total						68	

TREE CANOPY SCHEDULE			
Type	15 years Canopy Size	Quantity	Total Canopy Area
Planting	33 m²	68	2244 m²
Grand total		68	2244 m²

PLT-241 **Garden Bed - Groundcover (<1m Height)** — Total area: 536 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Dichanthium sericeum	Silky Blue Grass	0.4x0.4m	7 / m²	5.0%	200mm	188
Austrostipa scabra ssp. Falcata	Spear Grass	1.0x1.0m	7 / m²	10.0%	200mm	375
Calocephalus citreus	Lemon Beauty-heads	0.5x0.5m	7 / m²	15.0%	200mm	562
Calocephalus lacteus	Milky Beauty-heads	0.5x0.5m	7 / m²	15.0%	200mm	562
Disphyma crassifolium subsp. clavellatum	Rounded Noon-Flower	0.3x3m	7 / m²	10.0%	200mm	375
Chrysocephalum apiculatum	Common Everlasting	0.6x1m	7 / m²	5.0%	200mm	188
Goodenia ovata	Hop Goodenia	0.3x.1m	7 / m²	5.0%	200mm	188
Chrysocephalum semipapposum	Clustered Everlasting	0.6x0.6m	7 / m²	5.0%	200mm	188
Lomandra longifolia	Spiny headed Mat Rush	1x1m	7 / m²	10.0%	200mm	375
Dianella brevicaulis	Coast Flax-lilly	0.6x0.6m	7 / m²	10.0%	200mm	375
Rytidosperma caespitosum	Common Wallaby-grass	0.9x0.5m	7 / m²	10.0%	200mm	375

PLT-242 **Garden Bed - Screening Mix (>1m Height)** — Total area: 105 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage of Total	Pot Size	Quantities
Ground Cover						
Acacia acinacea	Gold dust Wattle	2x1.5m	5.33 / m²	*15.0%*	200mm	84
Austrostipa scabra ssp. falcata	Spear Grass	1.0x1.0m	7 / m²	*15.0%*	200mm	110
Understory						
Dianella revoluta	Blue flax-lily	1x1.5m	5.33 / m²	*10.0%*	200mm	56
Leptospermum lanigerum	Wooly Teatree	2x3m	5.33 / m²	*10.0%*	200mm	56
Lomandra longifolia	Spiny headed Mat Rush	0.75x1m	5.33 / m²	*10.0%*	200mm	56
Rytidosperma caespitosum	Common Wallaby-grass	1x1m	5.33 / m²	*10.0%*	200mm	56
Dodonaea viscosa	Sticky hop bush	1.5x2m	5.33 / m²	*10.0%*	200mm	56
Correa glabra	*Rock correa*	2x3m	5.33 / m²	*10.0%*	200mm	56
Kunzea leptospermoides	Yarra burgan	2x3m	5.33 / m²	*10.0%*	200mm	56

PLT-243 **Garden Bed - Embankment Mix** — Total area: 45 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Chrysocephalum apiculatum	Common Everlasting	0.5x0.5m	6 / m²	20.0%	Tube	54
Ficinia nodosa	Knobby Club-rush	1x1m	6 / m²	20.0%	Tube	54
Lomandra longifolia	Spiny headed Mat Rush	1x1m	4 / m²	30.0%	Tube	54
Disphyma crassifolium subsp. clavellatum	Rounded Noon-Flower	0.3x.1m	6 / m²	30.0%	Tube	81

PLT-341 **WSUD - Rain Garden Mix** — Total area: 171 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Disphyma crassifolium subsp. clavellatum	Rounded Noon-Flower	0.3x.1m	6 / m²	20.0%	Tube	205
Carex apressa	Tall Sedge	0.5x0.5m	6 / m²	30.0%	Tube	308
Ficinia nodosa	Knobby Club-rush	1x1m	6 / m²	30.0%	Tube	308
Juncus kraussii spp. Australiensis	Sea Rush	1x1m	6 / m²	20.0%	Tube	205

PLT-441 **Revegetation - Marsh Infill Mix** — Total area: 440 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Bolboschoenus caldwellii	Sea Club-rush	1x1m	3 / m²	50.0%	Tube	660
Disphyma crassifolium subsp. clavellatum	Rounded Noon-Flower	0.3x3m	3 / m²	50.0%	Tube	660

PLT-442 **Revegetation - Infill Planting Mix** — Total area: 92 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Ground Cover						
Austrostipa scabra ssp. falcata	Spear Grass	1x0.5m	7 / m²	8.0%	Tube	52
Calocephalus citreus	Lemon Beauty-heads	0.5x0.5m	7 / m²	8.0%	Tube	52
Calocephalus lacteus	Milky Beauty-heads	0.5x0.5m	7 / m²	8.0%	Tube	52
Chloris truncata	Windmill grass	0.45x0.3	7 / m²	8.0%	Tube	52
Chrysocephalum apiculatum	Common Everlasting	0.6x1m	7 / m²	8.0%	Tube	52
Dianella brevicaulis	Coast Flax-lilly	0.6x0.6m	7 / m²	4.0%	Tube	26
Rytidosperma caespitosum	Common Wallaby-grass	0.9x0.5m	7 / m²	4.0%	Tube	26
Austrostipa bigeniculata	Kneed Spear Grass	1.0x1.0m	7 / m²	4.0%	Tube	26
Themeda triandra	Kangaroo grass	1.5x1m	7 / m²	4.0%	Tube	26
Understory						
Acacia acinacea	Gold dust Wattle	2x1.5m	7 / m²	4.0%	Tube	26
Acacia paradoxa	Hedge Wattle	4x5m	7 / m²	4.0%	Tube	26
Dianella revoluta	Blue flax-lily	1x1.5m	7 / m²	4.0%	Tube	26
Leptospermum lanigerum	Wooly Teatree	2x2m	7 / m²	4.0%	Tube	26
Lomandra longifolia	Spiny headed Mat Rush	1x1m	7 / m²	4.0%	Tube	26
Dodonaea viscosa	Sticky hop bush	1.5x2m	7 / m²	4.0%	Tube	26
Correa glabra	*Rock correa*	2x3m	7 / m²	4.0%	Tube	26
Kunzea leptospermoides	Yarra burgan	2x3m	7 / m²	4.0%	Tube	26
Trees						
Acacia pycnantha	Golden Wattle	8x4m	1 / m²	4.0%	Tube	4
Eucalyptus camaldulensis	River Red Gum	30x20m	1 / m²	4.0%	Tube	4
Callistemon sieberi	Bottlebrush	3x2m	1 / m²	4.0%	Tube	4

PLT-443 **Revegetation - Track Planting Mix** — Total area: 307 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Austrostipa scabra ssp. falcata	Spear Grass	1.0x1.0m	7 / m²	25.0%	Cell	537
Chloris truncata	Windmill grass	0.45x0.3	7 / m²	25.0%	Cell	537
Dichanthium sericeum	Silky blue-grass	0.4x0.4m	7 / m²	25.0%	Cell	537
Rytidosperma caespitosum	Common Wallaby-grass	0.9x0.5m	7 / m²	25.0%	Cell	537

PLT-444 **Revegetation - Herb Infill Mix** — Total area: 215 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Ground Cover						
Chloris truncata	Windmill grass	0.45x0.3	7 / m²	5.0%	Tube	75
Einadia nutans subsp. nutans	Climbing Salt Bush	1x1.5m	7 / m²	10.0%	Tube	151
Enchylaena tomentosa var. tomentosa	Ruby Salt bush	1x1m	7 / m²	10.0%	Tube	151
Dichanthium sericeum	Silky blue-grass	0.4x0.4m	7 / m²	10.0%	Tube	151
Rytidosperma caespitosum	Common Wallaby-grass	0.9x0.5m	7 / m²	10.0%	Tube	151
Austrostipa bigeniculata	Kneed Spear Grass	1.0x1.0m	7 / m²	5.0%	Tube	75
Themeda triandra	Kangaroo grass	1.5x1m	7 / m²	5.0%	Tube	75
Understory						
Dodonaea viscosa	Sticky hop bush	1.5x2m	7 / m²	20.0%	Tube	301
Correa glabra	*Rock correa*	2x3m	7 / m²	15.0%	Tube	226
Kunzea leptospermoides	Yarra burgan	2x3m	7 / m²	10.0%	Tube	151

PLT-445 **Revegetation - Woodland mix** — Total area: 302 m²

Botanic Name	Common Name	Mature Size (HxW)	Planting Density	Percentage	Pot Size	Quantities
Ground Cover						
Austrostipa scabra ssp. Falcata	Spear Grass	1.0x1.0m	7 / m²	10.0%	Tube	211
Chloris truncata	Windmill grass	0.45x0.3	7 / m²	5.0%	Tube	106
Dichanthium sericeum	Silky blue-grass	0.4x0.4m	7 / m²	15.0%	Tube	317
Rytidosperma caespitosum	Common Wallaby-grass	0.9x0.5m	7 / m²	10.0%	Tube	211
Understory						
Acacia acinacea	Gold dust Wattle	2x1.5m	7 / m²	12.5%	Tube	264
Acacia paradoxa	Hedge Wattle	4x5m	7 / m²	12.5%	Tube	264
Dodonaea viscosa	Hop Bush	3x2m	7 / m²	12.5%	Tube	264
Leptospermum lanigerum	Wooly Teatree	2x3m	7 / m²	12.5%	Tube	264
Trees						
Acacia pycnantha	Golden Wattle	8x4m	1 / m²	5.0%	Tube	15
Eucalyptus camaldulensis	River Red Gum	30x20m	1 / m²	5.0%	Tube	15

NOTE: PLANTING SCHEDULE / SPECIES SELECTION TO BE UNDERTAKEN IN COORDINATION WITH RETURNED ASSET OWNER

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-000011-DP — Revision: A.3

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		A.2	30/07/2024	ISSUED FOR DEVELOPMENT PLAN	YS	CG		
		A.1	26/07/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL
ARDEN
INTAKE SUPPLY SUBSTATION
LANDSCAPE REINSTATEMENT
PLANTING SCHEDULE

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

PUBLIC TRANSPORT VICTORIA PT

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Checked By: C.GUTHRIE	Ind. Review
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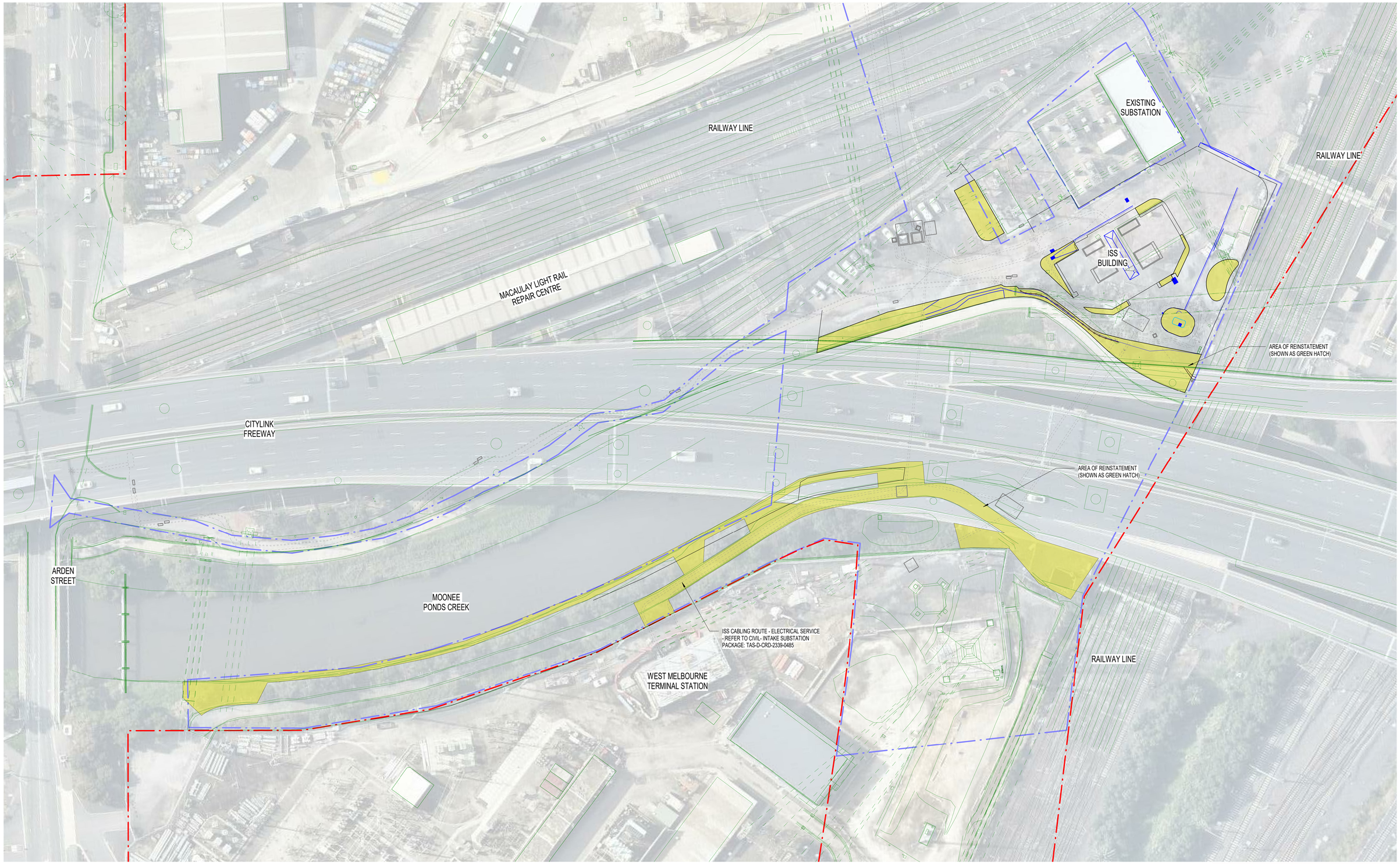

DEVELOPMENT PLAN SUBMISSION

LEGEND

PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

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		A.1	06/07/2021	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT PRECINCT PLAN

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

PUBLIC TRANSPORT VICTORIA PT

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Checked By: C.GUTHRIE	Ind. Review
Approved	Approval Date

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Revision

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Revision: A.3

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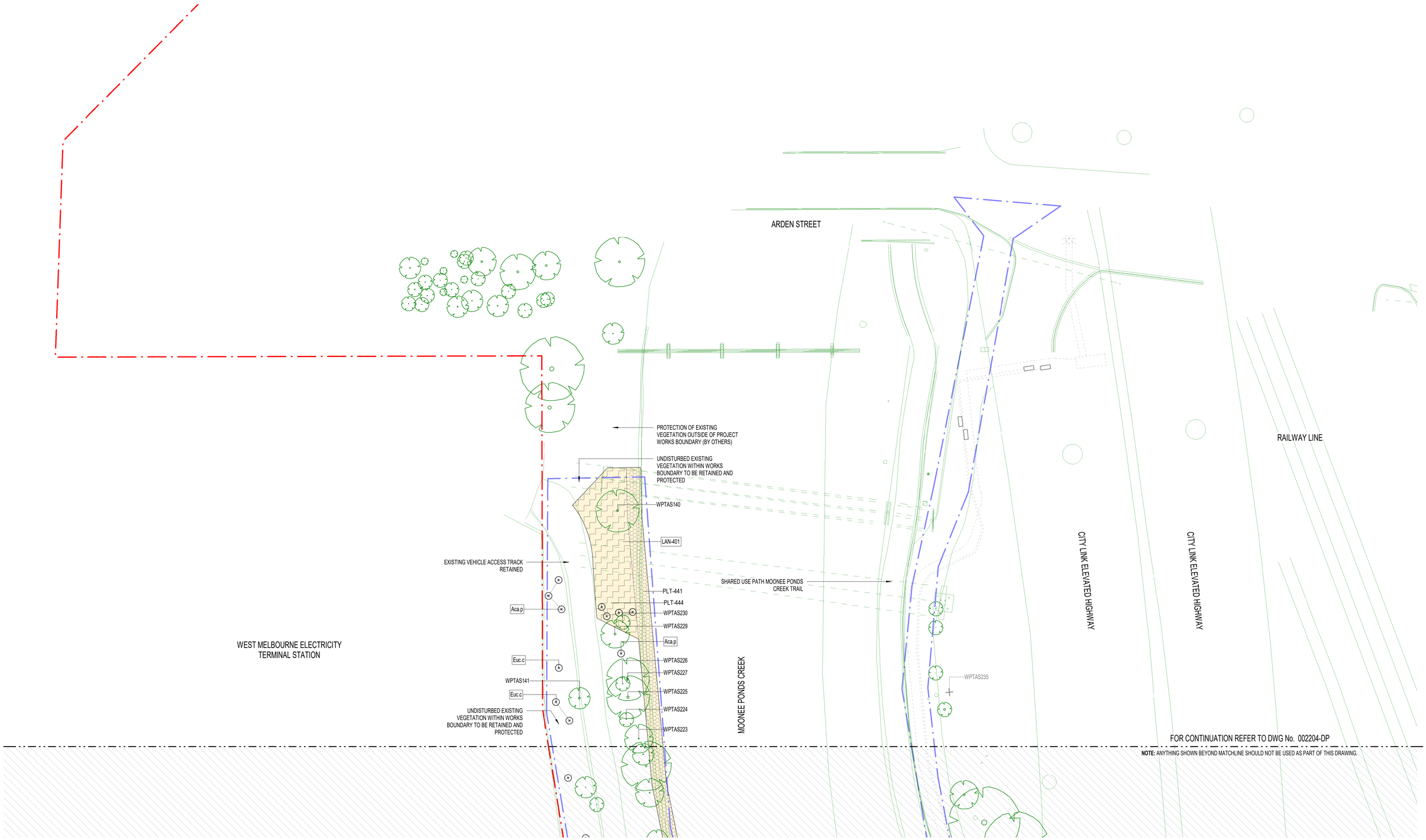

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DEVELOPMENT PLAN SUBMISSION

LEGEND

- PROJECT LAND BOUNDARY
- EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

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		A.2	26/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		
		A.1	06/07/2021	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

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INTAKE SUPPLY SUBSTATION
LANDSCAPE REINSTATEMENT
PLANTING PLAN - SHEET 01

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

PUBLIC TRANSPORT VICTORIA PT

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Designed By	Y.SONG
Checked By	C.GUTHRIE
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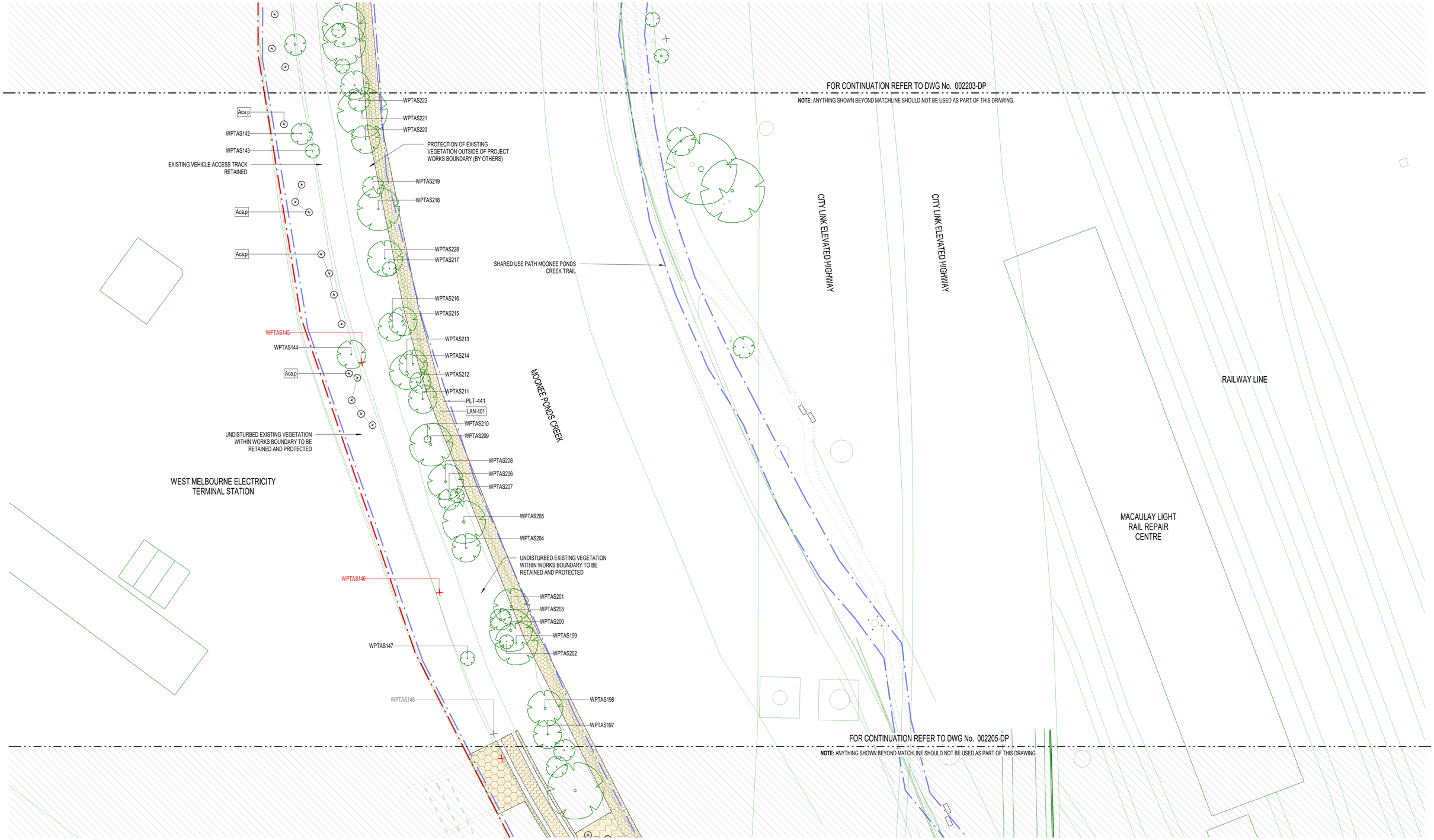

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PROJECT LAND BOUNDARY

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		A.1	06/07/2021	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION

LANDSCAPE REINSTATEMENT

PLANTING PLAN - SHEET 02

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

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-002204-DP

Revision: A.4

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M.WATSON	Y.SONG
Checked By	Ind. Review
C.GUTHRIE	
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Drawing Number	Revision

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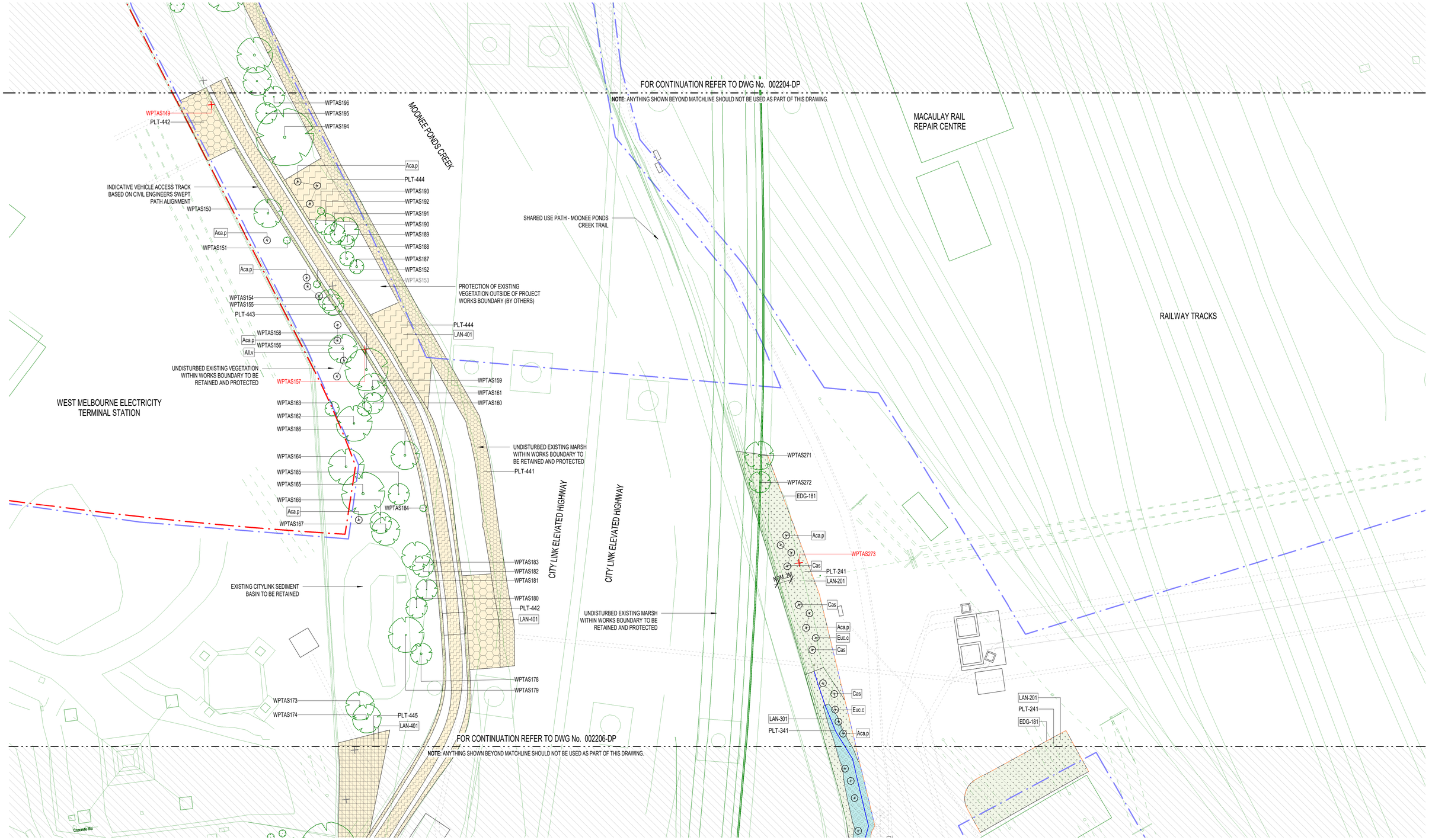

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- EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

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		A.1	26/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL
ARDEN
INTAKE SUPPLY SUBSTATION
LANDSCAPE REINSTATEMENT
PLANTING PLAN - SHEET 03

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

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number	Revision
TAS-CYP-ARD-00-DRG-AUD-AEN-002205-DP	A.3

PUBLIC TRANSPORT VICTORIA PT

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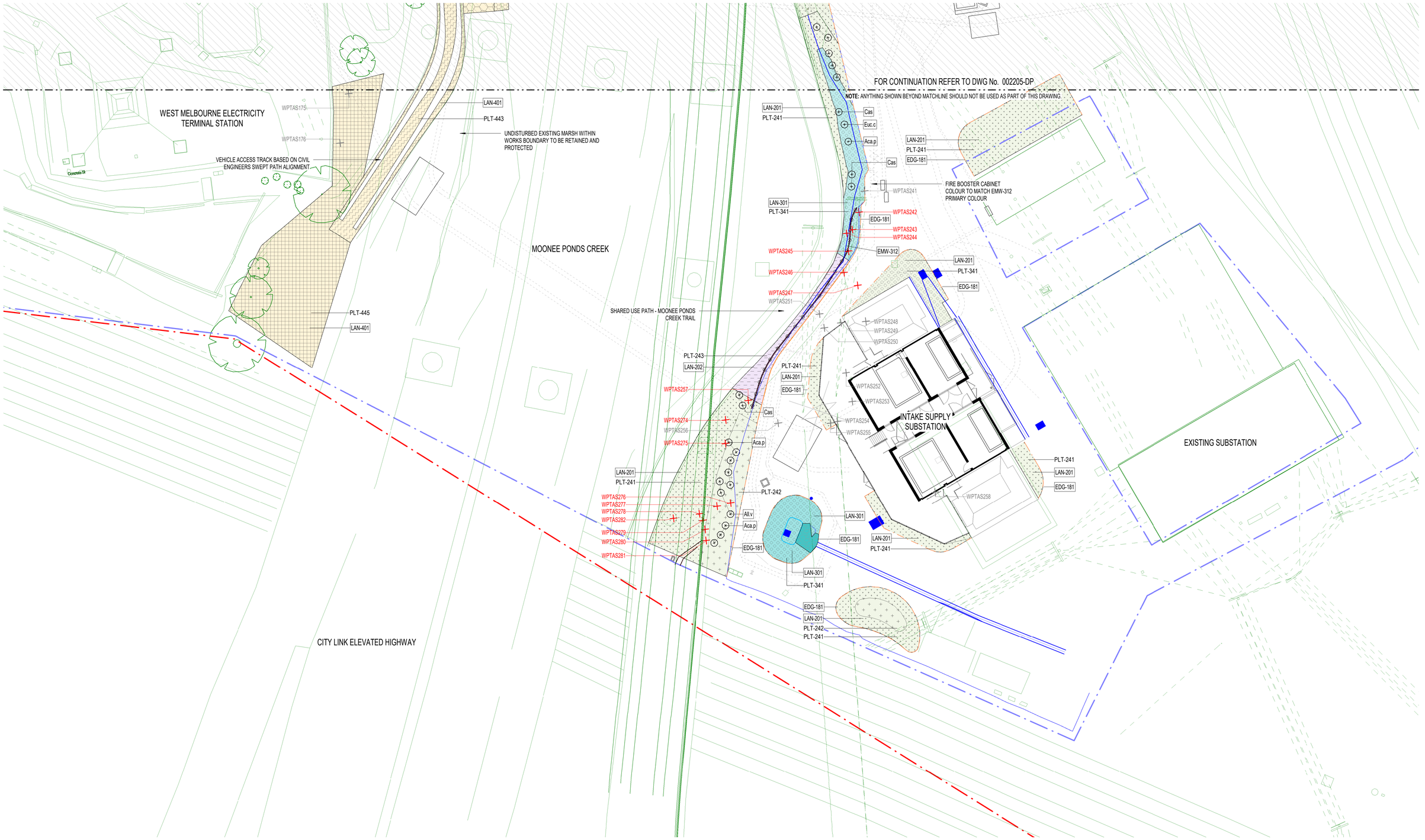

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PROJECT LAND BOUNDARY

EXTENT OF PUBLIC REALM/ DESIGN RESPONSE

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		A.1	26/05/2022	ISSUED FOR DEVELOPMENT PLAN	ES	CG		

Consultant: Cross Yarra Partnership

Franchisee / Lessee: RAIL PROJECTS VICTORIA

ARCHITECTURAL

ARDEN

INTAKE SUPPLY SUBSTATION
LANDSCAPE REINSTATEMENT
PLANTING PLAN - SHEET 04

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

DEVELOPMENT PLAN SUBMISSION

Project Drawing Number: TAS-CYP-ARD-00-DRG-AUD-AEN-002206-DP

Revision: A.3

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Checked By	Ind. Review
C.GUTHRIE	
Approved	Approval Date

Drawing Number

Revision

APPENDIX D: INTAKE SUBSTATION URBAN DESIGN STRATEGY GUIDELINES ASSESSMENT

Intake Substation Development Plan - Urban Design Strategy guidelines assessment

Author: Elif Aygun
Checker: Sabrina Chapman
Approver: Mat Peel
Date: 12/08/2024

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 Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 Intake Substation 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 Intake Substation Development Plan. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 / cyclist access surrounding the Intake Substation 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 Intake Substation as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.

Intake Substation Development Plan - Urban Design Strategy guidelines assessment

Cross Yarra Partnership

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	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 Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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.	This Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. The Intake Substation site is not intended to be accessed by the public.
	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.	No vehicular traffic lanes will be impacted as part of the construction of the Intake Substation. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans Precinct Development Plans.
	3.1.c.8.	Provide for vehicle parking, as appropriate, with consideration of locations and arrangements, management systems (ticket machines etc.) and motorcycle parking.	Vehicular parking will not be impacted as part of the construction of the Intake Substation. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.
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 Intake Substation 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 Intake Substation 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 Intake Substation.

Intake Substation Development Plan - Urban Design Strategy guidelines assessment

Cross Yarra Partnership

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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 Intake Substation 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 Intake Substation 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 Intake Substation 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 Intake Substation. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.
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 Intake Substation is presented in Section 4.3.5 of the Development Plan. The Intake Substation will not provide access to the public and therefore further consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 Intake Substation as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 Intake Substation as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 Intake Substation as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.

Intake Substation Development Plan - Urban Design Strategy guidelines assessment

Cross Yarra Partnership

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Approver: Mat Peel
Date: 12/08/2024

	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 (formerly Transport for Victoria, VicRoads, Public Transport Victoria), the land manager and authority standards and guidelines. CYP's works at the Intake Substation does not propose signage installation, as it is not a station precinct. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 4.7.3, a Development Plan must include references to signage, however advertising is not specified. Signage is outlined in UDS guideline response 3.2.c.12.
	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.	Planting is included within the landscape plans and presented in Section 4.3.2 of the Intake Substation Development Plan. Soil conditions and new planting is presented in Section 4.4.2.
	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.	Irrigation for the Intake Substation is presented in Section 4.4.7 of the Development Plan.
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 Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.

Intake Substation Development Plan - Urban Design Strategy guidelines assessment

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	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 Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South and Domain Precinct Development Plans.
	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 Intake Substation 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 Intake Substation 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**		

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	3.4.c.1.	Avoid limiting future redevelopment potential of residual properties acquired for the project at the Western Portal and Eastern Portal.	This Intake Substation Development Plan addresses the Intake Substation and does not address the tunnel portals. Refer to the Western Portal and Eastern Portal Development Plans.
	3.4.c.2.	Consider future precinct-wide redevelopment at Arden, as well as over-site development of the station.	This Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Refer to the Arden Station 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 relevant to the Intake Substation. 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 Intake Substation is presented in Section 4.3.3 of the Development Plan.
	3.4.c.5.	Development plans for station infrastructure should consider, and integrate with, over-site development to provide for coordinated design outcomes.	This Intake Substation Development Plan addresses the Intake Substation and does not address the station precincts. Consistency with this guideline is addressed in the Arden, Parkville, CBD North, CBD South 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 Intake Substation 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 relevant to the Intake Substation. Refer to CBD North and CBD South Precinct Development Plans.
	3.4.c.8.	Not preclude possible future across, decking over or development above rail cuttings at South Yarra.	This is relevant to the Intake Substation. 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 prepared an Environmental Management System and 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), which have been reviewed by the project's Independent Reviewer. This has been subject to separate stakeholder consultation requirements and reviewed by the Independent Environmental Auditor, including quarterly audits of performance throughout construction.
	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 prepared an Environmental Management System and Construction Environmental Management Plan. The aspect-specific control measures are identified in the Health and Safety Management Plan and Land Use Management Plan, which will be reviewed by the project's Independent Reviewer. This has been subject to separate stakeholder consultation requirements and reviewed by the Independent Environmental Auditor, including quarterly audits of performance throughout construction.
	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 prepared an Environmental Management System and Construction Environmental Management Plan. The aspect-specific control measures are identified in the Ecology Management Plan with site specific controls detailed in the Site Environmental Implementation Plans. These plans have been reviewed by 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.
	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 prepared an Environmental Management System and Construction Environmental Management Plan. The aspect-specific control measures are identified in the Urban Design Management Plan, which will be reviewed by the project's Independent Reviewer. This has been subject to separate stakeholder consultation requirements and reviewed by the Independent Environmental Auditor, including quarterly audits of performance throughout construction.

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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 Intake Substation 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 (formerly Transport for Victoria, VicRoads, Public Transport 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 Intake Substation 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 Intake Substation 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 provision of a suitable environment for the growth of plants and trees, ensuring underground structures are positioned at sufficient depth, is presented in Section 4.3.2 of the Intake Substation Development Plan.

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	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.	Landscape plans for the Intake Substation are presented in Section 4.3.2, and 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.	Landscape plans for the Intake Substation are presented in Section 4.3.2, and 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.	Water-sensitive urban design initiatives are presented in Section 4.3.2 of the Intake Substation Development Plan.
	3.6.c.8.	Practice sustainable use of materials and resources	Materials and finishes for the Intake Substation 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Domain Precinct Development Plan.

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	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 Intake Substation. Refer to the Domain Precinct Development Plan.
4.2	**Precinct 2: Western Portal**		
	4.2.1	**Hobsons Road Mixed Use Precinct**	
	4.2.1.e.1	Leave the site in a condition with no added constraints to its future redevelopment, beyond those existing at present.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.
	4.2.2	**JJ Holland Park Interface**	
	4.2.2.e.1	Generally maintain the northern kerb of Childers Street at its existing alignment.	This is not relevant to the Intake Substation. Refer to the Western Portal 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	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.
	4.2.2.e.4	Provide planted screening of railway infrastructure south of Childers Street	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.
	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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.

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	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.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.
	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.	This is not relevant to the Intake Substation. Refer to the Western Portal Development Plan.
	4.2.3.e.6	Maintain safe bicycle access through the area, arranged to minimise conflicts with pedestrians and car parking manoeuvres.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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.	This is not relevant to the Intake Substation. Refer to the Western Portal 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 Intake Substation. 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 Intake Substation. 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.	CYP removal of trees has been avoided where possible, with particular emphasis given to the retention of native biodiversity values in close proximity to Moonee Ponds Creek. Trees will be reinstated where impacted by construction along Moonee Ponds Creek and Trail to provide landscaped areas within the public realm and help facilitate implementation of the City of Melbourne and the Victorian Planning Authority draft Moonee Ponds Creek Strategic Opportunities Plan. CYP also propose to reinstate low level growth and Water Sensitive Urban Design (WSUD) plantings to deliver positive visual benefits to the area as described in Section 4.3.2 of the Development Plan.
4.4	**Precinct 4: Parkville Station**		
	4.4.1	**Royal Parade**	

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4.4.1.e.1.	Retain and protect existing trees along Royal Parade.	This is not relevant to the Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Parkville Precinct Development Plan.
4.4.1.e.4.	Integrate with the proposed tram super stop in Royal Parade	This is not relevant to the Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Parkville Precinct Development Plan.

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	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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Parkville Precinct Development Plan.
	4.4.4	**University Square, Barry Street and Leicester Street**	
	4.4.4.e.1	Integrate aboveground Metro Tunnel infrastructure with the proposed design for University Square, Barry Street and Leicester Street, including: - coordinate 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North Precinct Development Plan.
	4.5.1.e.3	Address issues of servicing neighbouring properties.	This is not relevant to the Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North Precinct Development Plan.
	4.5.2	**Franklin Street**	

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	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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North Precinct Development Plan.
	4.5.2.e.5	Create a safe bicycle route along Franklin Street.	This is not relevant to the Intake Substation. Refer to the CBD North Precinct Development Plan.
	4.5.2.e.6	Minimise conflicts between turning vehicular traffic and Swanston Street trams.	This is not relevant to the Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North Precinct Development Plan.
	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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North 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 Intake Substation. Refer to the CBD North Precinct Development Plan.
4.6	**Precinct 6: CBD South Station**		
	4.6.1	**Cocker Alley Sub Precinct**	

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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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South Precinct Development Plan.
4.6.1.e.3	Address issues of servicing neighbouring properties.	This is not relevant to the Intake Substation. Refer to the CBD South Precinct Development Plan.
4.6.1.e.4	Integrate over site development with the station and associated infrastructure.	This is not relevant to the Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South Precinct Development Plan.
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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 CBD South clock tower from the square	This is not relevant to the Intake Substation. Refer to the CBD South Precinct Development Plan.

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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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South Precinct Development Plan.
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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Domain Precinct Development Plan.

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	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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Eastern Portal Development Plan.

APPENDIX E: INTAKE SUBSTATION ENVIRONMENTAL PERFORMANCE REQUIREMENTS ASSESSMENT

Intake Substation Development Plan - Environmental Performance Requirement assessment

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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 Intake Substation response to stormwater treatment is presented in Section 4.4.1 and 4.4.7 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 in the Site Environmental Implementation Plan. 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. 2. Where groundwater interception during construction is predicted to occur, dewatering is to be managed so that groundwater is not released to stormwater or sensitive surface water bodies. (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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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.	The Intake Substation is in close proximity to Moonee Ponds Creek. Cross Yarra Partnership has implemented an Environmental Management System including a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Surface Water Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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.	The Intake Substation has been designed to provide flood immunity through elevating all rooms above ground level to protect the Intake Substation from being flooded from the 1 in 100 year Average Recurrence Interval (ARI) flood event level, in accordance with the Melbourne Water Guidelines. Selected equipment located outdoors will be positioned such as to ensure their components sensitive to flooding are clear of flood height.
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).	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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 Intake Substation response to stormwater treatment is presented in Section 4.4.1 and 4.4.7 of the 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 Intake Substation design is within the activity area defined in the Cultural Heritage Management Plans. Compliance with this Environmental Performance Requirement will be in accordance with RPV's approved Environmental Management Framework, including all Cultural Heritage Management Plans.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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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 Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the 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 Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the 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 Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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.	The public realm response in regards to tree retention for the Intake Substation 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 Intake Substation Development Plan.

Intake Substation Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

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Approver: Mat Peel
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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 Intake Substation 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 (including a Tree Protection Plan) with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 in the Site Environmental Implementation Plan. This has been reviewed by the project's Independent Reviewer. 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 will include a Business Engagement and Continuity Management Plan (Business Disruption Mitigation Plan). These plans have been 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 will include a Business Engagement and Continuity Management Plan (Business Disruption Mitigation Plan). These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Approver: Mat Peel
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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 Management Plan and Noise and Vibration Management Plan. Site specific controls for Air quality and Noise and vibration will be detailed in the Site Environmental Implementation Plan. 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.	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 include a Business Engagement and Continuity Management Plan (Business Disruption Mitigation Plan). This is reviewed by the project's Independent Reviewer. These plans have been reviewed by the project's Independent Reviewer and audited by the project's Independent Environmental Auditor.
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 Intake Substation. Refer to the 'Emergency Response and Incident Management Plan - Parkville'.
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 Intake Substation. 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 will include aspect-specific control measures including the Spoil Management Plan (Acid Sulfate Soils and Rock Management Plan); Remedial Management Plan and Prescribed Industrial Waste 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 will include aspect-specific control measures including the Spoil Management Plan (Acid Sulfate Soils and Rock Management Plan); Remedial Management Plan and Prescribed Industrial Waste 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 will include aspect-specific control measures including a Remedial Management Plan and Prescribed Industrial Waste Management Plan. These plans will be reviewed by the project's Independent Reviewer. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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. The Construction Management Plan Sub-plan will include aspect-specific control measures including a Spoil Management Plan, Remediation Management Plan, Prescribed Industrial Waste Management Plan and a Health and Safety Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Intake Substation is presented in Section 4.4.3 of the Development Plan.
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 in the Site Environmental Implementation Plan. 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 with site specific controls in the Site Environmental Implementation Plan. 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, CBD North of Victoria.	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 in the Site Environmental Implementation Plan.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	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).	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 in the Site Environmental Implementation Plan. 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	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 in the Site Environmental Implementation Plan. 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.	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 in the Site Environmental Implementation Plan. 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.
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 with site specific controls in the Site Environmental Implementation Plan. 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 Intake Substation is presented in Section 4.4.3 of the Development Plan.
Historical Cultural Heritage	CH11	1. Ensure no direct impact on heritage buildings on the former Glueworks site in Kensington.	Historical cultural heritage at the Intake Substation is presented in Section 4.4.3 of the Development Plan.
Historical Cultural Heritage	CH12	1. Retain and protect Langford Street pumping station as part of the design for the new substation.	An alternative design location has been selected for the Intake Substation which does not impact on the Langford Street Pumping Station.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the CBD South 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 Intake Substation. Refer to the CBD South 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. 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 Intake Substation. Refer to the Rail Turnback Precinct Development Plan.
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.	The Intake Substation will not have any impact to culturally significant street fabric or infrastructure, therefore this EPR is not relevant for the Intake Substation Development Plan.
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 with site specific controls in the Site Environmental Implementation Plan. This is subject to stakeholder consultation requirements with Heritage Victoria, reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 and prepared a Construction Environmental Management Plan. Site specific controls are detailed in the Site Environmental Implementation Plan. 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. Site specific controls are detailed in the Site Environmental Implementation Plan. 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 and will ensure the relevant plans comply with the EPRs and will undertake 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).	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. Site specific controls are detailed in the Site Environmental Implementation Plan. A Communications and Stakeholder Engagement Management Plan will also be prepared. These plans have 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.
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 prepared an Environmental Management System and 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.	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 in the Site Environmental Implementation Plan. 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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Date: 12/08/2024

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 in the Site Environmental Implementation Plan. 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. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 include sub-plans such as Climate Resilience, Carbon and Energy. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 Construction Management Plan Sub-plan include aspect-specific control measures detailed in the Spoil Management Plan and the Design Management Plans include a Groundwater Management Plan and Ground Movement Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the 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 have been reviewed by the project's Independent Reviewer and audited by the 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 have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 Management Plan and Communications and Stakeholder Engagement Management Plan, which have been reviewed by the project's Independent Reviewer and 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 Management Plan, which have been reviewed by the project's Independent Reviewer and 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 Management Plan, which have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor..

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Management Plan, which have been reviewed by the project's Independent Reviewer and 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. The aspect-specific control measures are identified in the Groundwater Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans 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 in the Site Environmental Implementation Plan. These plans have 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 in the Site Environmental Implementation Plan. A Trade Waste Agreement has been obtained at the relevant time. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 in the Site Environmental Implementation Plan. These plans have 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).	Land use and planning, in particular the impact on existing land use, is presented in Section 4.4.4 of the Intake Substation Development Plan.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Cross Yarra Partnership

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Intake Substation has been considered in accordance with relevant Master Plans, 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 Intake Substation. 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).	The design of the Intake Substation is being developed in consultation with the Urban Design and Architectural Advice Panel, this is presented in Section 4.4.4 of the 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 CBD North and CBD North 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 Intake Substation are presented in Section 4.4.5 of the Development Plan.
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 Intake Substation 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. The aspect-specific control measures are identified in the Urban Design Management Plan, which have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Intake Substation. Refer to the CBD South 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 Intake Substation. 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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 in the Site Environmental Implementation Plan. 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. These plans have 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 in the Site Environmental Implementation Plan. These plans have been 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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 in the Site Environmental Implementation Plan. These plans 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 prepared an Environmental Management System and Construction Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been 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 in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans 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. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been 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. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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 prepared an Environmental Management System, Construction Environmental Management Plan and Operational Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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 and Operational Environmental Management Plan to manage construction and operational impacts. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 and Operational Environmental Management Plan to manage construction and operational impacts. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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 and Operational Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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	**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 and Operational Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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 and Operational Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 and Operational Environmental Management Plan. The aspect-specific control measures are identified in the Noise and Vibration Management Plan with site specific controls in the Site Environmental Implementation Plan. 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	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 and Operational Environmental Management Plan. 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 Site Environmental Implementation Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 prepared an Environmental Management System, Construction Environmental Management Plan and Operational Environmental Management Plan. 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 Site Environmental Implementation Plan. 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.	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 Respite and Relocation Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.
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 Respite and Relocation Management Plan. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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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.	Cross Yarra Partnership has implemented an Environmental Management System and prepared a Construction Environmental Management Plan. 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 will inform the Communications and Stakeholder Engagement Management Plan, which have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor..
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 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 include sub-plans, such as Business Engagement and Continuity Management Plan, Respite and Relocation Management 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 Intake Substation. Refer to the CBD South 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 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 include sub-plans, such as Special Events 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.	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 include sub-plans, such as Respite and Relocation Management Framework. These plans have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

Cross Yarra Partnership

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Approver: Mat Peel
Date: 12/08/2024

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Intake Substation is presented in Section 4.3.3 and 4.4.6 of the Development Plan.
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 Intake Substation. Refer to the CBD North 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 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 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 Intake Substation. 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.	The Arden Communications Coordination Working Group is being consulted on the design development and the Development Plan process.
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 Intake Substation 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 Intake Substation is presented in Section 4.4.7 of the Development Plan.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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.
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 implemented an Environmental Management System and prepared a Construction Environmental Management Plan. The aspect-specific control measures are identified in the Transport Management Plan and Communications and Stakeholder Engagement Management Plan, which have been reviewed by the project's Independent Reviewer and 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 an Environmental Management System and 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), which have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

Intake Substation Development Plan - Environmental Performance Requirement assessment

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 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), which have been reviewed by the project's Independent Reviewer and 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 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), 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 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), which have been reviewed by the project's Independent Reviewer and audited by the Independent Environmental Auditor.

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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
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 Transport Management Implementation Plan), which 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. 8. Where vehicles and pedestrian access are altered during construction, ensure that vehicle and pedestrian access is reinstated appropriately, in accordance with relevant road design standards, so adjacent land is not compromised.	No operational road transport will be impacted as part of the construction of the Intake Substation, and therefore this EPR is not relevant to the Intake Substation 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.	No operational public transport will be impacted as part of the construction of the Intake Substation, and therefore this EPR is not relevant to the Intake Substation 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 is presented in Section 4.4.8 of the Intake Substation 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 is not relevant to the Intake Substation, and therefore this EPR is not addressed in the Intake Substation Development Plan.