



RAIL INFRASTRUCTURE ALLIANCE

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ABBREVIATIONS AND DEFINITIONS

Table 1 Abbreviations, Terms and Definitions

Abbreviation	Term	Definition
BNV	Bicycle Network Victoria	Victoria's biggest bike riding organisation that aims to build places to ride, change behaviours and support riders.
BSGC	Metro Tunnel Business Support Guidelines for Construction	A document that provides guidelines for Metro Tunnel contractors to address residual impacts on businesses so far as is reasonably practicable and appropriate.
CCTV	Closed-circuit television	Also known as video surveillance, CCTV is the use of video cameras to transmit a signal to a specific place, on a limited set of monitors.
CPTED	Crime Prevention through Environmental Design	The use of design to manage safety in the built environment.
CSEMF	Metro Tunnel Community and Stakeholder Engagement Management Framework	An overarching document that provides a framework for Metro Tunnel contractors to address the management of communications and stakeholder engagement associated with the delivery of the works.
CSEMP	Communications and Stakeholder Engagement Management Plan	Document prepared by RIA which details the management of communications and stakeholder engagement associated with the delivery of the works.
CEMP	Construction Environment Management Plan	Overarching document prepared by the RIA which details the management of environmental aspects and impacts associated with the delivery of the works.
CER	Communications Equipment Room	An equipment room that provides a controlled and secure environment capable of accommodating a range of electrical and communications equipment for the operation of rail infrastructure.
	Council	Stonnington City Council
CSR	Combined Services Route	A common cable containment system that houses communications, signalling and power cabling.
DELWP	Department of Environment, Land Water and Planning	The State Government Department responsible for Environment, Land Water and Planning which brings together planning, local government, environment, energy, suburban development, forests, emergency management, climate change and water functions into a single department to strengthen connections between the environment, community, industry and economy.
DOT	Department of Transport	The State Government Department responsible for Transport.
DPRC	Metro Tunnel Development Plan Review Committee	A committee engaged by the State Government to review and advise on the Development Plans for the Metro Tunnel Project.
DTF	Department of Treasury and Finance	The State Government Department responsible for Treasury and Finance which provides economic, financial and resource management advice to help the Government deliver its policies.
EES	Environment Effects Statement	The Environment Effects Statement for the Metro Tunnel Project exhibited and assessed under the Environment Effects Act 1978 (Vic).
EMF	Metro Tunnel Environmental Management Framework	Required under the Incorporated Document, it outlines clear accountabilities for the delivery and monitoring of the Environmental Performance Requirements to manage the environmental effects of the Metro Tunnel Project. The Metro Tunnel EMF was approved by the Minister for Planning and is publicly available on the Project website.

Abbreviation	Term	Definition
EMS	Metro Tunnel Environmental Management System	A document with requirements to ensure that works are planned and performed so that the adverse effects on the environment are appropriately managed.
EPRs	Environmental Performance Requirements	Environmental Performance Requirements as detailed within the approved EMF are performance-based requirements that define the project-wide environmental outcomes that must be achieved during design, construction and operation of the Project.
EPA	Environment Protection Authority	An independent statutory authority under the <i>Environment Protection Act 2017</i> with the objective to protect human health and the environment by reducing the harmful effects of pollution and waste.
HV	Heritage Victoria	The State Government's principal cultural (non-Aboriginal) heritage agency who identify, protect and interpret Victoria's most significant cultural heritage resources, and give advice on heritage matters.
	Incorporated Document	The <i>Melbourne Metro Rail Project Incorporated Document</i> as inserted into the Maribyrnong, Melbourne, Port Phillip and Stonnington Planning Schemes via planning scheme amendment GC45 and subsequent amendments.
MW	Melbourne Water	A statutory authority owned by the Government who manage and protect Melbourne's major water resources on behalf of the community.
MTM	Metro Trains Melbourne	A consortium of rail and construction businesses which manage Melbourne's metropolitan rail service.
Metro Tunnel	Metro Tunnel Project	The Metro Tunnel Project or Melbourne Metro Rail Project, as identified in the Incorporated Document.
OEMP	Operations Environmental Management Plan	A document which details the management of operational aspects and impacts associated with the delivery of the works.
OVGA	Office of the Victorian Government Architect	The leader in enhancing the quality of built environments in Victoria through the provision of leadership and strategic advice to government about architecture and urban design, along with the promotion an awareness of good design making great living places and urban environments.
OHW	Overhead Wiring	A wire that is used to transmit electrical energy to trams or trains
PRINP	Passenger Rail Infrastructure Noise Policy	A noise policy to guide the consideration of the impacts of rail noise from improved or new passenger rail infrastructure and from changes to land use near existing and planned rail corridors.
PSA	Planning Scheme Amendment	An amendment to the relevant local Planning Scheme/s which govern the use and development of the Project Land.
PPP	Public Private Partnership	A cooperative arrangement between two or more public and private sectors, typically of a long-term nature.
	Project Land	Land as identified within Appendix 1 of the Incorporated Document.
PTV	Public Transport Victoria	A statutory authority that manages Victoria's train, tram and bus services.
RIA	Rail Infrastructure Alliance	The consortium contracted to deliver the Portals, cut and cover tunnelling, tunnel decline structures and the realignment of existing rail tracks to allow for the new Metro Tunnel tracks as they surface.
RPV	Rail Projects Victoria	A government authority responsible for the planning and delivery of the Metro Tunnel Project.
RRL	Regional Rail Link	The pair of non-electrified tracks running from Southern Cross station to West Werribee Junction.
SEIP	Site Environmental Implementation Plans	Documents prepared by RIA which detail site specific measures to prevent adverse environmental impacts during construction of the Metro Tunnel Project.

Abbreviation	Term	Definition
	Sensitive receptor or sensitive receiver	Sensitive receptors as per relevant statutory guidelines, including homes, schools, universities and hospitals, or places where a person's regular daily life might be affected by amenity impacts as a consequence of the Project. Sensitive receptors do not include public open space or places of work.
SEPP	State Environment Protection Policy	Policies that are subordinate legislation made under the provisions of the Environment Protection Act 1970 to provide more detailed requirements and guidance for the application of the Act to Victoria.
SER	Signalling Equipment Room	A housing structure for a range of electrical and signalling equipment for the operation of rail infrastructure. These structures may be occupied by authorised personnel to perform works.
TfV	Transport for Victoria	Transport for Victoria brings Victoria's transport sector agencies together under one umbrella.
TTWG	Metro Tunnel Traffic and Transport Working Group	A technical working group of transport agencies and emergency services that allows for centralised discussion and agreement on key transport issues of relevance to the Metro Tunnel Project.
UDAAP	Metro Tunnel Urban Design and Architecture Advisory Panel	The independent design review body for the Metro Tunnel Project, chaired by the OVGA.
UDS	Metro Tunnel Urban Design Strategy	Required under the Incorporated Document, it provides urban design guidance relating to the design, procurement and implementation of the Project. The Metro Tunnel UDS was approved by the Minister for Planning and is publicly available on the Project website.
	VicRoads	VicRoads plans, develops and manages the arterial road network of Victoria and delivers road safety initiatives and customer focused registration and licensing services.
	VicTrack	VicTrack owns Victoria's transport land, assets and infrastructure and works to protect and grow the value of the portfolio to support a thriving transport system, and make travel and living better for Victorians.
VAHR	Victorian Aboriginal Heritage Register	Register of Aboriginal places and objects under the <i>Aboriginal Heritage Act 2006</i> .
VHI	Victorian Heritage Inventory	Inventory of historical archaeological sites which are identified and protected under the Heritage Act 2017.
VHR	Victorian Heritage Register	Register of significant heritage places and/or objects which are identified and protected under the Heritage Act 2017.
WSUD	Water Sensitive Urban Design	An approach to planning and designing urban areas to make use of water as a valuable resource and reduce the harm urban development causes to catchments.

FOREWORD

Rail Projects Victoria (RPV) is the Victorian Government body responsible for overseeing the delivery of the Metro Tunnel Project (the Project). In conjunction with its delivery partners, RPV is responsible for all aspects of the Project, including planning and development of a project reference design, site investigations, stakeholder engagement, planning approvals and procurement through to construction delivery and project commissioning.

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

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

The Project's concept design in the EES positions the Eastern Portal on the east side of Osborne Street in close proximity to Toorak Road. This location was influenced by design standards required for crossing under the Sandringham and Frankston rail lines and requires a tunnel boring machine retrieval box to be located in the rail reserve between Osborne Street, South Yarra and the existing Sandringham Line.

The Project is made up of a series of works packages:

- Cross Yarra Partnership (CYP) is the consortium contracted to deliver the Tunnels and Stations Public Private Partnership (PPP) works package, including twin nine-kilometre tunnels, two tunnel entrance portals and five new underground stations. As part of delivering this package, CYP will be responsible for the main tunnelling works, station fit-out, mechanical and electrical systems, tunnel boring machine extraction shafts at the portals, and specific station operations and maintenance services.
- The Rail Infrastructure Alliance (RIA) is responsible for works at the Eastern Portal including cut and cover tunnelling, tunnel decline structures and realignment of existing tracks to allow for the new Metro Tunnel tracks as they surface. This Eastern Portal Development Plan only addresses the scope and extent of RIA's works at the Eastern Portal, including:
 - cut and cover tunnelling
 - decline structures
 - realignment of existing lines
 - landscaping and hardscaping works in the public realm

Other works proposed in the Eastern Portal will be undertaken by CYP, with ongoing interface activities between CYP and RIA as required. The scope and extent of the built form for the CYP related works are addressed in a separate Development Plan.



Evan Tattersall

Chief Executive Officer

1 Introduction

1.1 Purpose

The Rail Infrastructure Alliance (RIA), on behalf of Rail Projects Victoria (RPV), is delivering the Eastern Portal (or the Eastern Portal precinct) as part of the Project. This Eastern Portal RIA Development Plan (the Plan) addresses the surface works for the Eastern Portal. The Eastern Portal is an open-to-air decline structure and a cut and cover structure crossing under the Sandringham, Frankston and freight lines to connect the Cranbourne/Pakenham line with the Sunbury line.

The Plan has been prepared by RIA for approval by the Minister for Planning as required under the conditions of the *Melbourne Metro Rail Project Incorporated Document* (the Incorporated Document).

In accordance with Clause 4.7.3 of the Incorporated Document, this Plan includes:

- Site Layout Plan/s
- Architectural, landscape and public realm plans and elevations
- An assessment of the proposed above ground works against the relevant sections of the approved Urban Design Strategy (UDS) and Environmental Performance Requirements (EPRs) included within the Environmental Management Framework (EMF).

1.2 Metro Tunnel Project

The Metro Tunnel is an \$11b investment delivering twin nine-kilometre rail tunnels from the west of the city to the south-east as part of a new Sunbury to Cranbourne/Pakenham line. The Metro Tunnel will create additional capacity in the inner core of the metropolitan rail network, allowing more trains to run more often across the broader network. It is supported by:

- Five new underground stations at Arden (to be renamed North Melbourne), Parkville, State Library (at the northern end of Swanston Street), Town Hall (at the southern end of Swanston Street) and Anzac (on St Kilda Road)
- Portal structures to connect the new tunnels to the existing Sunbury, Cranbourne and Pakenham lines, at Kensington (Western Portal) and South Yarra (Eastern Portal), respectively
- A Western Turnback at West Footscray where trains will be able to return towards Melbourne's CBD
- High capacity signalling to maximise the efficiency of the new fleet of High Capacity Metro Trains
- A train/tram interchange at Domain.

The Metro Tunnel Environment Effects Statement (EES) defined a number of precincts as part of the Project based on the location, the nature of project components and construction works, the potential impacts on local areas and the characteristics of surrounding communities. The precinct relevant to this Plan is described as the **Eastern Portal (South Yarra), EES Precinct 8**.

This precinct is highly urbanised and comprises extensive mixed-use development and a diverse range of housing types, from low density detached housing to large residential apartment blocks. The existing railway line is bordered by this residential development and the South Yarra Siding Reserve. The area is also adjacent to one of Melbourne's busiest retail and entertainment precincts, centred on Toorak Road and Chapel Street.

1.3 Delivery of the Metro Tunnel Project

The Metro Tunnel is being delivered under separate works packages as follows:

- **Metro Tunnel Early Works (Early Works)** – these works are separate to the RIA Early Works. This initial program of works is required to prepare key construction sites to support the Tunnel and Stations works
- **Tunnel and Stations PPP (T&S PPP)** – this package delivers the five new stations and the new tunnels, including tunnel boring machine retrieval shafts at the portals. This package is being delivered by the Cross Yarra Partnership (CYP). These works are ongoing. A delivery interface exists at the portal precincts, between the CYP T&S PPP package and the RIA package, with CYP delivering part of the portal infrastructure
- **Rail Systems Alliance (RSA)** – this package delivers the signalling system required to support the Metro Tunnel and is being delivered by the Rail Systems Alliance. These works are ongoing
- **Rail Infrastructure Alliance (RIA)** – this package delivers a series of rail corridor enhancements along the Sunbury, Cranbourne and Pakenham lines, including delivery of the Eastern Portal precinct as described in this document. This package is being delivered by RIA. These works are ongoing.

Figure 1 below identifies the scope of the Metro Tunnel.



Figure 1 Metro Tunnel Project

2 Approvals Framework

2.1 Incorporated Document

The Metro Tunnel was assessed through an EES process, a requirement of the Minister for Planning's original 'public works' declaration as published in 2015. This assessment considered the potential environmental, social, economic and planning impacts of the Metro Tunnel, and the approach to managing these impacts. The assessment was supported by a range of technical studies that considered the potential impacts of the Project on a variety of issues, including the natural environment, geology and ground conditions, heritage impacts and traffic and transport.

Planning Scheme Amendment (PSA) GC45 was published in the Government Gazette in January 2017. The approval of PSA GC45 inserted the *Melbourne Metro Rail Project Incorporated Document* into relevant planning schemes to facilitate the delivery of the Metro Tunnel. PSA GC45 has subsequently been updated and amended through planning scheme amendments GC67 (June 2017) and GC82 (June 2018).

2.2 Incorporated Document Conditions

Table 2 outlines the relevant conditions of the Incorporated Document in relation to this Plan.

Table 2 Incorporated Document Conditions relevant to the Plan

Clause	Requirements
4.7.1	Specifies that <i>'a Development Plan must be approved by the Minister for Planning for development that relates'</i> to the Eastern Portal and <i>'any of the above-ground works or structures that are part of the Project.'</i>
4.7.2 and 4.7.3	Stipulates that <i>'a Development Plan must address surface works that are associated with'</i> the Eastern Portal and <i>'include'</i> : <ul style="list-style-type: none">• <i>A site layout plan/s</i>• <i>Architectural, landscape and public realm plans and elevations including lighting, signage, pedestrian access, bicycle access and other ancillary facilities</i>• <i>An explanation demonstrating how the Development Plan (including materials and external finishes) is in accordance with the approved Urban Design Strategy and the approved Environmental Performance Requirements included within the Environmental Management Framework.'</i>
4.7.4	Sets out the stakeholder and community consultation process associated with the approval process for Development Plans.
4.7.5 and 4.7.6	Specifies that <i>'written comments received under Clause 4.7.4 and a summary of consultation and response to issues raised during the consultation'</i> , must accompany a Development Plan submitted to the Minister for Planning. Before deciding whether to approve the Development Plan, <i>'the Minister for Planning must consider all written comments received ...and the consultation and response summary.'</i>
4.7.7	Requires that the Development Plan <i>'be approved by the Minister for Planning prior to the commencement of any development relating to an item in Clause 4.7.1.'</i>
4.7.8	Notes that <i>'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'</i> . Amendments to Development Plans: <ul style="list-style-type: none">• <i>Must 'not involve any change to an approved Environmental Performance Requirement'; and</i>• <i>Must 'comply with the requirements set out in Clauses 4.7.3, 4.7.4, 4.7.5 and 4.7.6, unless, in the opinion of the Minister for Planning, the proposed amendment does not result in a material detriment to any person, or 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 to the amendment.'</i>
4.7.9	<i>'For land to which a Development Plan applies, development must be carried out in accordance with an approved Development Plan.'</i>

2.3 Approved Plans

2.3.1 Metro Tunnel Project Plans

RPV has prepared the following Plans, which have been approved by the Minister for Planning where required, that affect the Eastern Portal:

- *Metro Tunnel Environmental Management Framework* (August 2018), as required under Clause 4.8.1 of the Incorporated Document and approved by the Minister for Planning. This document is available on the Metro Tunnel website
- *Metro Tunnel Environment Management System*, as required under the EMF, certified to AS/NZS ISO 14001:2015 *Environmental management systems – Requirements*, to ensure that works are planned and performed so that the adverse effects on the environment are either avoided or minimised, and are carried out in accordance with the approved EPRs
- *Metro Tunnel Business Support Guidelines for Construction*, as required under the EMF. This document is available on the Metro Tunnel website
- *Metro Tunnel Residential Impact Mitigation Guidelines for Construction*, as required under the EMF. This document is available on the Metro Tunnel website
- *Metro Tunnel Community and Stakeholder Engagement Management Framework*, as required under the Incorporated Document. This document is available on the Metro Tunnel website
- *Metro Tunnel Urban Design Strategy*, as required by the Incorporated Document and approved by the Minister for Planning. This document is available on the Metro Tunnel website
- *Metro Tunnel Living Infrastructure Plan*, as required by the Project. This document is available on the Metro Tunnel website.

2.3.2 Eastern Portal Early Works and Development Plan

The following Plans have been prepared in relation to the Eastern Portal:

- *RIA Early Works Plan (Eastern & Western Portals), December 2018* which addresses early works to be undertaken prior to the main construction works including utility relocation, site preparation and associated construction activities, demolition works, tree removal and changes to the local road network and paving
- *Eastern Portal Development Plan June 2018* by CYP which addresses the scope and extent of CYP tunnel entrance works only, including:
 - An ancillary building with emergency access and egress
 - Reinstatement of Osborne Street (within CYP extent of works)
 - Landscaping within the CYP extent of works area surrounding the ancillary building
- *Early Works Plan – 24 January 2018* by CYP which addressed the early works required to support scope and extent of CYP tunnel entrance works only
- *Managing Contractor Early Works Plan December 2017* by John Holland which addressed the Metro Tunnel Early Works.

2.3.3 RIA Eastern Portal Development Plan Approval and Amendments

The Plan was originally prepared by RIA and approved by the Minister for Planning in May 2019.

An amendment was then undertaken between January and June 2020 which made further design changes and refinements in response to feedback received on the Plan as part of the initial consultation process and the design development process in consultation with key stakeholders. This amendment was approved in June 2020.

Following this amendment, RIA conducted consultation with key stakeholders and directly affected members of the community regarding the design of areas that were shown on the Plan as 'Land reserved for future rail purposes' at 3 - 5 Chambers Street, South Yarra. This consultation occurred between June and November 2020 and it was determined that an amendment to the Plan was required to capture the works required on this land. This amendment was approved in January 2021.

2.3.4 RIA Eastern Portal Development Plan Amendment July 2021

In addition to the above amendments, RIA was required to update the Plan and associated drawings as a result of changes to the design in the Eastern Portal precinct to accommodate a new substation underneath South Yarra Siding Reserve. This underground substation was not subject to a Metro Tunnel Project Development Plan and has been approved through planning permit PA2000931, issued by DELWP (as the Responsible Authority) on 30 October 2020.

The amendment to the Development Plan seeks to capture the necessary alterations to South Yarra Siding Reserve and Osborne Street Reserve to accommodate the approved substation works. Consultation with key stakeholders and residents occurred between January and May 2021.

The amendment is minor as the proposed changes are limited to the reconfiguration and refinement of key design elements in the South Yarra Siding Reserve and Osborne Street reserve, with no major changes proposed. The proposed amendments retain all key elements of the reserves in an alternative arrangement.

Despite this, engagement with key stakeholders and members of the community regarding the sensitive interfaces and changes to the currently approved plan has been undertaken.

3 Community and Stakeholder Engagement

3.1 Overview of Stakeholders

This Plan (July 2021) builds on the previous consultation from:

- The EES and PSA process
- The consultation during the preparation of the *RIA Early Works Plan (Eastern and Western Portals) September 2018*
- The consultation from the original RIA Eastern Portal Development Plan, the June 2020 Amended Eastern Portal Development Plan and the November 2020 Amended Eastern Portal Development Plan.

RIA has consulted with each of the relevant stakeholders identified in the Incorporated Document, being:

- Metro Tunnel Urban Design and Architecture Advisory Panel (UDAAP), including the Office of the Victorian Government Architect (OVGA)
- Stonnington City Council (Council)
- Department of Transport (DoT), including Transport for Victoria, Public Transport Victoria and VicRoads
- Melbourne Water
- Heritage Victoria.

In addition to the stakeholders identified in the Incorporated Document, RIA has also consulted with other key stakeholders during design development, including:

- Department of Environment, Land Water and Planning (DELWP)
- Metro Tunnel Development Plan Review Committee (DPRC)
- Metro Tunnel Traffic and Transport Working Group
- Metro Trains Melbourne (MTM)
- Environment Protection Authority (EPA)
- Cross Yarra Partnership (CYP)
- Rail Systems Alliance (RSA)
- Bicycle Network Victoria
- VicTrack
- Department of Treasury and Finance
- South Yarra (Eastern Portal) Precinct Community Reference Group
- Chapel Street Traders Association
- Toorak Road Traders Association
- The local community and businesses.

3.2 Eastern Portal RIA Development Plan 2019

Between October 2018 and February 2019, RIA undertook engagement with community members and commuters in South Yarra in support of the preparation of this Plan. Key Project awareness raising activities included on-street pop-ups to engage the community, presentations to the South Yarra (Eastern Portal) Precinct Community Reference Group, a targeted workshop and pre-public display briefing to representatives from key local groups and businesses.

The above engagement activities were followed by public display of the draft Plan for 15 business days, from 4 February 2019 to 22 February 2019 in accordance with the requirements of Clause 4.7.4 of the Incorporated Document.

Additional public display activities during the required public display period, included an email update sent to the Metro Tunnel E-news database, a letterbox drop to local residents and businesses, three social media posts, two information pop-ups, a community drop-in session and a local trader group drop-in session.

Overall, 53 public submissions were received on the draft Plan, 26 of which provided comment on the draft Plan. All other submissions did not provide comment on the draft Plan. The submissions that were received have been considered and addressed within this Plan. Generally, the submissions commented on the landscaping within and the use of space in South Yarra Siding Reserve, the use and development of the proposed new Promenade, the design and location of services equipment and Egress areas, the necessity for and amenity of the Osborne Street bridge and Osborne Street Reserve, graffiti and visual bulk on the William Street bridge, and concern for the treatment and amenity of Lovers Walk.

Two design refinements were made to the Plan which include:

- The addition of the Signal Gentries and the overhead line equipment to the plans and the cross section drawings (refer Appendix B)
- The inclusion of the maintenance access and vehicle containment barrier and 1.8 metre balustrade to Lovers Walk, west of the William Street bridge.

All updates to the Plan responded to feedback received by providing more clarity on matters including lighting, materials, finishes, the use of visually permeable materials throughout the project area and including additional strategic justification in relation to the Osborne Street bridge, the car parking solution and Water Sensitive Urban Design (WSUD).

This Plan was approved by the Minister for Planning on 15 May 2019.

3.3 Eastern Portal RIA Development Plan Amendment June 2020

Between January and June 2020, RIA engaged with key stakeholders and the community as part of the design development process.

Key Project awareness raising and public display activities included a letter box drop, door knocks to nearby residences, a community information event, social and digital media updates, presentations to the South Yarra (Eastern Portal) Precinct Community Reference Group and public display of the draft Plan for 15 business days from 17 February 2020 until 6 March 2020 in accordance with Clause 4.7.4 of the Incorporated Document.

Additional public display activities during the required public display period, included an email update sent to the Metro Tunnel E-news database, a letter box drop, three social media posts and a community drop-in session.

Overall, 52 public submissions were received on the draft Plan, 31 of which provided comment. All other submissions did not provide comment on the draft Plan. The submissions received have been considered and addressed within this Plan.

Generally, the feedback received focused on the design solution of the Osborne Street Reserve and bridge, noise and visual amenity at the Arthur Street pocket park, safety concerns across the precinct, particularly at the intersection of William Street and the Promenade and vegetation outcomes across the area. Submissions were also received that provided positive feedback and/or praised the design or work done thus far. Design refinements have been made to the Plan as a result of public consultation which included:

- Changes to the design solution for Osborne Street, including:
 - The addition of fifteen (15) trees along Osborne Street
 - Minor design refinements that improve sightlines between the Osborne Street Bridge, ramp and surrounding streetscape for pedestrians and cyclists
 - The addition of a proposed landing at the bottom of the Osborne Street Bridge staircase to highlight the entrance
- Addition of four (4) trees at the Arthur Street Pocket Park
- Minor updates to notations and symbols to provide additional detail and commit to ongoing design development
- Minor editorial updates to provide greater clarity in the report regarding the above matters.

All other updates to the Plan provide more clarity in relation to the feedback received regarding design detail, the treatment and justification of the William and Osborne Street bridges, South Yarra Siding Reserve, car parking, lighting, materials and finishes, landscaping and Water Sensitive Urban Design (WSUD).

This Amendment to the Plan was approved by the Minister for Planning on 17 June 2020.

3.4 Eastern Portal RIA Development Plan Amendment November 2020 (SER/CER)

Between June and October 2020, RIA undertook consultation with key stakeholders and directly affected members of the community regarding the sensitive interfaces and works proposed in the area north of the rail corridor that was previously shown as 'Land reserved for future rail purposes'.

Key Project awareness raising and proposed public display activities included a letter box drop, social and digital media updates and presentations to the South Yarra (Eastern Portal) Precinct Community Reference Group.

The above engagement activities were undertaken to support the public display of the draft Plan in accordance with the following requirements of Clause 4.7.4 of the Incorporated Document:

- The draft Plan was made available for public inspection, for 15 business days, from Monday 13 July 2020 until Friday 31 July 2020 on the Engage Victoria website
- The Engage Victoria and Metro Tunnel websites provided interested parties with an opportunity to provide feedback via an online survey
- A notice was published in The Herald Sun and The Age newspapers on Monday 13 July 2020.

Additional public display activities during the required public display period included:

- An email update sent to the Metro Tunnel E-news database notifying the community of the public display period
- A letterbox drop to local residents and businesses inviting them to comment on the draft Plan
- Four social media posts on the Metro Tunnel Facebook and Twitter pages providing links to the draft Plan and the online survey
- Four virtual community information sessions.

Overall, 11 submissions were received on the draft Plan, with one submission from Council, one from the EPA and nine from the public. Of the public submissions, eight provided comment on the draft Amended Plan and one did not provide comment.

The submissions received have been considered and addressed within the Plan as approved in January 2021. Generally, the feedback focused on the layout and materials of the SER/CER compound, proximity and response to the residential context, landscaping, the provision of trees and the walking environment of Lovers Walk. Submissions were also received that provided positive feedback and/or praised the design or work done thus far.

Design refinements made to the Plan as a result of public consultation included:

- Inclusion of a high quality, architectural screen surrounding the compound
- Addition of pockets of landscaping within the compound
- Addition of small trees at the William Street and Chambers Street entrances to Lovers Walk
- Minor updates to notations and symbols to provide additional detail and commit to ongoing design development
- Minor editorial updates to provide greater clarity in the report regarding the above matters

All other updates made to the Plan sought to provide more clarity in relation to the feedback received regarding design detail.

3.5 Eastern Portal RIA Development Plan Amendment July 2021

Whilst the nature of the proposed amendments to the Plan did not require specified engagement activities to be undertaken in accordance with Clause 4.7.4 of the Incorporated Document, RIA undertook consultation with key stakeholders and members of the community regarding the sensitive interfaces and changes to the currently approved Development Plan. The engagement activities that were undertaken included:

- An email update sent to the Metro Tunnel E-news database notifying the community of the amendment
- A letterbox drop to local residents and businesses inviting them to comment on the draft Plan
- Public display of the Plan and an online survey on the Metro Tunnel website for 15 business days to provide interested parties with an opportunity to provide feedback
- Virtual community information sessions to discuss the amendment to the Plan with interested community members
- Drop-in session at a local café in South Yarra to discuss the amendment to the Plan with community members

- Consultation with the South Yarra CRG, Council, UDAAP, adjacent residents and other key stakeholders.

This engagement occurred between January and May 2021.

Overall, 13 submissions were received on the draft Plan, with one submission from Council and twelve from the public.

The submissions received have been considered and addressed within the Plan. Generally, the feedback focused on the layout of specific design elements within South Yarra Siding Reserve, a desire for additional grassed areas and shrubs, and the provision of additional trees. Submissions were also received that provided positive feedback and felt the changes to the design were appropriate for the area.

Design refinements made to the Plan as a result of public consultation included:

- Revised park furniture layout in the dog off-leash area to allow for a greater buffer to adjacent residents at the southern boundary and minimisation of noise impacts
- Revised tree planting layout at the southern edge of South Yarra Siding Reserve, including deciduous tree species, in order to provide more natural light to adjacent properties in winter months
- Revised tree planting at the northern end of South Yarra Siding Reserve
- Inclusion of informal, natural play elements throughout South Yarra Siding Reserve
- Revised feature tree species from a deciduous to evergreen species
- Minor updates to notations and symbols to provide additional detail and commit to ongoing design development
- Minor editorial updates to provide greater clarity in the report regarding the above matters

All other updates made to the Plan sought to provide more clarity in relation to the feedback received regarding design detail.

4 Site Context

This section describes how the strategic, physical and natural context of the Eastern Portal precinct has been considered in the design development process.

4.1 The Eastern Portal precinct and the Development Plan Area

The Eastern Portal precinct is located four kilometres south-east of Melbourne's CBD in the suburb of South Yarra, within the City of Stonnington. The precinct contains the existing South Yarra Siding Reserve, rail and road reserve and several residential properties that have been acquired by the State for the purposes of the Metro Tunnel.

The Development Plan area comprises land contained within the Incorporated Document's Project Land. It encompasses land generally bound by and including Osborne Street to the west, Toorak Road to the north, Chapel Street to the east and Arthur Street to the south, including the existing rail corridors, South Yarra Siding Reserve, William Street and Arthur Street.

The area does not include land affected by CYP's *Eastern Portal Development Plan (June 2018)*, in relation to the extent of the built form (as shown in Figure 3 of the *CYP Eastern Portal Development Plan (June 2018)*).

4.2 Existing Conditions

This section refers to the condition of the site and locality prior to the commencement preparatory and early construction works for the Metro Tunnel.

The Eastern Portal sits within one of Melbourne's busiest retail, entertainment and residential precincts – the iconic Chapel Street Activity Centre in inner suburban South Yarra. This Centre has a focus on fashion, retail, entertainment and dining and attracts a metropolitan-wide catchment. The broader area is characterised by a mix of commercial and residential uses on small allotments, together with more recent and substantial redevelopment precincts, particularly to the north and east of Toorak Road.

Daily traffic volumes on Toorak Road are quite high with around 18,000 vehicles per day. The precinct is also well served by public transport. The Route 78 tram runs along Chapel Street whilst the Route 58 tram runs along Toorak Road. In addition, South Yarra station is the eleventh busiest station on the metropolitan train network and the sixth busiest transfer station. Existing rail services at South Yarra station include Sandringham, Cranbourne, Pakenham and Frankston. The existing Cranbourne/Pakenham and Sandringham railway corridors pass south, beneath Toorak Road, before heading south-east and south respectively. The South Yarra Siding Reserve sits between these two railway corridors as they diverge south of Toorak Road. No bus services traverse the precinct.

The built form of the locality surrounding the Development Plan area comprises a diverse range of mixed-use development consistent with an active and regionally significant inner urban activity centre. These include commercial and retail buildings, and housing types ranging from lower density detached dwellings to townhouses and mid-rise to large residential and mixed-use blocks and towers.

Land to the west of Osborne Street and south of South Yarra Siding Reserve beyond the Development Plan area is characterised by low rise, detached and semi-detached residential development. The Osborne Street Reserve runs along the eastern side of Osborne Street and provides a relatively green outlook for the residential land on the opposite side of Osborne Street. Land further to the south is also predominantly low-rise residential development.

Land to the east and north of the Development Plan area is generally made up of commercial development fronting onto Toorak Road and Chapel Street and a mixture of commercial and residential uses between the main roads and the Cranbourne/Pakenham railway corridor.

Prior to the commencement of Project works, South Yarra Siding Reserve was the primary local public open space in the precinct and is also used and recognised as an off-leash dog park. Access to the South Yarra Siding Reserve is restricted to a single point from William Street to its east.

Key pedestrian routes in the area include Chapel Street and Toorak Road, as well as Lovers Walk, which provides a narrow pedestrian link that connects Toorak Road to Chapel Street, along the north-east side of the Cranbourne/Pakenham railway corridor.

The landscape character in the locality is predominantly made up of exotic vegetation in private and public spaces. Native vegetation within the area has been planted for street beautification purposes and in many cases is not considered indigenous to the area.

The land affected by this Development Plan is contained within the Public Use Zone 4 (Transport), the Activity Centre Zone 1, the General Residential Zone Schedules 1 and 12, and the Public Park and Recreation Zone.

The land is also affected by the Design and Development Overlay (Schedule 20 - Melbourne Metro Rail Project – Infrastructure Protection Areas), the Incorporated Plan Overlay (Schedule 3 - Late Night Liquor Licence Trading in The Chapel Street Precinct: Measuring the Saturation Levels) and the Heritage Overlay (HO150 - Toorak Road (west of William and Claremont Streets) Precinct, South Yarra).

There is an area of Aboriginal Cultural Heritage Sensitivity located at South Yarra Siding Reserve. This is registered on the Victorian Aboriginal Heritage Register as an artefact scatter (VAHR 7822-4006).

There are also two places located adjacent to the Development Plan area listed on the Victorian Heritage Database. They are:

- Former South Yarra Post Office (VHR# H0210), located at 162 Toorak Road, South Yarra
- Former South Yarra Railway Station (VHR# H1068), located at 163-165 Toorak Road.

Figure 2 provides a context for the site and shows the Development Plan area (the RIA scope and extent) within the Eastern Portal Project Land prescribed by the Incorporated Document. The Figure also identifies significant buildings and locations considered relevant to the Eastern Portal and the design response.

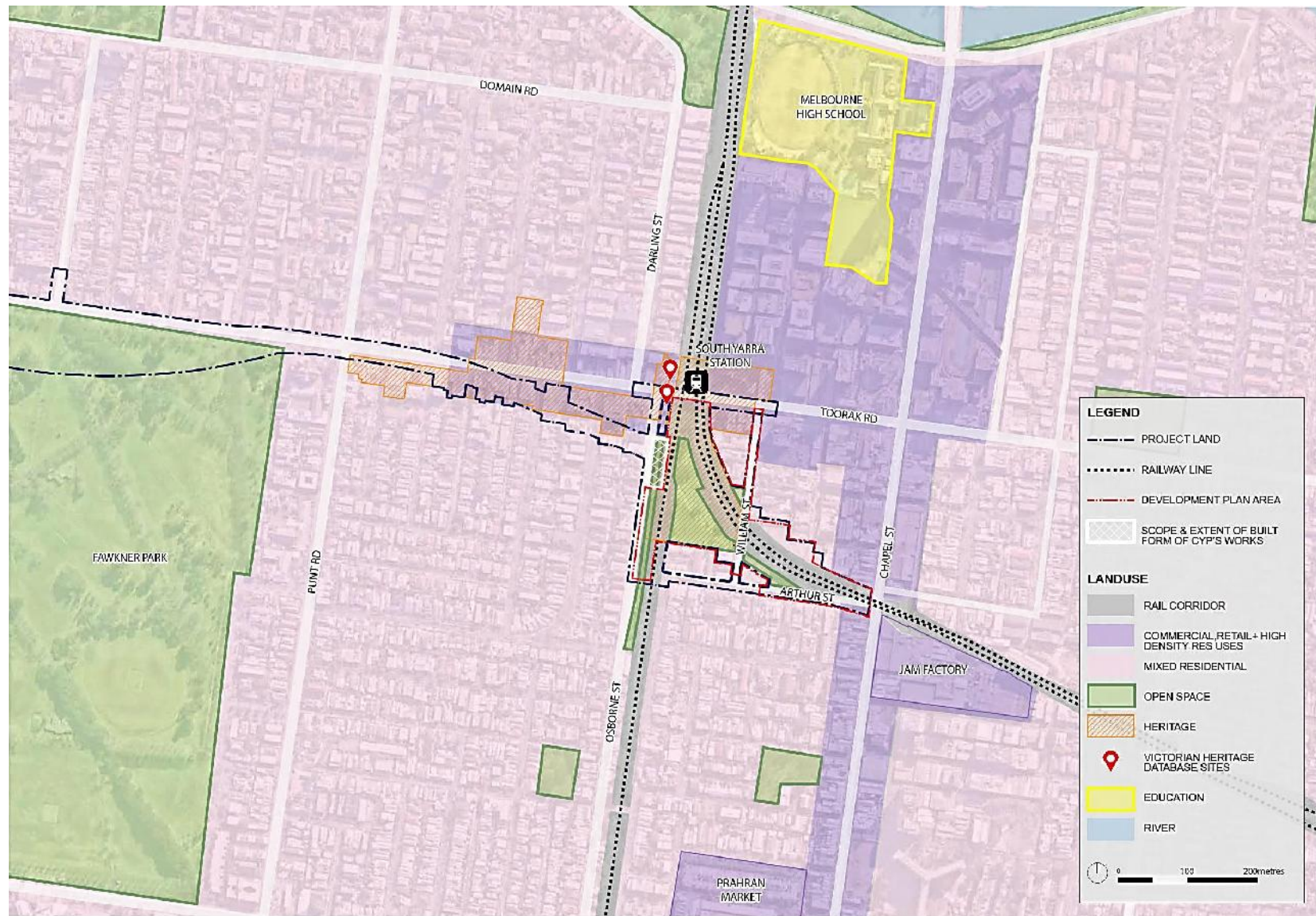


Figure 2 Site Context Plan

4.3 Strategic Context

The Eastern Portal is within the City of Stonnington in South Yarra. Future development of this area is guided by key strategic planning documents prepared by or on behalf of the City of Stonnington, including:

- *Chapel ReVision Structure Plan 2013 – 2031*
- *Public Realm Strategy* (2010)
- *Cycling Strategy* (2013-2018)
- *Cycling Strategy* (2020-2025)
- *Urban Forest Strategy* (2017-2022)
- *Strategies for Creating Open Space* (2013)
- *Urban Lighting Guidelines* (2019)
- *Integrated Transport Plan* (2020).

This Plan considers all key strategic planning documents.

Toorak Road and Chapel Street are key areas of the *Chapel ReVision Structure Plan 2013 – 2031* and the *Chapel reVision Sub-Precinct Framework Plan – Toorak Road Central / South Yarra Sidings 2015*. The Plan identifies the Toorak Road and Chapel Street interfaces of the Development Plan area as being within South Yarra Precinct which envisages enhancement through improved pedestrian connections, environments and streetscape amenity. An urban network analysis prepared by Hansen Partnership in the *Chapel ReVision Structure Plan 2013 – 2031* and *Chapel reVision Sub-Precinct Framework Plan – Toorak Road Central / South Yarra Sidings 2015*, found that a new pedestrian link into South Yarra Siding Reserve from Osborne Street will open up the park to a greater catchment of users by increasing the number of residents and households that live within a 400 metre walking distance of South Yarra Siding Reserve.

The *Public Realm Strategy* (2010) identifies the Development Plan area as being within the South Yarra Precinct which identifies opportunities such as 'streetscape work' and 'urban 'green' hot spots' on Toorak Road and Chapel Street. The *Chapel ReVision Structure Plan 2013 – 2031* implements concepts from this strategy to South Yarra Siding Reserve and 'developing the landscaping and infrastructure within the Osborne Street Reserve'.

The *Cycling Strategy* (2013-2018) proposes a number of cycling related recommendations throughout the City of Stonnington. This includes shared user paths along Osborne Street, which would continue north along Yarra Street to connect Malvern Road with the Yarra River.

The *Cycling Strategy* (2020-2025) proposes a number of strategic initiatives for cycling within the City of Stonnington. It focuses on initiatives that Council can effectively implement and seeks to increase the number of cyclists and improve safety. This strategy focuses on safer cycling along Chapel Street, providing paths for all users and the delivery of Strategic Cycling Corridors through state investment.

The *Urban Forest Strategy* (2017-2022) provides an assessment of the existing urban forest within the City of Stonnington, focusing on canopy cover, species diversity, age diversity and tree health and summarises the issues and challenges for the municipality. Key directions of relevance to this Plan include maximising the protection and retention of trees in the urban landscape, expanding the urban forest across public and private land in order to increase canopy cover, developing avenues of feature trees along high profile streets and greening the city by growing vegetation.

Strategies for Creating Open Space (2013) suggests a number of opportunities that are relevant to the development of the Eastern Portal, including investigating ‘*the security of Lovers Walk*’, ‘*the conversion of at grade car parking to open space*’ and considering the potential to negotiate future decking over rail line for improvement to and widening of Lovers Walk, including landscaping of the rail corridor if and when there is a development over the South Yarra railway station.

The *Urban Lighting Guidelines* (2019) consider environmental factors and seek to achieve a safe and defined character for the City of Stonnington with minimal environmental impact. At the Eastern Portal, the design and location of lighting is subject to consultation with Council and ultimately guided by this document.

The *Integrated Transport Plan* (2020) provides strategic guidance to manage various integrated transport factors and challenges in the Eastern Portal precinct including high-density development and demands on cycle safety, access to public transport services and competing demands for street space and network efficiency.

5 Scope of Works

The Eastern Portal will connect the Metro Tunnel to the Cranbourne/Pakenham line, south of South Yarra station. The works include an open-to-air decline structure and a cut and cover structure crossing under the Sandringham, Frankston and freight lines to connect to the Cranbourne/Pakenham line to the west.

To facilitate these works, the rail corridor between Toorak Road and Chapel Street has been widened through the construction of retaining walls which have replaced existing battered slopes to the railway cutting. Existing rail tracks have also been realigned.

Specifically, the RIA works will include:

- Permanent realignment of the Cranbourne/Pakenham line and Frankston line
- A Portal and decline structure connecting to the surface to the east of William Street
- Emergency egress area adjacent to the railway corridor and William Street
- A reinstated and enhanced South Yarra Siding Reserve
- New pocket parks at William Street and Arthur Street
- Works to the linear reserve along Osborne Street
- A replacement bridge at William Street
- A new pedestrian and cyclist bridge at Osborne Street connecting to the South Yarra Siding Reserve
- Retaining walls and embankments
- Reinstated roads and walkways
- A new Promenade connecting South Yarra Siding Reserve to Chapel Street via Arthur Street
- A widened rail corridor, including retaining walls and lineside fencing
- Reinstated civil works
- Relocation of utility services
- Works to Lovers Walk
- A SER/CER compound north of Lovers Walk between Chambers Street and William Street
- Track and civil infrastructure works, including traction power and signalling modifications

RIA is also delivering the below works which are not subject to the Plan:

- Construction of a large detention tank below the South Yarra Siding Reserve.
- Construction of a substation below the South Yarra Siding Reserve.

Appendix A contains Site Layout Plans and Appendix B contains Architectural, Landscape, Public Realm and Urban Design Plans and Elevations.

There are no trees to be removed as part of this Development Plan that require approval under Clause 4.7 of the Incorporated Document.

Most of the works outlined in this Plan for the Eastern Portal commenced shortly following the approval of the Eastern Portal Development Plan May 2019, and subsequent amendments as relevant. Additional works detailed in this amendment will commence following approval of the Amended Plan. Key stakeholders and community members that are affected during construction are notified and informed regularly throughout the construction process as set out in the Communications and Stakeholder Engagement Management Plan (CSEMP).

Associated construction works to occur within the Project Land boundary are managed in accordance with the approved EMF (refer Section 6.4.1 and Appendix D). The associated works area is shown in Appendix A. The associated construction works includes, but is not limited to:

- Laydown areas
- Site offices
- Excavation and dewatering
- Traffic management/road closures
- Piling
- Temporary hoardings and fencing
- Vegetation removal.

This Plan, including the urban design, architectural and landscape works, interfaces with works being undertaken by CYP in the Osborne Street Reserve.

6 Design Response

This Plan has been prepared to accord with the approved UDS and relevant EPRs of the EMF.

Sections of the UDS relevant to this Plan include:

- Section 2.1 – Urban Design Principles
- Section 3 – Key Directions for Metro Tunnel
- Section 4.8 – Precinct 8: Eastern Portal (South Yarra).

Relevant EPRs and the Urban Design Principles of the UDS have guided the design development process for the works. RIA has undertaken an iterative design process, informed by specialist technical assessments and engagement with key stakeholders and the community. RIA has sought to uncover and strengthen the key characteristics of the precinct and understand its likely future condition to ensure that streets, spaces and built forms are created to better serve the needs of the local community.

The design also responds to key elements and objectives of strategic documents as set out in Section 4.3 of this Plan.

Detailed design continues to progress during project delivery. Technical design packages will continue to be reviewed by RPV and are subject to further consultation with relevant stakeholders including Council, OVGA, VicRoads and MTM as required.

The following sections demonstrate how the Plan accords with the key directions and precinct specific design issues that are outlined in the UDS.

Detail of RIA's proposed built form and above ground works for the Eastern Portal are attached as follows:

- Site Layout Plans (Appendix A)
- Architectural, Landscape, Public Realm and Urban Design Plans and Elevations (Appendix B)
- A detailed assessment of the Eastern Portal design response against the key directions and precinct specific design guidelines of the UDS (Appendix C)
- A detailed assessment of the EPRs that are applicable to this Plan and the mitigation measures required to manage any potential impacts (Appendix D).

6.1 Design Overview

The design response includes the following key elements (refer Figure 3, Appendix A and Appendix B for further detail of the proposed design response):

- The redesign of South Yarra Siding Reserve, including public open space enhancements through landscaping, provision of park amenities and the demarcation of space
- Park amenities including picnic facilities, passive and active recreational spaces and a dog off-leash area
- The Promenade – the creation of an alternate and major pedestrian and cyclist connection between Chapel Street and Toorak Road following the southern edge of the rail corridor which also allows for:
 - A future direct connection to Toorak Road
 - Improvements to the eastern end of Arthur Street
- The replacement of the William Street bridge
- A new and direct pedestrian and cyclist bridge/connection to South Yarra Siding Reserve from Osborne Street
- The reinstatement of street trees and other landscaping works throughout the precinct to increase canopy cover in the local area
- Creation of new pocket parks at William Street and Arthur Street
- New rail infrastructure including the SER/CER compound and buildings
- Safety and amenity improvements to Lovers Walk, including:
 - Widening and levelling of Lovers Walk where possible
 - Landscaping and high quality, architectural screen around the SER/CER compound
- Providing priority to pedestrian movements at William Street
- Improved passive surveillance within and around Eastern Portal Precinct, particularly in the South Yarra Siding Reserve
- The careful placement of above ground rail assets to maximise the return of public space whilst still meeting functional requirements of the Project
- The careful and clear separation of public open space areas from restricted spaces required for the maintenance and operation of the railway.



Figure 3 Site Concept Plan

6.2 Consistency with the Urban Design Strategy Key Directions

Table 3 summarises how the how the Plan addresses the UDS's Key Directions as relevant to the Eastern Portal.

Table 3 Integration of the UDS during the development

Design Guidelines	Development Plan Response
Making new and improved connections	<p>The design response significantly improves walking and cycling links through the precinct by creating a number of new strategic connections, including the local access shared path connecting Osborne Street to South Yarra Siding Reserve and the new Promenade between Chapel Street and South Yarra Siding Reserve via Arthur Street.</p> <p>The new Promenade anticipates the opportunity to deck over the northern end of the railway corridor to connect South Yarra Siding Reserve directly with Toorak Road, providing opportunity for improved connection to Chapel Street and Arthur Street at some point in the future. The William Street bridge has been designed to provide better pedestrian amenity and priority, and to connect Lovers Walk with the new Promenade.</p> <p>The design response and materials also seek to prioritise pedestrian movements across William Street and enhance visual permeability throughout the precinct through the inclusion of permeable anti-throw screens and lineside fencing where appropriate.</p> <p>The design response is consistent with this design guideline by also retaining and improving Lovers Walk where possible and enhancing surrounding streetscapes. This is achieved through the provision of new and improved connections that support universal access objectives while also improving pedestrian amenity in the use of soft and hard landscaping and improved visual connections throughout the precinct.</p>
Making great public places	<p>The design response has focused on works that will make South Yarra Siding Reserve a great public place, reflecting it's anticipated role as a park for local residents and visitors to the area. The design has incorporated feedback from key stakeholders and the community to enhance its useability, flexibility, and ensure that the future use of South Yarra Siding Reserve responds to identified needs.</p> <p>The high-quality design solution proposed improves the amenity of the precinct and encourages a greater mix of passive and more active recreational uses in South Yarra Siding Reserve. Furthermore, the design solution:</p> <ul style="list-style-type: none"> • Ensures the useable space of South Yarra Siding Reserve is suitable for both active and passive recreation activities. Retaining walls along the railway corridor have been designed to support infill soil which maximise the amount of accessible, usable and relatively level ground within South Yarra Siding Reserve • Provides wider and better connections within and through the precinct which enables the prioritisation of safety and amenity of users by encouraging new users to the precinct and providing visual connections • Provides better managed space within South Yarra Siding Reserve through the careful use of levels and access, landscaped areas that provide informal seating elements, a picnic area (including an open pergola), informal play elements and different types of passive recreation as well as an off-leash dog area. <p>The design solution also includes new pocket parks on William Street and Arthur Street. These areas provide additional passive recreational spaces for the precinct with a focus on soft landscaping that successfully enhances streetscapes, whilst also improving interfaces between the rail corridor and residential areas.</p>

Design Guidelines	Development Plan Response
	<p>The amenity of Lovers Walk will also be improved as part of the SER/CER works, with path widening, new landscaping and a permeable fence installed to improve the openness of the pathway. The proposed compound fence design is also a deviation from the standard fence requirements to provide an improved amenity outcome in the area.</p> <p>A high quality, permeable architectural screen will be installed along the perimeter of the SER/CER compound at the interface with the public realm. This will ensure that it responds appropriately to the context and provides an attractive walking environment for users.</p>
Balancing line-wide consistency with site responsiveness and supporting integrated site redevelopment	<p>The design response appropriately emphasises site responsiveness to the local context of South Yarra, whilst ensuring that the technical requirements of the Project are appropriately met within the railway corridor and public realm.</p> <p>All aboveground infrastructure that is required for the Portal has been designed to respect and reflect the local context of the area through careful regard to siting, design, movement patterns and materials and finishes. This ensures that all elements of the Portal are part of a precinct-wide design intent and palette. They are also separated where possible from key public areas (existing and proposed).</p> <p>The height and bulk of structures are designed to visually blend into their surrounds and are complemented by landscaping and other works that enhance the public realm.</p> <p>The Plan incorporates materials that will ensure railway infrastructure is visually recessive and successfully integrates with the character of the area. The design development of any CYP elements within the Eastern Portal precinct will consider the existing built form and materials of the precinct and those approved as part of this Plan via ongoing consultation.</p>
Designing for the future	<p>The design response provides for current and future open space provisions of the precinct by improving cyclist and pedestrian connections and enhancing areas of public open space so that they are more adaptable and more responsive to the needs of residents and the broader community. This is achieved through:</p> <ul style="list-style-type: none"> • Re-instating South Yarra Siding Reserve as a better designed local park for passive and more active recreation that provides for a number of user groups at the same time, including local walking and cycling users • A new Promenade that directs users of South Yarra Siding Reserve from the intersection of Arthur Street and Chapel Street to Osborne Street as well as creating the foundation for a future city-scale pedestrian and cycling connection along the south of the rail corridor from South Yarra station (Toorak Road) to Chapel Street • A new local path to South Yarra Siding Reserve from Osborne Street, sized to accommodate pedestrians and recreational cyclists • Improving the amenity of Lovers Walk through the addition of landscaping, widening of the pathway where possible and the installation of a high quality, architectural screen between William Street and Chambers Street. • Strengthening the landscape character of the whole precinct through considered and substantial tree and multi-storey planting throughout Osborne, William and Arthur Streets, and South Yarra Siding Reserve • Future street beautification initiatives being planned by Council as part of the <i>Chapel reVision Structure Plan</i> are appropriately considered and no works will conflict with future Council initiatives. <p>Materials and finishes have been informed by their quality, durability and life cycle impacts to ensure that the Portal provides a high quality and long-lasting public realm. Landscaping will be based on environmentally sustainable design principles and contain self-sustaining and low maintenance species in accordance with the <i>Metro Tunnel Living Infrastructure Plan</i> and the City of Stonnington <i>Urban Forestry Strategy</i>. Landscaping will be chosen in consultation with relevant asset owners, including Council.</p>

6.3 Consistency with Precinct Specific Design Issues

The precinct specific design issues of Eastern Portal (South Yarra) are relevant to this Plan. To demonstrate that the Plan appropriately responds to precinct specific design issues identified in the UDS, Table 4 presents the objectives of the UDS in relation to the Eastern Portal precinct and the Development Plan Response to the objectives.

Table 4 Precinct 8: Eastern Portal (South Yarra) Precinct Specific Issues

Objectives	Development Plan Response
Retain and improve walking and cycling links connecting to activity centres, local streets, South Yarra station, and the open space network.	<p>The design response for the Portal retains and enhances walking and cycling links through the addition of a new Osborne Street bridge connection, the reinstatement of the William Street bridge with widened footpaths and new pathways through South Yarra Siding Reserve and the retention of Lovers Walk.</p> <p>The proposed pedestrian paths are designed to integrate with the existing network and facilitate a future connection between Toorak Road and Chapel Street. The Promenade extends from the north of the Siding Reserve through the Arthur Street Pocket Park to Chapel Street as shown in Figure 5. This connection is further integrated with a pedestrian-priority crossing at the intersection of the Promenade and William Street.</p> <p>The cyclist connections are designed for local levels of use and to integrate the precinct with the broader cycling network by facilitating a future shared connection through the Promenade connecting Toorak Road and Chapel Street. The Promenade and the Osborne Street Bridge have been designed to accommodate cyclist movements. Lovers Walk has been retained, widened and landscaped where possible in order to maximise the width and amenity of the pathway. This is achieved through the design of the SER/CER compound which has been minimised where possible, whilst also ensuring that it meets requirements for building clearance and maintenance access. A high quality, architectural screen will also be installed along the perimeter of the compound which will contribute to providing an attractive walking link for the area.</p>
Maximise the amount of accessible, usable and relatively level public open space in the precinct.	<p>Retaining walls along the railway corridor have been designed to support infill soil which maximises the amount of accessible and usable ground within South Yarra Siding Reserve, ensuring the useable space is suitable for both active and passive recreation activities.</p> <p>Where possible, pathways throughout the precinct have been widened to maximise the amount of accessible and usable space for active modes of transport</p> <p>Public spaces throughout the precinct have been designed to be <i>Disability Discrimination Act</i> (DDA) compliant.</p> <p>Pocket parks on William and Arthur Street further increase the amount of public open space within the precinct.</p>
Improve the quality, amenity and safety of existing public open space and walking and cycling links.	<p>Quality, amenity and safety will be achieved by providing an improved design and layout. Further, prioritising pedestrians, cyclists, the use of landscaping to guide users through the precinct and the use of materials will create a cohesive and legible public realm. In addition, Closed-circuit television (CCTV) and public lighting will be introduced where required.</p> <p>The widening of pathways across the precinct will also improve walking and cycling links.</p>
Design all aboveground structures as part of an integrated high quality design that respects the public realm and local built form.	<p>The Plan ensures that above ground infrastructure solutions respect the existing built form of the area and incorporates materials that will ensure railway infrastructure successfully integrates with the character of the area.</p> <p>In particular, the SER/CER compound has been designed with a high quality architectural screen that responds to the public interface. The design of the screen ensures that sightlines along Lovers Walk are enhanced and the overall visual amenity of the precinct is improved. Screening for the compound will utilise materials that respect and integrate with the wider residential context of the area.</p>

Objectives	Development Plan Response
	The design development of any CYP elements within the Eastern Portal precinct will consider the existing built form and materials of the precinct and those approved as part of this Plan via ongoing consultation.
Design to help manage sensitive interfaces between neighbouring properties, project infrastructure and public spaces.	Sensitive interfaces will be managed through appropriate fencing solutions and where possible, the use of safe, appropriate and dense landscaping solutions that will improve safety and visibility in areas that have the potential to be more isolated or have residential or railway interfaces. Landscaping solutions along the southern boundary of South Yarra Siding Reserve, at the pocket parks on William and Arthur Streets and within and around the SER/CER compound are examples of how the design will provide an improved interface between residents, the community and the rail corridor.
Contribute to a continuous corridor of vegetation along the rail lines.	Continuous tree planting will be provided along the railway corridors, including dense multi storey planting to the west of the South Yarra Siding Reserve and feature tree planting along the Promenade. A continuous strip of landscaping will also be provided along Lovers Walk between William Street and Chambers Street.
Minimise impacts on the amount and quality of open space arising from service access to the rail lines.	Service access to the rail lines is limited where possible to maintenance access points north and south of the rail corridor, west of the William Street bridge and vehicle access along Arthur Street to the egress area. The access points seek to maintain openness throughout the public realm, including South Yarra Siding Reserve in the use of balustrade, fences and screens.

6.4 Aspect Specific Design

The following sections provide more detail regarding aspect specific design elements.

6.4.1 Architecture

The architectural design response seeks to ensure that the aboveground infrastructure complements the local context of South Yarra and continues the suite of materials used throughout the public environment. The Plan achieves this through the design of the William Street Bridge, the Osborne Street bridge and the public realm and landscaping, as follows:

- William Street bridge:
 - Ensuring that aboveground infrastructure associated with the William Street bridge responds to the built environment of the area and retains visual connections with South Yarra Siding Reserve. Specifically, the architectural response of the bridge considers the context of the precinct (particularly with the connections with William Street, Lovers Walk and the Promenade) focusing on minimising visual fragmentation. The design response includes the use of viewing points and splaying of the bridge at the north in order to provide improved visual permeability. The materiality of the bridge and the siting of viewpoints both contribute to the minimisation of visual bulk and provide a consistent design response. This ensures that the bridge contains elements of similarity in proposed materials and colours with other existing and proposed built elements, maintaining connections to the surrounding historic environment and reflecting the character of the precinct
 - Balancing MTM requirements with the need to create visual connections between the William Street Bridge and the surrounding precinct. Specifically, MTM design requirements for the reinstated bridge requires a single span bridge, meaning that support columns underneath the bridge cannot be used. This results in a structural solution requiring a 2.4 m high metre girder (measured from footpath height)

- Providing generous spaces for pedestrians on the new William Street Bridge. This includes providing for a footpath on the western side of the bridge of a minimum width of three (3) metres, extending from 17 William Street to South Yarra Siding Reserve. The bridge structure embraces fin walls and screens to read as one with the proposed design and safety treatments to Lovers Walk and the Promenade
- Providing an architecturally designed seating structure with integrated lighting at the northern section of the bridge. This will act as a key focal point of the area and highlight the delineation between William Street, Lovers Walk and the new Promenade
- Osborne Street bridge:
 - The design of the Osborne Street bridge provides a high quality architectural solution that minimises the appearance of visual bulk through the use of visually permeable and high quality materials where appropriate. Further, the proposed landscape design response provides a continuous green edge along the streetscape connected by vertical plantings on the ramp structure
 - The design development of any CYP elements on Osborne Street will consider the existing built form and materials of the precinct and those approved as part of this Plan via ongoing consultation
- SER/CER compound:
 - The design solution for the SER/CER compound maximises the width and amenity of Lovers Walk while providing for the design requirements of key infrastructure elements and maintenance access
 - Building orientation and locations within the SER/CER compound have been designed with consideration towards the public interface and adjacent properties to provide a visually recessive interface with the public realm.
 - A high quality permeable architectural screen will be installed along the perimeter of the SER/CER compound. This screen will reference residential materials and integrate the compound with the public realm and wider residential context, as well as provide an attractive walking environment for users.
 - The siting of the buildings and visually permeable fencing around the compound seeks to ensure that sightlines between Chambers Street and along Lovers Walk are retained.
 - The interface between Lovers Walk and the compound is softened with a high quality, permeable architectural screen, groundcover and low-level landscaping
- Public realm and landscaping:
 - Maximising views between different locations in the precinct including Lovers Walk, the William Street Bridge, the Osborne Street Bridge, South Yarra Siding Reserve and the Arthur Street and William Street pocket parks to enhance safety and visual connections between these areas and reduce opportunities for anti-social behaviour and graffiti. This is achieved through the use of viewing points on the William Street bridge and permeable screens throughout the precinct to provide and improve lines of sight across the precinct
 - Providing a landscaping solution that enhances the character of the area and softens the appearance of hard surfaces and above ground structures, enabling hard surfaces and above ground structures to blend into the public realm
 - Providing high quality landscape design finishes that contributes to the doubling of tree canopy cover through the reinstatement of lost trees, planting of new trees and creation of improved growing conditions. Landscaping is consistent with the character of the area and which present a cohesive public realm

- Designing service equipment areas with materials and finishes to ensure that they read as part of the public realm, are visually recessive and connect through materiality and form to other infrastructure within the precinct. The design also considers the treatment of the CYP building, William Street bridge, anti-throw screens and the landscape treatments in South Yarra Siding Reserve and the Arthur Street and William Street pocket parks
- Seating elements have considered public safety and lines of sight to enhance passive surveillance and user experience from multiple interfaces

Examples of indicative design treatments are shown in Figure 4.

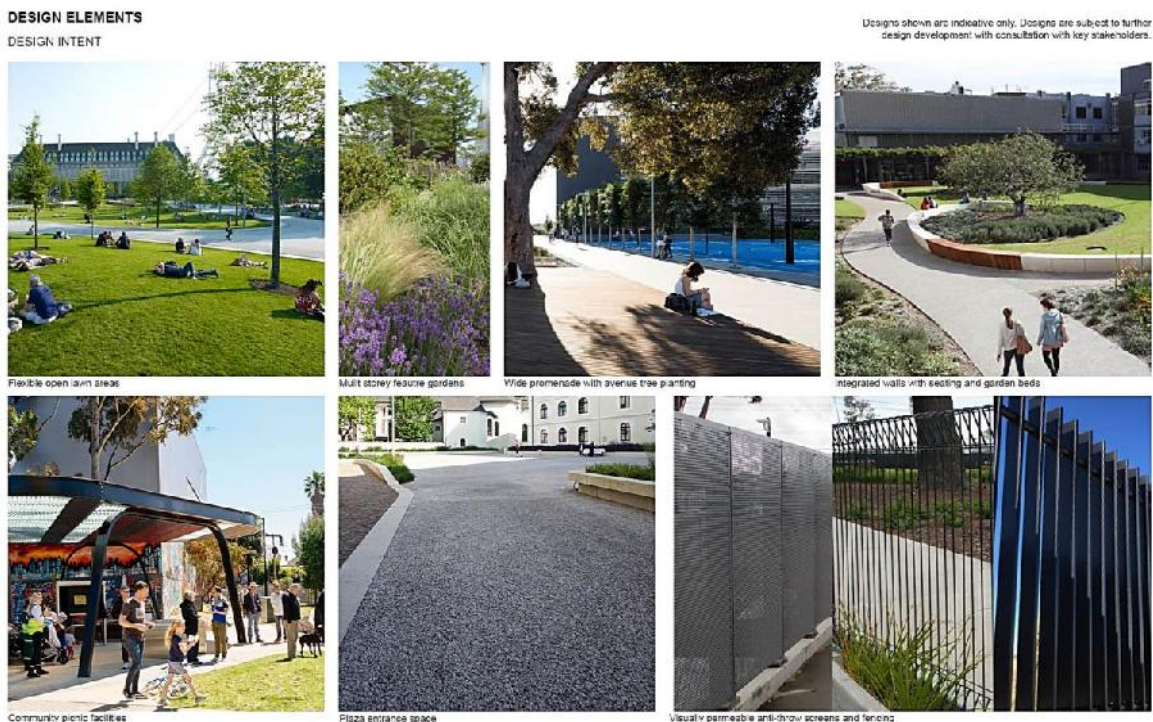


Figure 4 Indicative design intent

Whilst not a part of this Development Plan, the *Eastern Portal Development Plan June 2018* by CYP describes the approach being taken with regard to materials and finishes for the CYP works.

6.4.2 Community Experience

The design of South Yarra Siding Reserve is the urban design focal point of the works. It creates an improved and more accessible public open space. The new Promenade and other pathways are universally accessible for a broader catchment of users moving through the precinct and new / modified pathways into and through the park are designed to be DDA compliant and meet the guidelines stated in the VicRoads cycle note 21.

The proposed design response enhances the community's experience of the precinct by improving the accessibility and usability of South Yarra Siding Reserve. The design solution seeks to improve key pedestrian and cyclist connections through South Yarra Siding Reserve and the broader precinct to better meet the needs of users of the area.

The design solution has, and its detail will continue to be informed through consultation with key stakeholders. This consultative process has particularly informed the design and intended purpose of South Yarra Siding Reserve.

The South Yarra Siding Reserve will also be enhanced through a design solution that balances open space and landscaped garden beds. Areas of open space comprise of

softscape areas for passive recreation and pathways to enhance connections through South Yarra Siding Reserve, including the Promenade and pathways connecting the Promenade to Osborne Street and Arthur Street.

This enables the logical provision of areas for both passive and more active recreational activities, including a picnic area, an open lawn and an area for dogs to play off-leash. The design uses a number of physical treatments and visual cues to define these spaces.

A passive recreation area is located at the northern end of the South Yarra Siding Reserve to provide a logical end to South Yarra Siding Reserve until the future extension to Toorak Road is achieved. With public safety in mind, it is a lightweight, open lawn area with informal play elements that will help attract more users and provide activation for the area.

In addition, South Yarra Siding Reserve provides the opportunity to build an underground stormwater detention tank to capture water volumes created in a 1 in 200-year flood event. The intent of the tank is to attenuate flows to minimise impacts on downstream property and drainage infrastructure. It will capture all stormwater runoff and flows from the Arthur Street stormwater diversion. A soil depth of 1.5 metres is achieved above the proposed tank to ensure tree retention and growth once planted.

A new underground substation, not under consideration as part of the Plan, will be constructed beneath South Yarra Siding Reserve and minor alterations to the park design are required as a result. This reconfiguration will not remove or impact any approved design elements within South Yarra Siding Reserve.

The new Osborne Street bridge has been designed to create a new, universal access point into South Yarra Siding Reserve and will be located within the existing Osborne Street Reserve. The bridge has been designed to minimise footprint within the Osborne Street Reserve and provide a continuous green edge, while meeting DDA requirements for a local access shared path. The use of visually permeable materials and landscaping is proposed to ensure that the visual bulk of the structure is minimised within the existing Osborne Street Reserve whilst also showing consideration for the overall character of the Eastern Portal precinct, ensuring an integrated design response. The Osborne Street bridge opens South Yarra Siding Reserve to a much greater catchment of users, increasing the number of residents and households that live within a 400 metre walk of South Yarra Siding Reserve by more than a third.

The Osborne Street Reserve will be reinstated and the landscaping solution uses plantings to filter views towards the bridge, ramp and railway corridor, including open lawn, new garden beds, seating and tree planting of varying species to provide visual interest and colour within the Osborne Street Reserve.

The reinstatement of the William Street bridge will retain its current two-way traffic flow but also create an enhanced pedestrian experience between Lovers Walk and the new Promenade. This is achieved by removing car parking along the bridge, increasing pedestrian space, slowing vehicle speeds through design and maximising opportunities for visibility and views across the precinct. The raised pedestrian prioritised space at the southern end of the William Street bridge and proposed exposed aggregate concrete will provide both visual and physical cues for drivers to slow down. In addition, the minimum three metre width of pedestrian pathways on either side of the bridge prioritises pedestrians.

A new pocket park is located at Arthur Street that comprises of a mix of passive recreation space with landscaped garden beds, an abundance of new trees, public seating and a new promenade that connects to the South Yarra Siding Reserve. This pocket park softens the interface between the rail corridor to the north and residential properties to the south.

Lovers Walk is retained as part of the Project and works will be upgraded where possible to enhance users experience of this existing connection, whilst also addressing rail safety

requirements of the rail corridor. The design of Lovers Walk is the result of existing site constraints, the extent of private property and Project requirements including operational and maintenance requirements for the rail corridor, William Street bridge and pathways. Enhancements include regrading and resurfacing to improve user comfort, the introduction of lighting and CCTV where required, the widening of the walkway and provision of landscaping where possible. In addition, the William Street bridge design solution will provide a strong connection to the new Promenade.

A high quality, architectural screen will be provided along Lovers Walk between William Street and Chambers Street in order to improve the amenity of the interface between the SER/CER compound and the public realm. This screen, in addition to the continuous strip of landscaping and a widened path where possible, will ensure that this part of Lovers Walk will be a positive walking environment for users.

While enhancements to Lovers Walk are restricted by the required rail infrastructure it is likely that the new Promenade will become the key pedestrian and cyclist connection between Toorak Road (and South Yarra station) and Chapel Street.

The accommodation of greater pedestrian connections and amenity through the redesign of the William Street bridge and by the introduction of street trees in Osbourne and Arthur Streets will mean that not all car parking can be reinstated. Car parking is discussed further in Section 6.4.3.

The Services Equipment areas (including the SER/CER compound) and Egress Area have been sited to:

- Ensure that they are accessible from the railway corridor and/or public roads (as required)
- Meet functional requirements and MTM and Australian Standards
- Not encroach on the offering of public open space at South Yarra Siding Reserve or into Lovers Walk
- Minimise impact on the amenity of nearby residents and users of the Promenade.

Specifically, the Egress Area is required for emergency egress from the Metro Tunnel. It will comprise egress stairs and weather protection and be located behind the proposed anti-throw screening within the railway corridor. This design approach ensures that the Egress Area has a minimal impact on the built form of the Promenade. Visual connectivity, legibility, safety and amenity have all been considered in the Services Equipment area and Egress Area placement and design of screens, landscaping and other public realm infrastructure.

Space requirements of the SER/CER compound have been minimised as much as practicable, taking into account building clearance and vehicular maintenance access requirements. The interface of the compound with Lovers Walk uses a high quality, permeable architectural screen and low-level landscaping to retain and enhance visual connections between Chambers Street and Lovers Walk.

The design of these areas seeks to create clear lines of sight, avoiding the creation of hidden spaces or enclaves and ensure that opportunities to filter and screen with landscaping are utilised. Opportunities to reduce the footprint and shape of the areas to respond to the interfaces and increase the soft landscaped areas are explored as part of the detailed design process and have been captured in this Plan.

6.4.3 Access

The design of the Eastern Portal precinct maintains and enhances the pedestrian access throughout and around the Development Plan area. The design solution prioritises pedestrian movements through the:

- Reinstatement of Lovers Walk with widening and landscaping where possible
- Upgrade of William Street bridge to incorporate informal crossing areas that provide priority to pedestrians and wide pathways to enhance pedestrian connections between Lovers Walk and the Promenade
- Introduction of the Osborne Street bridge, pathways throughout the South Yarra Siding Reserve and the Promenade to prioritise pedestrian movements and the connection between Osborne Street, Arthur Street and Chapel Street. This new east-west connection will open the park up to a much greater catchment of users, improves park safety and is based on network analysis prepared by Hansen Partnership in 2016 in the *Chapel ReVision Structure Plan 2013 – 2031*
- Creation of new accessible pockets of green and open space along William Street and Arthur Street
- Proposed pathways through South Yarra Siding Reserve which work to informally delineate the different areas (dog off-leash and passive recreation) and provide an important pedestrian and cyclist connection to Osborne Street via the Osborne Street bridge. The pathways location is logically located to respond to the likely pathway of pedestrians and cyclists moving through the space.

Cyclist access will be provided via the William Street bridge pathways throughout the South Yarra Siding Reserve and the Promenade. Additional cyclist access is provided via the Osborne Street bridge.

The precinct currently contains unmarked car parking. The equivalent of approximately four car parks will be removed from the eastern side of Osborne Street near the new pedestrian bridge, one car park has been removed from the northern side of Arthur Street between William Street and Chapel Street and approximately 20 – 25 car parks have been removed along William Street to accommodate the new bridge structure and facilitate pedestrian connections with increased capacity, amenity, and accessibility. In addition, the changes to car parking conditions help to improve streetscape amenity through the use of planted kerb outstands where possible which also provide shade and screening. There will be no loss of car parking spaces at the front of existing residential dwellings on Chambers Street.

The new William Street Bridge will improve pedestrian amenity and access by widening the existing pathways to a minimum of three metres. This provides opportunities to strengthen the visual connections through the bridge and throughout the precinct and provides traffic calming through urban design and landscape treatments. Traffic calming measures will also improve the safety and access for cyclists.

The movement map shown in Figure 5 identifies major existing and proposed movement networks in and around the Development Plan area.



Figure 5 Movement Map

6.4.4 Safety and Crime Prevention Through Environmental Design

Safety at the Eastern Portal is a fundamental component of the design. This is achieved through the use of improved natural access, passive surveillance and territorial reinforcement, the three basic strategies of Crime Prevention through Environmental Design (CPTED) principles.

The proposed design takes into consideration operational and maintenance requirements, including limiting anti-social behaviours. This will be achieved through using materials and finishes that are robust and resistant to vandalism, incorporating CPTED principles to increase natural surveillance, using public lighting within the precinct to discourage would-be offenders and implementing MTM Safety Standards.

Natural access has been adopted in the design response through the careful placement of entrances, pathways, fences, landscaping and lighting to improve the guidance of users within the space, improve visibility and remove risk. The new Osborne Street bridge will improve public safety within South Yarra Siding Reserve by increasing opportunities for passive surveillance and improve access to South Yarra Siding Reserve. The bridge also provides a critical second entry/exit to the park that will significantly increase usage and alter safety perceptions of the park from being enclosed with only one entry/exit.

Increased community use will contribute to enhanced natural surveillance and safety. Significantly improved accessibility, a picnic area, public lighting and improving the quality and amenity of the area will contribute to making South Yarra Siding Reserve a more desirable place for the community to use.

Passive surveillance is the key design driver that has been used in the development of the design response to discourage anti-social activities. The design increases the range of uses that can be accommodated in South Yarra Siding Reserve through improved pedestrian connections and maintained and/or enhanced access and visibility across the rail corridor to improve natural surveillance. This is achieved by utilising permeable screens and fencing, as well as improved sight lines through the precinct. Spaces that could create hiding opportunities have been reduced or eliminated through clear definition of occupiable spaces, the careful location of new structures and tree planting.

The design of the SER/CER compound includes high quality, architectural screen to provide a clear delineation between the public realm and land required for the above ground infrastructure. Through extensive community and stakeholder engagement, the interface of the compound with Lovers Walk has been considered with the intention to enhance sightlines along the walkway through the use of a permeable fence and low-level landscaping. This ensures that passive surveillance can occur along Lovers Walk and between Lovers Walk and Chambers Street.

Territorial reinforcement works to distinguish a division between public and private space, and to display a sense of responsibility and investment in an area. The design response encourages people to move through and use public spaces throughout the Development Plan area. Specifically, the picnic area in the South Yarra Siding Reserve is to be an open, lightweight visible, central space for activation which will also act as a meeting place for the community.

Finally, the safety of the railway corridor has been considered in consultation with MTM, with the addition of throw screens and landscaping designed to deter users of the space from entering the rail corridor whilst supporting views across the precinct.

6.4.5 Street Furniture and Integrated Art

The design includes provision of seating along Osborne Street and at key locations in William Street, Arthur Street and South Yarra Siding Reserve. This seating will provide for passive recreation and pause points along pedestrian routes in locations that provide shade and/or views. The design of seating throughout the precinct will be designed in consultation with Council.

The design also includes informal play elements that utilises natural components that will be incorporated into the landscaping of South Yarra Siding Reserve. This play area will assist in activating South Yarra Siding Reserve.

The design provides for an integrated art piece with the potential to reference local Aboriginal culture and/or more recent heritage at the William Street entrance to South Yarra Siding Reserve. Any public art within the precinct commissioned by RIA as part of the Metro Tunnel Project will respond to the *Metro Tunnel Creative Strategy*.

6.4.6 Lighting

Street and pathway lighting throughout the Development Plan area will come from a variety of lighting solutions at a scale and form to suit the local context. The lighting design and infrastructure will generally align with the current context of lighting surrounding the Development Plan area and will be developed in consultation with the Council. In addition, lighting and CCTV will be placed along Lovers Walk to ensure the safety and security of users of the space.

Proposed lighting will be designed in accordance with Australian Standards for pedestrian safety (AS1158.3.1 - Lighting for Roads and Public Spaces - Pedestrian Area (Category P) Lighting - Performance and Design Requirements) and Council's *Urban Lighting Guidelines*. All lighting will be designed accordingly to reduce light spill into adjoining properties and the rail corridor.

6.4.7 Signage and Wayfinding

Existing signage and wayfinding that is part of the precinct will remain or will be enhanced to guide pedestrians and cyclists through the precinct. Where relevant, additional signage and wayfinding will either be incorporated into the materials palette for the precinct or designed in accordance with PTV, VicRoads and Council standards and guidelines.

6.4.8 Materials and Finishes

The design has developed a suite of wall, fence and screen types to provide for visual permeability, safety and protection from the rail corridor, whilst responding to the railway context of this location. This includes a continuity of steel and aluminium as robust materials that form sections of wall, permeable screens and fencing. A consistent concrete treatment is proposed to the retaining walls of the rail corridor to ensure a continuous visual backdrop within the rail corridor.

Materials will adopt a high quality, integrated architectural and structural engineering design solution including supporting structure(s), balustrades and lighting, with provision for safety, universal access and high levels of visibility. Materials are subject to further consultation with the Council and other relevant stakeholders during the detailed design phase of the Project.

These surfaces provide a consistent edge treatment to the public realm, which is complemented with the use of hard-wearing pavement materials present in the precinct, including bluestone, bitumen and concrete, and contrasted and softened with the soft landscape present in streetscapes and open spaces.

All materials and finishes will be robust and resistant to vandalism. Measures such as anti-graffiti paints and finishes, and minimising surfaces that attract graffiti will be employed. A schedule of indicative materials and finishes has been prepared (refer Figure 6) which provides a clear design palette of colour tones and textures that will be used for the Eastern Portal. The design solution has been selected through a collaborative process with OVGA and key stakeholders to ensure that it responds to the context of the precinct and consider life cycle impacts. Further refinement of the materials and finishes will be subject to ongoing consultation with key stakeholders.

Figure 7 provides an indicative materials and finishes palette for the SER/CER compound. These materials and surfaces ensure that the compound is visually recessive while also providing Lovers Walk with a visually permeable interface that improves the sense of openness along the pathway.

DESIGN ELEMENTS
MATERIALS PALETTE

Materials shown are indicative only and are subject to further design development with consultation with key stakeholders.



DESIGN ELEMENTS
DESIGN INTENT

Designs shown are indicative only. Designs are subject to further design development with consultation with key stakeholders.



DESIGN ELEMENTS
DESIGN INTENT

Designs shown are indicative only. Designs are subject to further design development with consultation with key stakeholders.



Figure 6 Indicative materials and finishes palette, demonstrating the design intent

DESIGN ELEMENTS

DESIGN INTENT

Designs shown are indicative only. Designs are subject to further design development with consultation with key stakeholders.



Asphalt pavement



Crushed gravel



3m high security fence



Building cladding



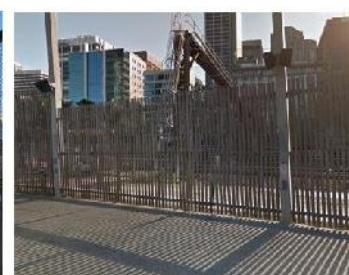
SCREEN PRECEDENTS



CARRUM LXP



MIM SECURAMESH



SCREEN ALONG FLINDERS WALK

Figure 7 Indicative materials and finishes palette for the SER/CER compound.

6.4.9 Landscape and Water Sensitive Urban Design

The landscape design response that has been developed for the precinct considers the character of the area, along with an emphasis on diverse, multi-storey planting in Osborne Street and the South Yarra Siding Reserve. Figure 4, Figure 6 and Figure 8 present the look and feel of the planting proposed as do the elevations in Appendix B. The proposed landscape strategy for South Yarra Siding Reserve aims to:

- Create well designed, functional and attractive green spaces that are well used by a range of community members
- Provide a landscape response that is based on environmentally sustainable design principles and contains self-sustaining and low maintenance species
- Secure maturity of landscape presentation within as short a period as possible balancing this with plant longevity.

The landscape strategy uses a combination of native and exotic species selected to achieve optimum performance, appearance and longevity for public open space environments. The design proposed four planting typologies: multi-storey garden beds for biodiversity opportunities, low planting to provide clear view lines for public safety, water sensitive urban design planting to treat stormwater and feature planting to create interesting colour, texture and form of planting at highly visible areas.

Figure 8 presents the indicative landscaping solution for the Eastern Portal, noting that the final landscaping solution is subject to consultation with the Council.

DESIGN ELEMENTS

TREE PLANTING

Trees shown are indicative only. Tree species are subject to further design development with consultation with key stakeholders. Expected tree size at maturity shown as height x width.



Figure 8 Indicative landscaping solution

A number of trees have been approved for removal within the railway corridor and along William Street, Chambers Street, Arthur Street and acquired properties. The design response seeks to mitigate the impact of the removed trees through significant tree planting that will contribute towards the doubling of canopy cover, protect local amenity, ensure a useable and safe open space in South Yarra Siding Reserve and create legible connections between Chapel Street, Toorak Road and Osborne Street. Trees proposed for planting in South Yarra Siding Reserve alone will result in approximately a 40 percent increase of trees within South Yarra Siding Reserve.

The proposed trees in South Yarra Siding Reserve will be sited to minimise potential impacts to properties south of South Yarra Siding Reserve, particularly in relation to solar access, leaf litter, drainage and potential damage from tree roots. The proposed trees have also been strategically located to allow for underground services to be installed. Surface level finishes will direct water flow away from properties into garden beds for passive irrigation with overflow directed towards the Promenade where it will be captured within the drainage system.

Landscaping along Osborne Street and the wider Eastern Portal area contributes to the broader habitat opportunities through the establishment of significant garden bed areas within South Yarra Siding Reserve and the Osborne Street Linear Reserve. Plants are predominantly native species, and diverse multi-storey plantings, including trees, within understorey vegetation are designed to be supportive of pollinator species where possible. New landscaping has also been provided within the SER/CER compound and along Lovers Walk between William Street and Chambers Street. This landscaping seeks to soften a predominantly hardscaped area, in addition to new trees at the William Street and Chambers Street entrances to Lovers Walk.

Where trees have been removed within existing streetscapes, vegetation will be reinstated with similar species in accordance with the *Metro Tunnel Living Infrastructure Plan* and the City of Stonnington *Urban Forestry Strategy*. Suitable soil volumes will be provided for all trees to optimise future canopy growth. These soil volumes are designed to ensure the Project meets targets outlined in the *Metro Tunnel Living Infrastructure Plan*. Tree installation heights are subject to Council requirements, Australian Standard 2303:2018, and MTM requirements for planting along rail corridors. Trees are typically be installed at heights of 1.5 metres to 2 metres depending on the species and growing conditions. A diverse range of tree species are proposed within South Yarra Siding Reserve and throughout the precinct. Where appropriate, low allergy plantings will be considered.

Water Sensitive Urban Design (WSUD) has been incorporated into the design response to help maximise the amount of water that is retained and re-used within the precinct (detailed in Appendix A and B). WSUD methods include the collection of stormwater from the road reserve into raingardens (bioretention systems) which are specifically designed to passively irrigate vegetation as well as intercept and clean the water before it goes into the stormwater system. The new WSUD treatments will be incorporated on Arthur Street and in South Yarra Siding Reserve.

6.4.10 Managing Construction Impacts

Section 3.5 of the UDS sets out the expectations for the management of construction impacts. RIA complies with the requirements of Section 3.5 and the management of construction impacts is discussed in Section 6.5.1 of this Plan, Appendix C (with reference to the UDS design guidelines) and Appendix D (with reference to the EPRs). This includes an Urban Design Management Plan which has been prepared to manage the design of the public interface during construction. Short term impacts experienced during the construction of the Eastern Portal (e.g. traffic and noise disruptions) are managed in accordance with RIA's Construction Environmental Management Plan (CEMP) and relevant EPRs.

6.5 Consistency with Environmental Management Framework

The EMF provides a transparent and integrated governance framework to manage the environmental aspects of the Metro Tunnel.

The Incorporated Document requires that this Plan must demonstrate how the Eastern Portal will be delivered in accordance with the EPRs within the EMF.

The EPRs that are within the EMF are performance-based requirements which define the project-wide environmental outcomes that must be achieved during design, construction and operation of the Metro Tunnel. 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.

The EPRs that are applicable to this Plan have been determined in consultation with the DELWP and the mitigation measures required to manage any potential impacts are documented in Appendix D of this Plan. The requirements of all relevant EPRs are being prepared and progressively implemented during the design, construction and operation, as required.

The key environmental risk areas and corresponding mitigation strategies associated with this Plan are summarised in Table 5 below. A comprehensive assessment against the relevant EPRs is provided in Section 6.5.1 and Appendix D.

Table 5 Risk and impact mitigation strategies associated with the design response

Key Environmental Risk Area	Impact Mitigation Strategy
Water, Air and Noise	Design of the Portal to: <ul style="list-style-type: none"> • Comply with applicable EPRs • Use WSUD in design • Consider the need for ongoing consultation with the key stakeholders.
Trees, land use and the landscape	Design of the Portal to: <ul style="list-style-type: none"> • Comply with applicable EPRs • Protect trees where possible • Reinstall or replace all trees removed during construction • Consider the need for consultation with and notification to affected stakeholders.
Protection of cultural and historical heritage places and values	Design of the Portal to: <ul style="list-style-type: none"> • Comply with applicable EPRs • Consider the need for consultation with and notification to relevant stakeholders • Comply with the approved CHMP and Heritage Management Plan • Avoid known cultural and historic heritage places.
Social and Community, Land Use and Visual Impacts	Design of the Portal to comply with applicable EPRs and design in consultation with Council, the community and key stakeholders.
Traffic and transport management and change	<ul style="list-style-type: none"> • Comply with applicable EPRs • Consult with and notify affected stakeholders • Implementation of Transport Management Plan • Installation of way-finding signage and alternative access plans where impacts may occur.

6.5.1 Managing Construction Impacts

To manage local amenity during the construction process, RIA has prepared and implemented an Environmental Management System (EMS). The EMS consists of a CEMP and Site Environmental Implementation Plans (SEIP), along with aspect specific plans as required by the EPRs.

In addition, RPV has appointed an Independent Environmental Auditor, as required by the EMF, to ensure that the works comply with the EPRs. The Independent Environmental Auditor is responsible for undertaking environmental audits of compliance with the approved CEMP, SEIP and other plans as necessary throughout the construction process.

The aspect-specific plans and management strategies that have been prepared to manage construction impacts are as follows:

- Complaints management system in accordance with the Metro Tunnel Community and Stakeholder Engagement Management Framework (CSEMF) and the Metro Tunnel Business Support Guidelines for Construction (BSGC)
- Communications and Stakeholder Engagement Management Plan (CSEMP) to manage business, resident and local community disruption, including:
 - Business Disruption Plan
 - Respite and Relocation Management Plan
 - Special Events Plan

- Sustainability Management Plan, including
 - Urban Ecology Management Plan
- Surface Water Management Plan
- Urban Design Management Plan (for temporary works)
- Transport Management Plan(s) (TMP), including
 - Worksite Traffic Management Plan(s) (WTMPs)
- Air Quality Management Plan
- Construction Noise and Vibration Management Plan
- Tree Management Plan, including:
 - Individual Tree Protection Plans
- Ground Movement Management Plan (GMMP)
- Groundwater Management Plan (GWMP)
- Heritage Management Plan
- Cultural Heritage Management Plan (CHMP 13967)
- Spoil Management Plan, including
 - Acid Sulfate Soil and Rock Management Sub-Plan
- Pre-construction conditions surveys, where required.

The management plans have been approved by RPV and subject to audit by the Independent Environmental Auditor, as required by the Metro Tunnel EMF.

7 Conclusion

The Plan has been prepared to address the requirements of the Incorporated Document as it relates to the proposed RIA scope of works for the Eastern Portal. Specifically, it also includes a response to the UDS and the EMF.

This Plan presents the scope and extent of the built form of RIA's works in the Development Plan area. Associated construction works will also continue to occur within the Project Land and construction impacts will continue to be managed in accordance with the approved EMF.

The Plan addresses the portal and public realm infrastructure works for the Eastern Portal including, cut and cover tunnelling, decline structures, realignment of existing lines, landscaping and hardscaping works in the public realm.

In accordance with the Incorporated Document this Plan includes:

- Site Layout Plan/s
- Architectural, landscape and public realm plans and elevations
- An assessment of the proposed above ground works against the relevant sections of the approved Urban Design Strategy (UDS) and Environmental Performance Requirements (EPRs) included within the Environmental Management Framework (EMF).

APPENDIX A: EASTERN PORTAL SITE LAYOUT PLANS



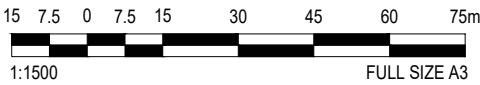
LEGEND

PROJECT LAND

WORKS BY CYP

WARNING
ALL SERVICES SHOWN ON THIS DRAWING ARE APPROXIMATE ONLY AND EXACT LOCATION IS TO BE CONFIRMED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORKS.

NOTE
THESE DRAWINGS ARE INTENDED FOR THE PURPOSE OF DESIGN CONCEPT ONLY AND ARE SUBJECT TO FURTHER DEVELOPMENT.



DEVELOPMENT PLAN SUBMISSION

RIA		H	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		G	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS			
RIA		F	27/11/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		E	29/06/2020	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS			
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS			
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved	

METRO GATEWAY

Franchisee / Lessee

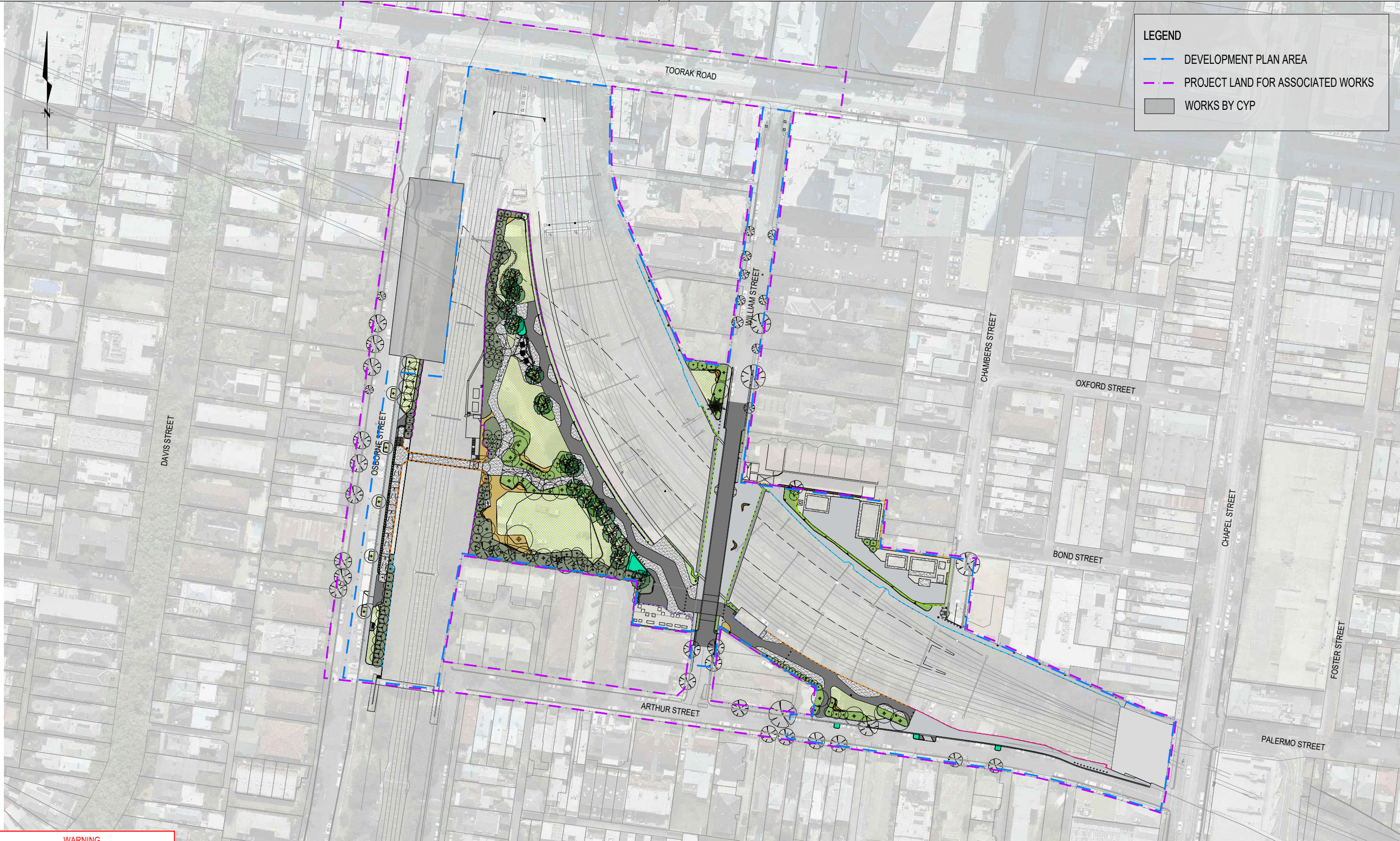
RAIL PROJECTS VICTORIA

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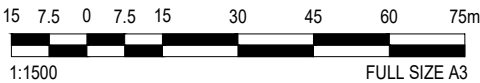
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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0004		Rev H
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN APPENDIX A - OVERALL PLAN			<div><div>PUBLIC TRANSPORT VICTORIA</div><div>PT</div></div> <div>File Name RIA-AEC-SKT-210-910-10-0004</div> <div>Sheet No. 01 of 01</div>		
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Drawing Number	Revision
			Scale 1:1500	Sheet Size A3	



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DEVELOPMENT PLAN SUBMISSION


RIA		H	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		G	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS			
RIA		F	27/11/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		E	29/06/2020	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS			
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS			
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved	



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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN APPENDIX A - OVERALL PLAN			 File Name RIA-AEC-SKT-210-910-10-SYR-0005 Sheet No. 01 of 01		Drawn By W WHITE Designed By W WHITE
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Scale 1:1500	Sheet Size A3
			Checked By A ROBERTS	Approved	Ind. Review
			Drawing Number	Revision	

APPENDIX B: EASTERN PORTAL ARCHITECTURAL, LANDSCAPE, PUBLIC REALM AND URBAN DESIGN PLANS AND ELEVATIONS

(DATE)

(SIGNATURE)

(BLOCK LETTERS)

Certified By:

PLOT DATE: 7/5/2021 10:45:22 AM

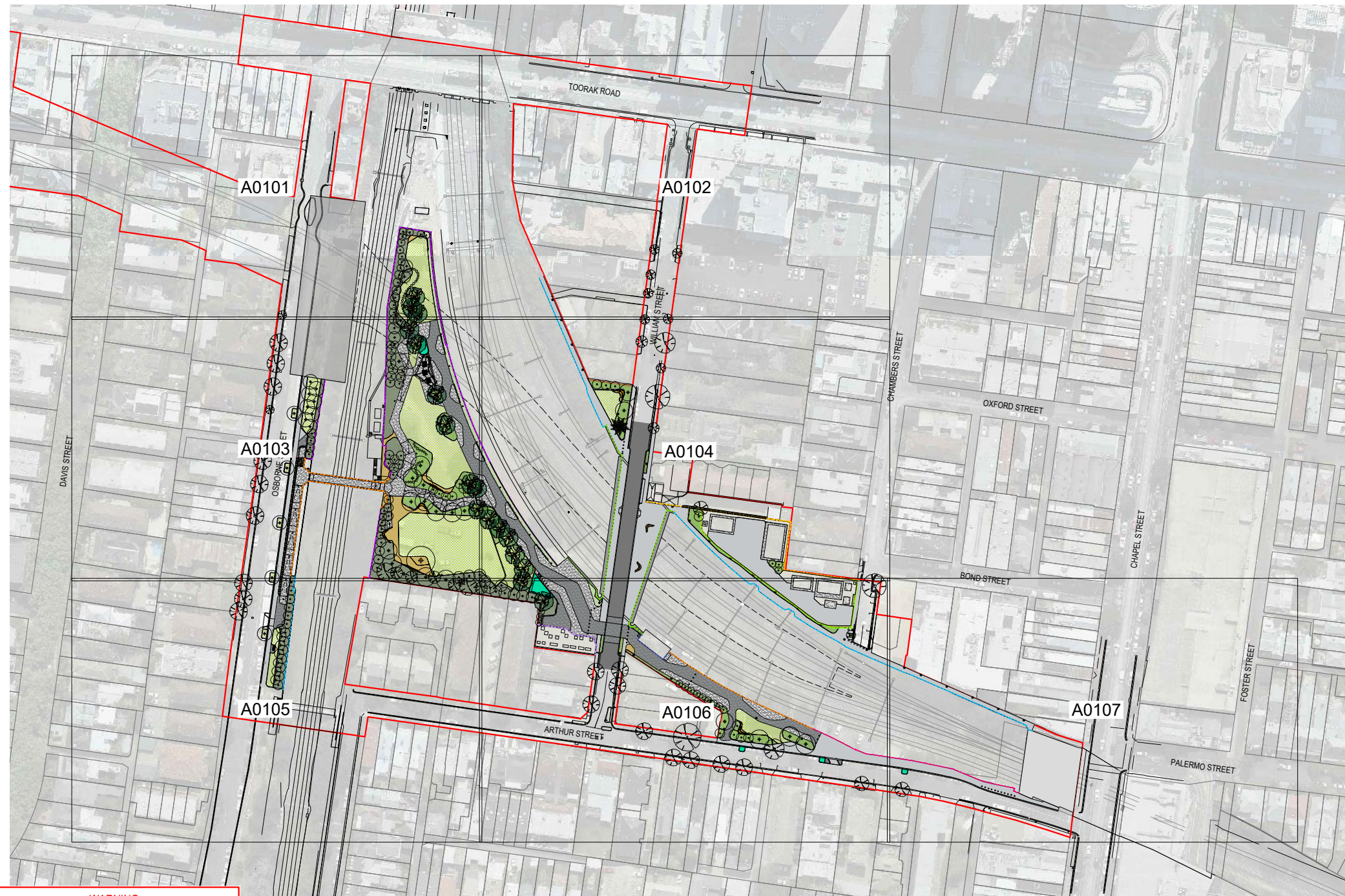
06/30/2021 8:56:19 PM

METRO TUNNEL

RAIL INFRASTRUCTURE ALLIANCE

EASTERN PORTAL DEVELOPMENT PLAN

APPENDIX B: URBAN DESIGN AND LANDSCAPE PLANS



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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved	



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
Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0001		Rev H
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN COVER AND INDEX SHEET			 File Name RIA-AEC-SKT-210-910-10-0001 Sheet No. 01 of 01		Drawn By W WHITE Designed By W WHITE
					Checked By A ROBERTS Ind. Review Ind. Review
Up Location East. North. ID#			Down Location East. North. ID#		Datum MGA Z55
In Serv.			Scale 1:2000		Sheet Size A3
Drawing Number			Revision		


LEGEND


HARDSCAPE


 PROPOSED ASPHALT PAVEMENT


 PROPOSED VEHICLE ASPHALT


 PROPOSED CONCRETE FEATURE PAVEMENT
(EXPOSED AGGREGATE OR EQUIVALENT)


 PROPOSED CONCRETE PAVEMENT
(EXPOSED AGGREGATE OR EQUIVALENT)


 PROPOSED GRANITIC GRAVEL

 CRUSHED GRAVEL

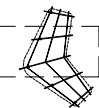
 PROPOSED STEPS

 PROPOSED EDGE


 PROPOSED RETAINING WALL AND SLOPED TERRACES


 PROPOSED RAMP


SHELTER


 PROPOSED OPEN PERGOLA


SOFTSCAPE


 EXISTING TREE


 PROPOSED PALM TREE


 PROPOSED PROMENADE TREE


 PROPOSED TREE


 PROPOSED TREE REPLACING REMOVED TREE


 PROPOSED LAWN

 PROPOSED GARDEN BED
(FEATURE PLANTING)


 PROPOSED GARDEN BED
(MULTI STOREY PLANTING)


 PROPOSED GARDEN BED
(LOW PLANTING)


 PROPOSED WSUD PLANTING
(WATER SENSITIVE URBAN DESIGN)


 PROPOSED RAIN GARDEN
(PASSIVELY IRRIGATED)


FURNITURE


 PROPOSED BENCH / SEAT


 PROPOSED PICNIC BENCH

 PROPOSED SEAT


 PROPOSED LIGHTING


 PROPOSED RUBBISH AND RECYCLE BINS
(REFER COUNCIL DETAIL AND SPECIFICATION)


 PROPOSED BOLLARDS
(REFER COUNCIL DETAIL AND SPECIFICATION)


 PROPOSED INFORMAL NATURAL PLAY ELEMENTS

BOUNDARIES


 PROJECT LAND


 CADASTRAL BOUNDARY


 CYP EASTERN PORTAL DEVELOPMENT PLAN AREA


 EXTENT OF METRO TUNNEL


FENCE / SCREEN


 2.4M HIGH ANTI-THROW SCREEN (HIGH QUALITY)


 2.4M HIGH ANTI-THROW SCREEN (HIGH QUALITY WITH LIMITED VISUAL PERMEABILITY)


 1.2M HIGH ANTI-THROW SCREEN (STANDARD QUALITY) ON TOP OF 1.2M HIGH CONTAINMENT BARRIER


 2.4M HIGH ANTI-THROW SCREEN (STANDARD QUALITY)


 1.2M HIGH BALUSTRADE (HIGH QUALITY)


 1.4M HIGH BALUSTRADE (HIGH QUALITY)


 2.4M HIGH ANTI-THROW SCREEN (HIGH QUALITY)

 2.4M HIGH FENCE (HIGH QUALITY)

 3.3M HIGH ANTI-THROW SCREEN (HIGH QUALITY)

 3.0M HIGH SECURITY FENCE (STANDARD QUALITY)

 PROPERTY FENCE (NON-PERMEABLE, HEIGHT & QUALITY SUBJECT TO CONSULTATION WITH PROPERTY OWNERS)

 3.1M HIGH SCREENING/CLADDING TREATMENT (HIGH QUALITY)

NOTE:

UNLESS OTHERWISE STATED ABOVE, ALL FENCES AND ANTI-THROW SCREENS TO BE VISUALLY PERMEABLE. ALL VEHICLE CONTAINMENT BARRIERS TO BE SOLID UP TO A MAXIMUM 1.2M HIGH.

LANDSCAPE NOTES

1. LOCATION OF PARK FURNITURE SUBJECT TO DETAILED DESIGN IN CONSULTATION WITH RELEVANT STAKEHOLDERS.
2. LIGHTING - LOCATION AND TYPES, SUBJECT TO DESIGN BY CITY OF STONNINGTON AND POWER AUTHORITY.
3. MATERIALS PALETTE IS SUBJECT TO DETAILED DESIGN IN CONSULTATION WITH RELEVANT STAKEHOLDERS.
4. TREES ARE SHOWN AT INDICATIVE MATURE SIZE. TREE SPECIES AND NUMBERS ARE SUBJECT TO FURTHER DESIGN DEVELOPMENT AND CONSULTATION WITH RELEVANT KEY STAKEHOLDERS.
5. INTEGRATED ARTWORK BY OTHERS. LOCATION TO BE DETERMINED AS PART OF ARTIST BRIEF IN CONSULTATION WITH CITY OF STONNINGTON AND RELEVANT KEY STAKEHOLDERS AS PART OF THE METRO TUNNEL ARTS ADVISORY PANEL.
6. MATERIALS AND FINISHES WILL BE ROBUST, AND RESISTANT TO VANDALISM.
7. PATHWAYS INTO AND THROUGH SOUTH YARRA SIDING RESERVE TO BE DISABILITY DISCRIMINATION ACT COMPLIANT AND MEET THE GUIDELINES STATED IN THE VICROADS CYCLE NOTE 21.
8. FENCE AND SCREEN DETAILS SUBJECT TO FURTHER DESIGN DEVELOPMENT AND CONSULTATION WITH KEY STAKEHOLDERS.
9. RAILWAY INFRASTRUCTURE WITHIN THE RAIL CORRIDOR IS INDICATIVE AND SUBJECT TO STAKEHOLDER REQUIREMENT.
10. INFORMAL NATURAL PLAY ELEMENTS SUBJECT TO FURTHER DESIGN DEVELOPMENT WITH RELEVANT STAKEHOLDERS.

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Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved




Franchisee / Lessee



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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN LEGEND AND NOTES			 File Name RIA-AEC-SKT-210-910-10-0002 Sheet No. 01 of 01		Drawn By W WHITE Designed By W WHITE
					Checked By A ROBERTS Ind. Review
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Approval Date	Revision
			Scale NTS	Sheet Size A3	Drawing Number



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15 7.5 0 7.5 15 30 45 60 75m

1:1500 FULL SIZE A3

DEVELOPMENT PLAN SUBMISSION

METRO GATEWAY

Franchisee / Lessee

RAIL PROJECTS VICTORIA

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Project Title

RAIL INFRASTRUCTURE ALLIANCE

ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN SITE MASTERPLAN

Up Location East. North. ID#

Down Location East. North. ID#

Datum MGA Z55

Project Drawing Number

RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0003

File Name RIA-AEC-SKT-210-910-10-0003

Sheet No. 01 of 01

In Serv.

Scale 1:1500

Sheet Size A3

Rev H

Drawn By W WHITE

Designed By W WHITE

Checked By A ROBERTS

Ind. Review

Approved

Approval Date

Drawing Number

Revision



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1:500

5 2.5 0 2.5 5 10 15 20 25m

FULL SIZE A3

CONTINUES ON SKT. SYR-A0103

CONTINUES ON SKT. SYR-A0102

DEVELOPMENT PLAN SUBMISSION

METRO

GATEWAY

RAIL PROJECTS

VICTORIA

Franchisee / Lessee

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Project Title

RAIL INFRASTRUCTURE ALLIANCE

Project Drawing Number

RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0101

Rev

F

ARCHITECTURAL

SOUTH YARRA

EASTERN PORTAL

DEVELOPMENT PLAN

LANDSCAPE PLAN - SHEET 01 OF 07

Up Location

East.

North.

ID#

Down Location

East.

North.

ID#

Datum

MGA Z55

File Name

RIA-AEC-SKT-210-910-10-0101

Sheet No.

01 of 01

In Serv.

Scale 1:500

Sheet Size A3

Drawn By

W WHITE

Checked By

A ROBERTS

Approved

Drawing Number

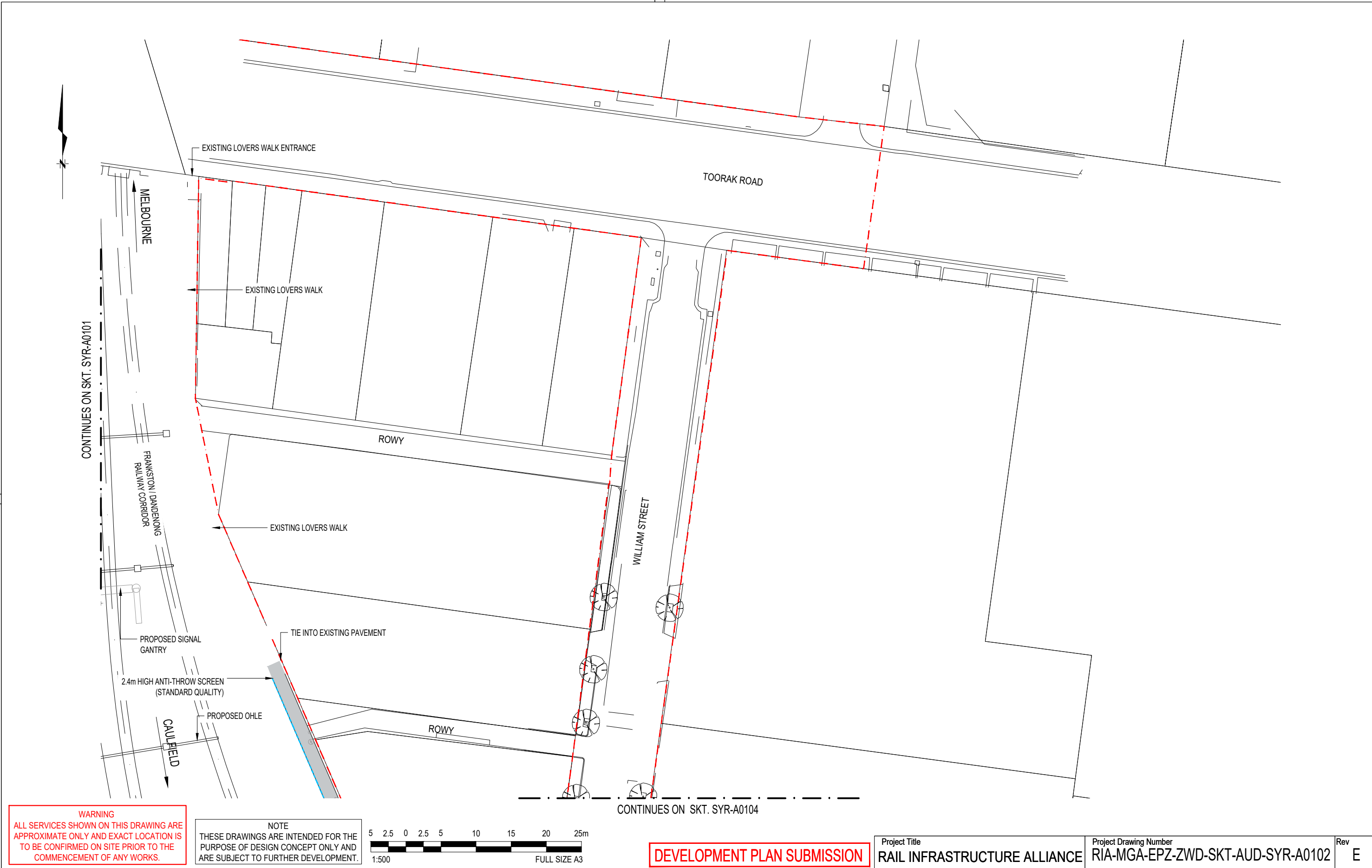
Designed By

W WHITE

Ind. Review

Approval Date

Revision



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Certified By:

(BLOCK LETTERS)

(SIGNATURE)

(DATE)

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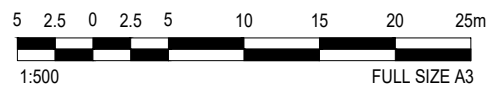
06/30/2021 9:18:57 PM

NOTE: DESIGNS SHOWN FOR OSBORNE STREET BRIDGE ARE SUBJECT TO FURTHER DEVELOPMENT WITH UDAAP AND OTHER KEY STAKEHOLDERS IN THE DETAILED DESIGN STAGE



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DEVELOPMENT PLAN SUBMISSION

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		F	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

Franchisee / Lessee

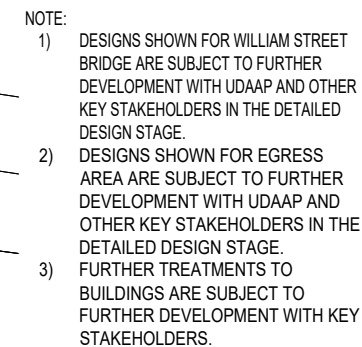
RAIL PROJECTS VICTORIA

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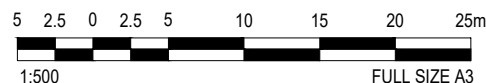
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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0103		Rev F
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN LANDSCAPE PLAN - SHEET 03 OF 07			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-0103		Designed By W WHITE
Down Location East. North. ID#			Sheet No. 01 of 01		Checked By A ROBERTS
Datum MGA Z55			In Serv.		Approved
Scale 1:500			Sheet Size A3		Approval Date
			Drawing Number		Revision



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DEVELOPMENT PLAN SUBMISSION


RIA		H	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		G	26/05/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		F	27/11/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	29/06/2020	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved



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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0104			Rev H	
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN LANDSCAPE PLAN - SHEET 04 OF 07					Drawn By W WHITE	Designed By W WHITE	
					Checked By A ROBERTS	Ind. Review	
			File Name RIA-AEC-SKT-210-910-10-0104		Approved	Approval Date	
			Sheet No. 01 of 01		Drawing Number		Revision
			In Serv.				
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	Scale N/A	Sheet Size A3			



WARNING

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NOTE

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1:500

5 2.5 0 2.5 5 10 15 20 25m

FULL SIZE A3

DEVELOPMENT PLAN SUBMISSION

METRO GATEWAY

Franchisee / Lessee

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Project Title

RAIL INFRASTRUCTURE ALLIANCE

Project Drawing Number

RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0105

Rev

F

ARCHITECTURAL

SOUTH YARRA

EASTERN PORTAL

DEVELOPMENT PLAN

LANDSCAPE PLAN - SHEET 05 OF 07

Up Location

East.

North.

ID#

Down Location

East.

North.

ID#

Datum

MGA Z55

Public Transport Victoria PT

File Name

RIA-AEC-SKT-210-910-10-0105

Sheet No.

01 of 01

Drawn By

W WHITE

Checked By

A ROBERTS

Approved

Drawing Number

Designed By

W WHITE

Ind. Review

Approval Date

Revision

In Serv.

Scale

N/A

Sheet Size

A3

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		F	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

Certified By:

(BLOCK LETTERS)

(SIGNATURE)

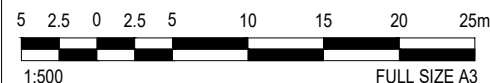
(DATE)

PLOT DATE: 7/5/2021 11:02:03 AM

06/30/2021 9:20:01 PM

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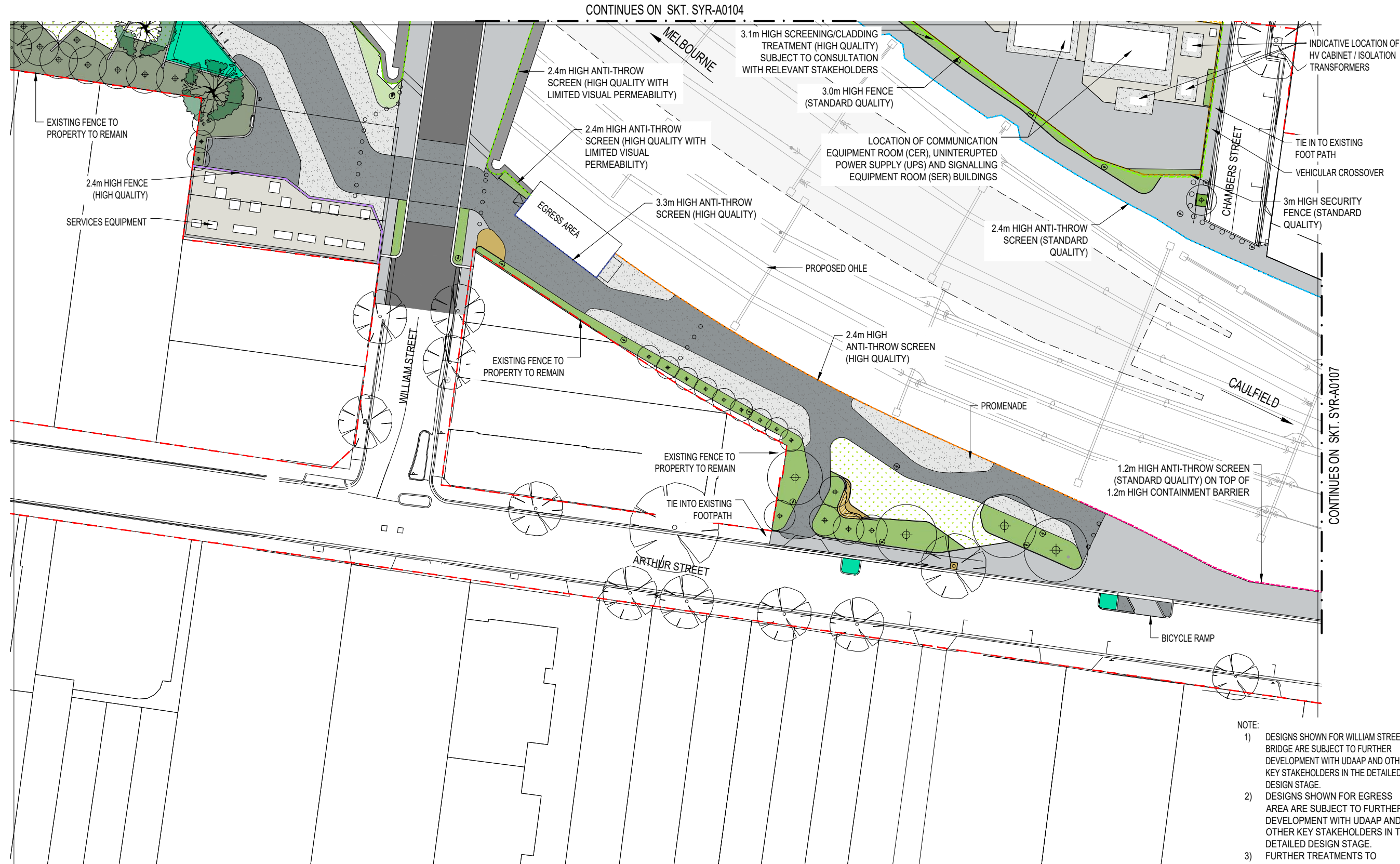
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Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0106		Rev H
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN LANDSCAPE PLAN - SHEET 06 OF 07			PUBLIC TRANSPORT VICTORIA PT		
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	File Name RIA-AEC-SKT-210-910-10-0106	Drawn By W WHITE	Designed By W WHITE
			Sheet No. 01 of 01	Checked By A ROBERTS	Ind. Review
			In Serv.	Approved	Approval Date
			Scale N/A	Sheet Size A3	Drawing Number
			Revision		

NOTE:

- DESIGNS SHOWN FOR WILLIAM STREET BRIDGE ARE SUBJECT TO FURTHER DEVELOPMENT WITH UDAAP AND OTHER KEY STAKEHOLDERS IN THE DETAILED DESIGN STAGE.
- DESIGNS SHOWN FOR EGRESS AREA ARE SUBJECT TO FURTHER DEVELOPMENT WITH UDAAP AND OTHER KEY STAKEHOLDERS IN THE DETAILED DESIGN STAGE.
- FURTHER TREATMENTS TO BUILDINGS ARE SUBJECT TO FURTHER DEVELOPMENT WITH KEY STAKEHOLDERS.





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5 2.5 0 2.5 5 10 15 20 25m

1:500 FULL SIZE A3

DEVELOPMENT PLAN SUBMISSION

METRO

GATEWAY

Franchisee / Lessee

RAIL PROJECTS

VICTORIA

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Project Title

RAIL INFRASTRUCTURE ALLIANCE

Project Drawing Number

RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0107

Rev

E

ARCHITECTURAL

SOUTH YARRA

EASTERN PORTAL

DEVELOPMENT PLAN

LANDSCAPE PLAN - SHEET 07 OF 07

Up Location

East.

North.

ID#

Down Location

East.

North.

ID#

Datum

MGA Z55

PUBLIC TRANSPORT VICTORIA

PT

File Name

RIA-AEC-SKT-210-910-10-0107

Sheet No.

01 of 01

In Serv.

Scale

N/A

Sheet Size

A3

Drawn By

W WHITE

Checked By

A ROBERTS

Approved

Drawing Number

Designed By

W WHITE

Ind. Review

Approval Date

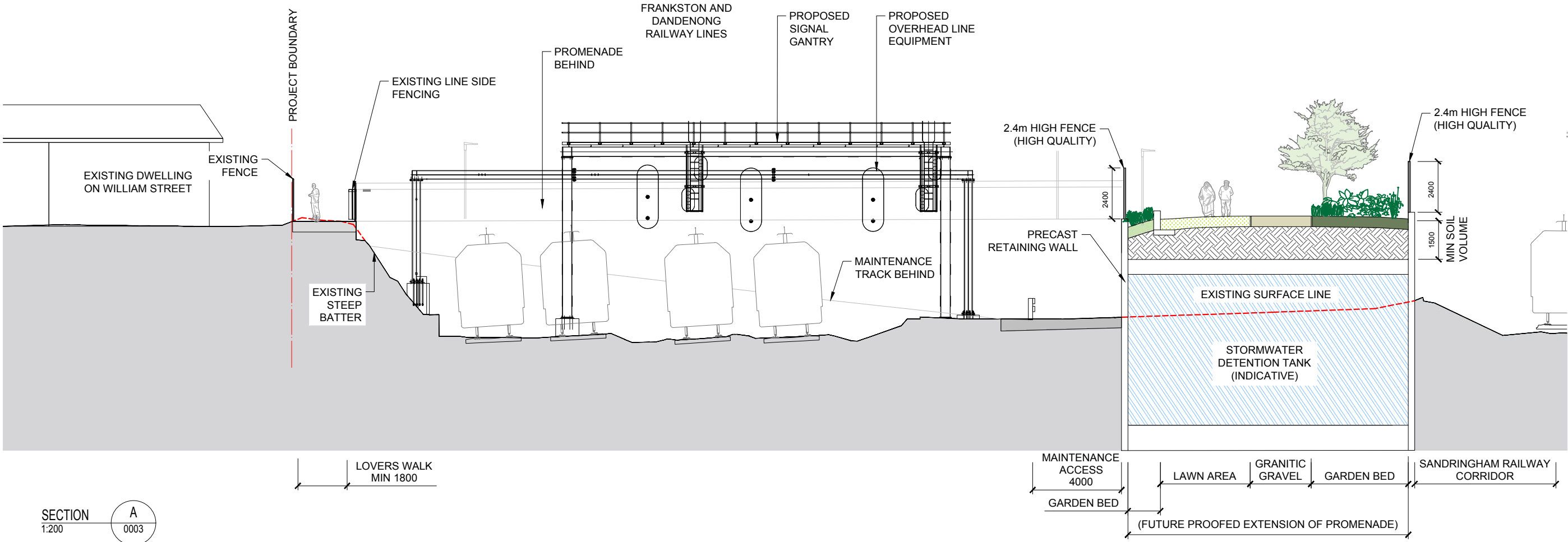
Revision

RIA	E	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA	D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS			
RIA	C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS			
RIA	B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
RIA	A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS			
Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved

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

PLOT DATE: 7/5/2021 11:06:46 AM

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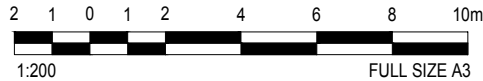


SECTION
1:200

A
0003

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DEVELOPMENT PLAN SUBMISSION

Revised By	In Serv	Rev.	Date	Description	Designed	Checked	Ind. Review	Approved
RIA		F	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

METROGATEWAY

Franchisee / Lessee

RAIL PROJECTS VICTORIA

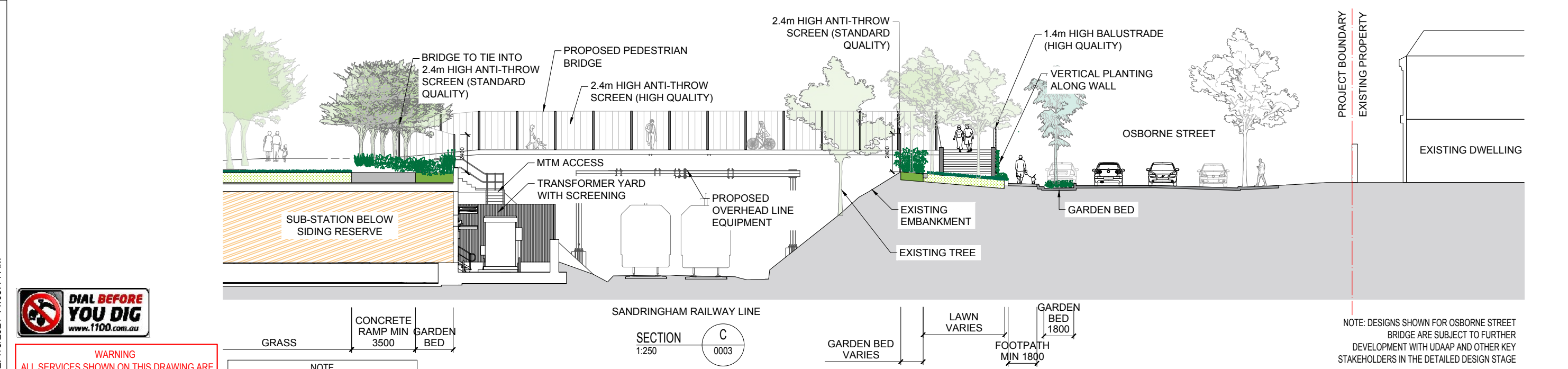
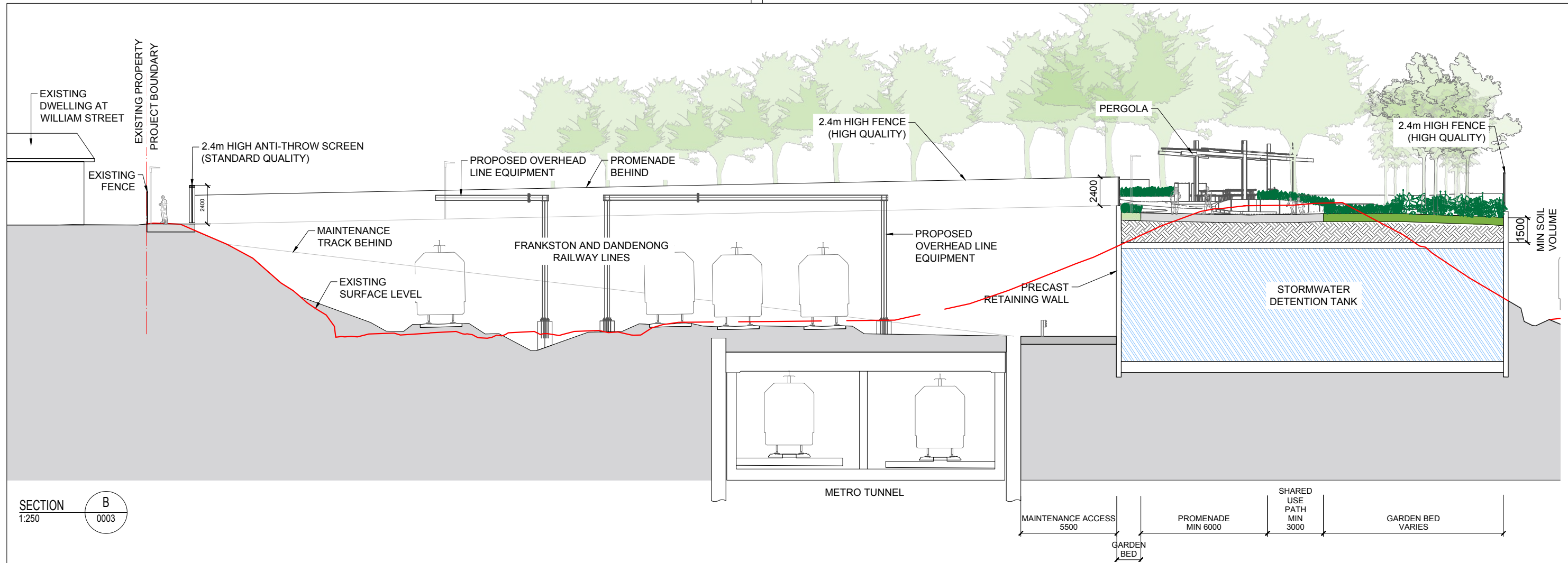
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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN CROSS SECTIONS - SHEET 01 OF 05			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-0301 Sheet No. 01 of 01		Designed By W WHITE
Down Location East. North. ID#			In Serv.		Ind. Review
Datum MGA Z55			Scale 1:200		Approval Date
			Sheet Size A3		Approval Date
			Drawing Number		Revision

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RIA		F	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		



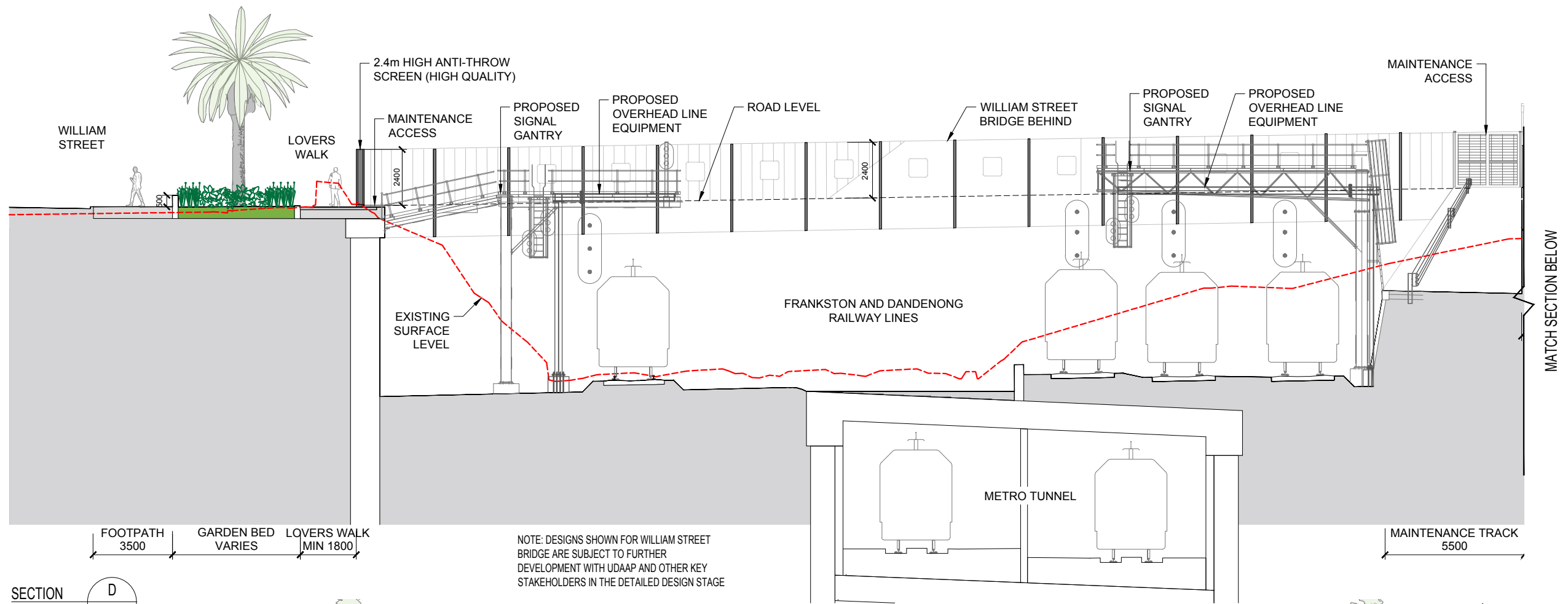
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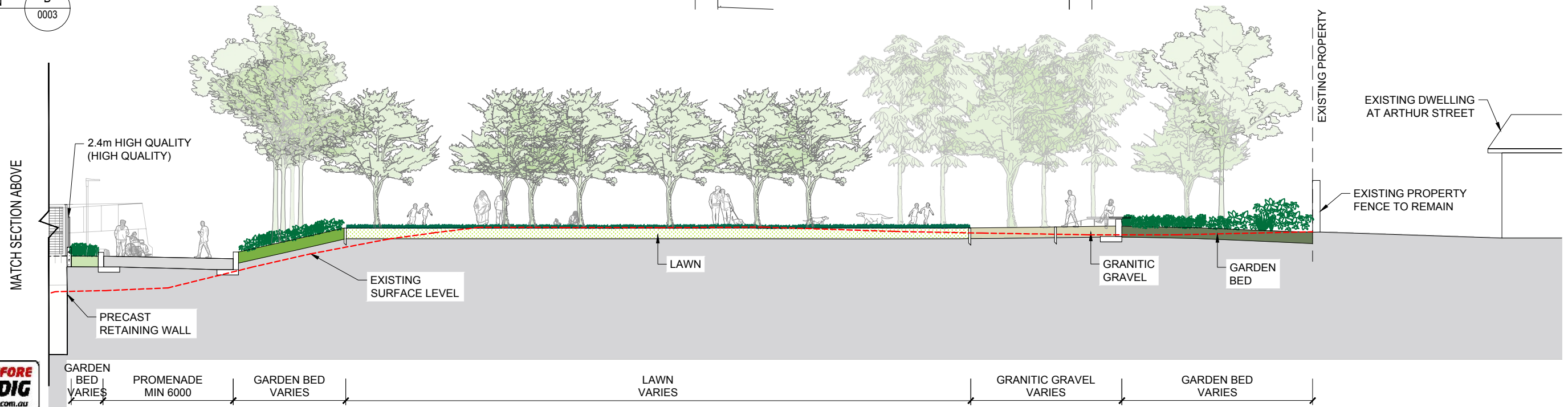
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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN CROSS SECTIONS - SHEET 02 OF 05			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-0302		Designed By W WHITE
Down Location East. North. ID#			Sheet No. 01 of 01		Checked By A ROBERTS
Datum MGA Z55			In Serv.		Ind. Review
Scale 1:250			Sheet Size A3		Approved
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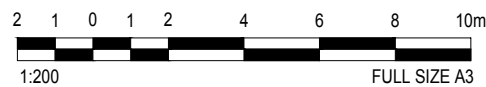


SECTION
1:200
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0003



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RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		



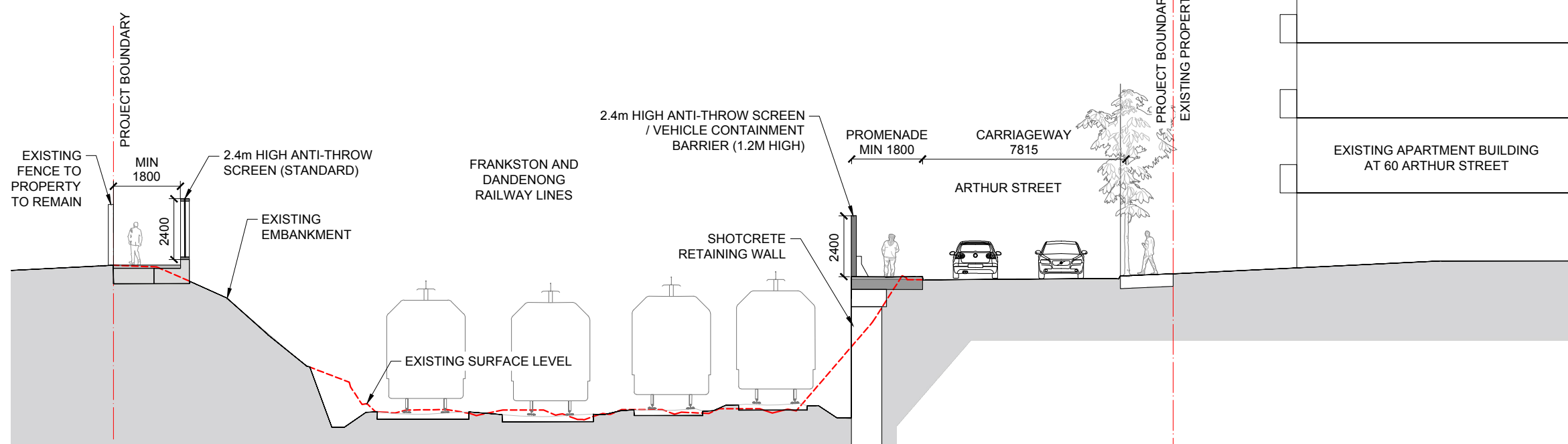
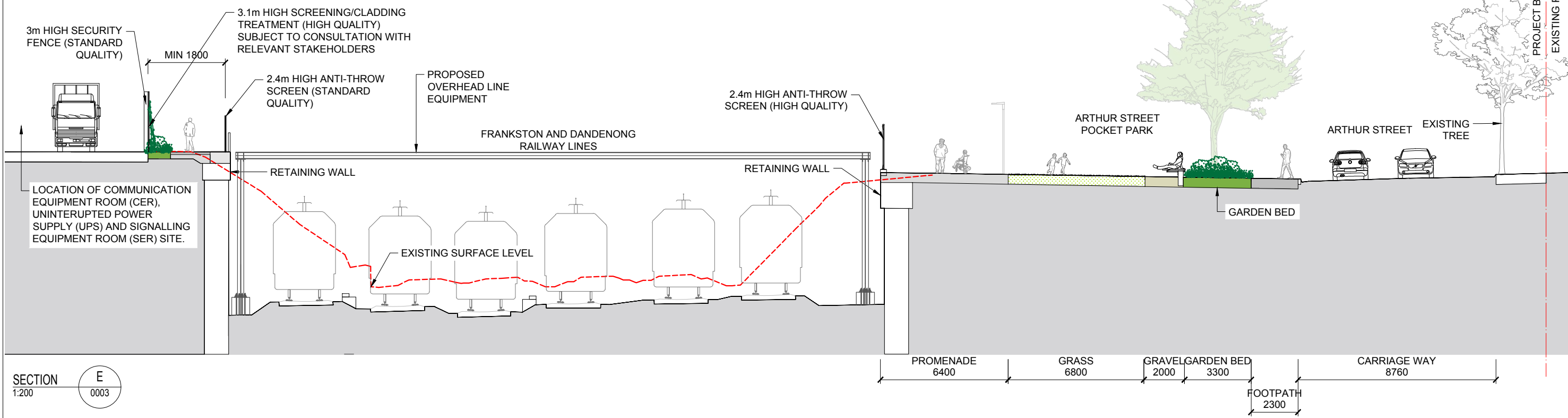
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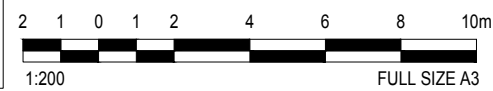
Project Title RAIL INFRASTRUCTURE ALLIANCE			Project Drawing Number RIA-MGA-EPZ-ZWD-SKT-AUD-SYR-A0303		Rev F
ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN CROSS SECTIONS - SHEET 03 OF 05			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE Designed By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-0303 Sheet No. 01 of 01		Checked By A ROBERTS Ind. Review
Down Location East. North. ID#			In Serv. Scale 1:200 Sheet Size A3		Approved Approval Date
Datum MGA Z55			Drawing Number		Revision

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RIA		G	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		F	27/11/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	29/06/2020	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

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ARCHITECTURAL			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
SOUTH YARRA			Checked By A ROBERTS		Designed By W WHITE
EASTERN PORTAL			Approved		Ind. Review
DEVELOPMENT PLAN			Approval Date		
CROSS SECTIONS - SHEET 04 OF 05			Drawing Number		Revision
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Scale 1:200	Sheet Size A3
			File Name RIA-AEC-SKT-210-910-10-0304		
			Sheet No. 01 of 01		

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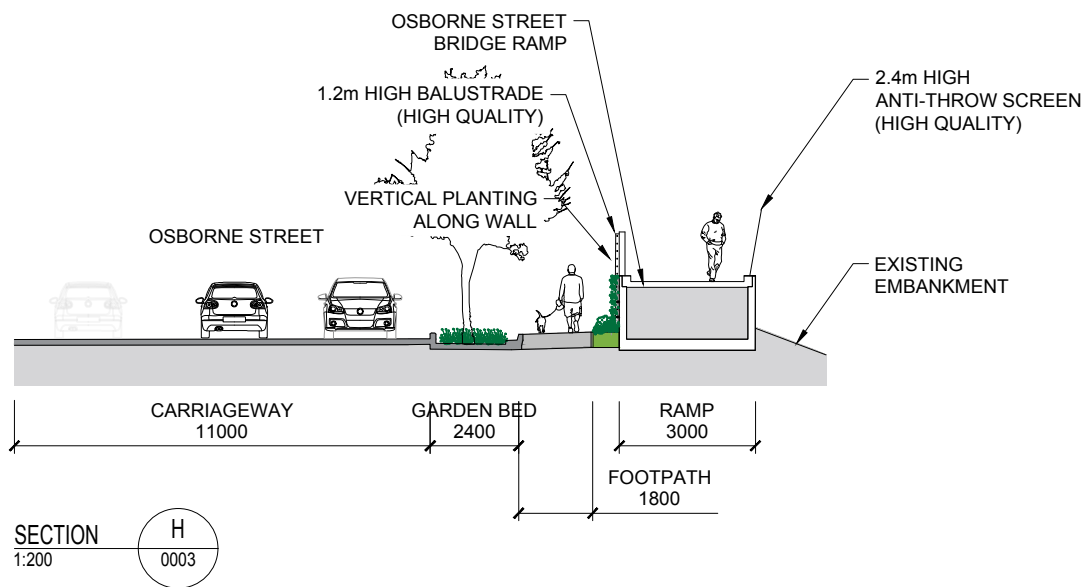
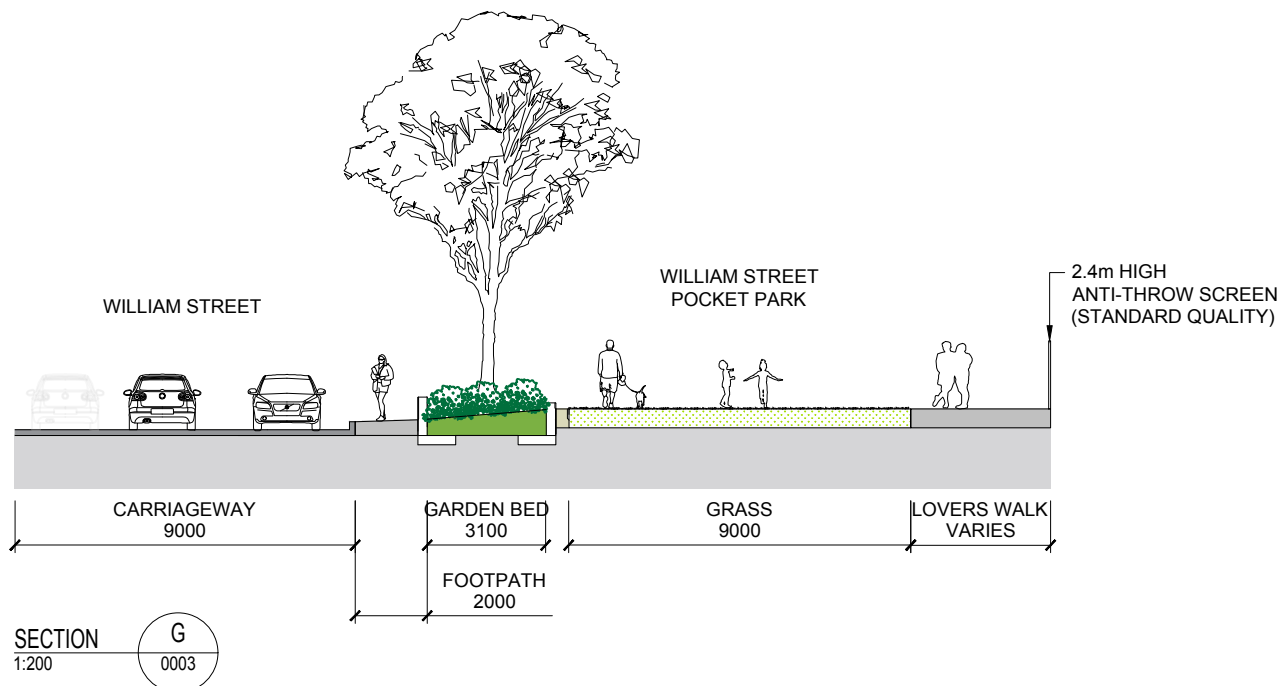
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RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

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GATEWAY

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RAIL PROJECTS

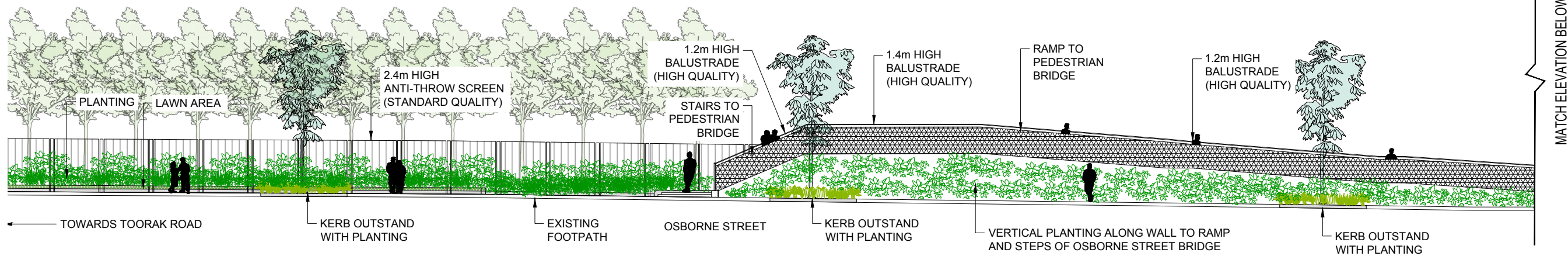
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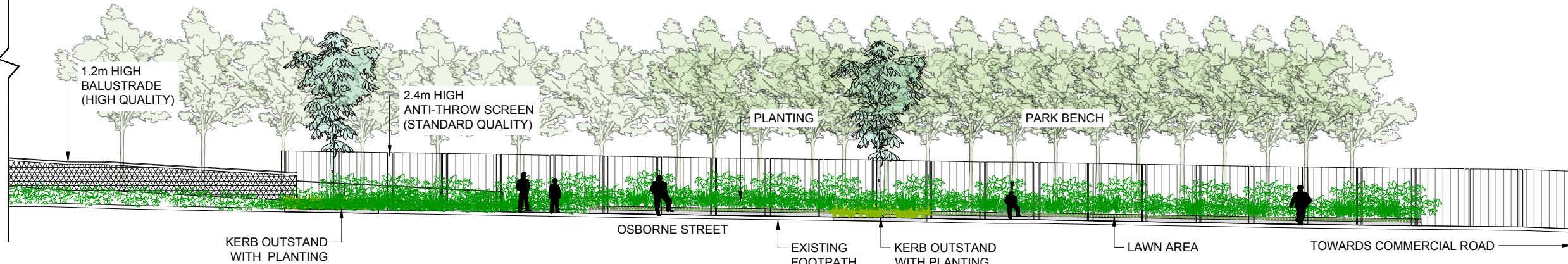
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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN CROSS SECTIONS - SHEET 05 OF 05			<div><div><div>PUBLIC TRANSPORT VICTORIA</div><div>PT</div></div><div>File Name RIA-AEC-SKT-210-910-10-SYR-0305</div><div>Sheet No. 01 of 01</div></div>		Drawn By W WHITE Checked By A ROBERTS Approved Approval Date
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv. Scale 1:200	Sheet Size A3	Drawing Number Revision



OSBORNE STREET ELEVATION
1:200
I
A0003

MATCH ELEVATION ABOVE



NOTE: DESIGNS SHOWN FOR OSBORNE STREET
BRIDGE ARE SUBJECT TO FURTHER
DEVELOPMENT WITH UDAAP AND OTHER KEY
STAKEHOLDERS IN THE DETAILED DESIGN STAGE



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ARCHITECTURAL			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
EASTERN PORTAL DEVELOPMENT PLAN ELEVATIONS - SHEET 01 OF 03			File Name RIA-AEC-SKT-210-910-10-0401		Designed By W WHITE
Up Location East. North. ID#			Sheet No. 01 of 01		Checked By A ROBERTS
Down Location East. North. ID#			In Serv.		Ind. Review
Datum MGA Z55			Scale 1:200		Approval Date
			Sheet Size A3		Drawing Number
					Revision

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RIA		F	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		E	26/02/2021	DRAFT AMENDMENT FOR CONSULTATION	W WHITE	A ROBERTS		
RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		

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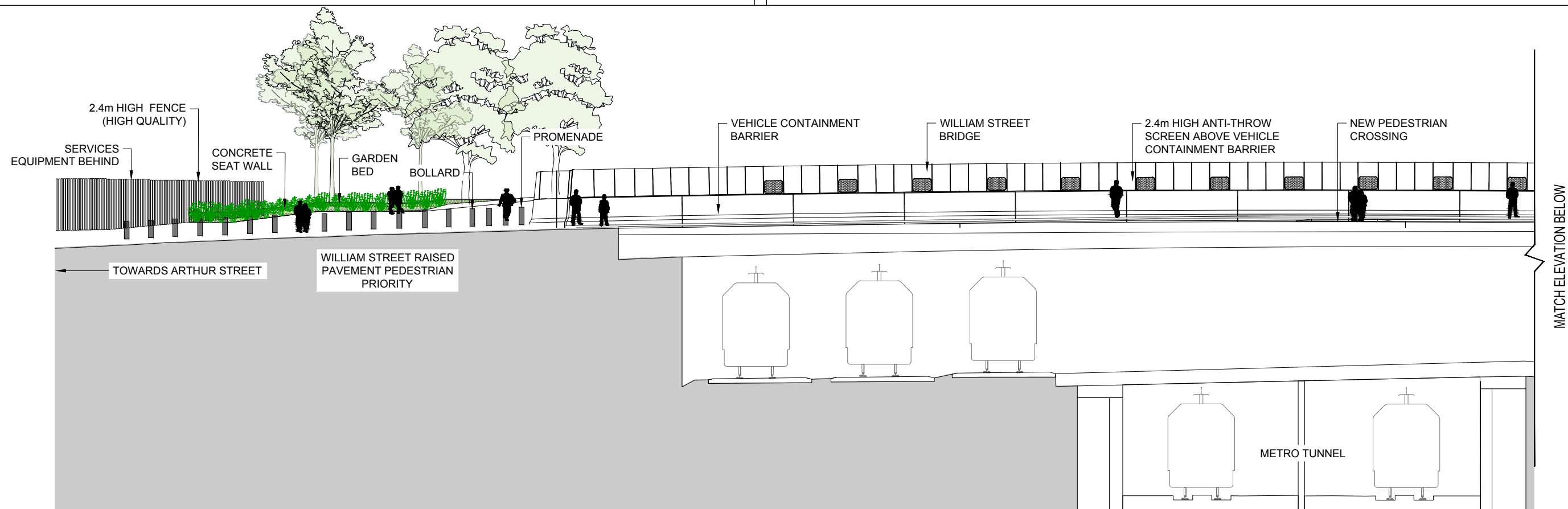
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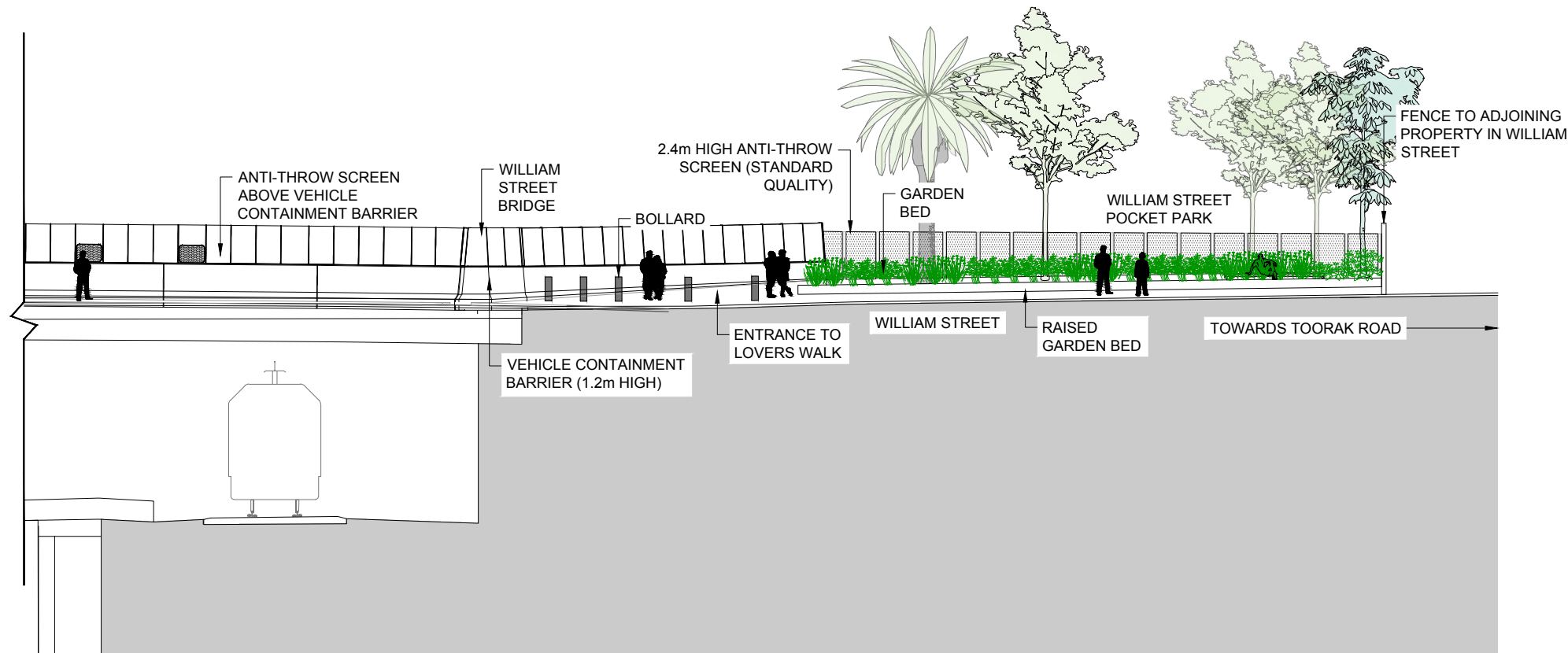
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WILLIAM STREET ELEVATION
1:200

J
A0003



MATCH ELEVATION ABOVE



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2 1 0 1 2 4 6 8 10m
1:200 FULL SIZE A3

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RIA		D	13/05/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		C	17/02/2020	DRAFT AMENDMENT FOR CONSULTATION	R RUSSELL	A ROBERTS		
RIA		B	11/04/2019	FINAL ISSUE FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		
RIA		A	06/03/2019	ISSUED FOR DEVELOPMENT PLAN	R RUSSELL	A ROBERTS		



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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN ELEVATIONS - SHEET 02 OF 03			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-SYR-0402		Designed By W WHITE
Down Location East. North. ID#			Sheet No. 01 of 01		Checked By A ROBERTS
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					Revision

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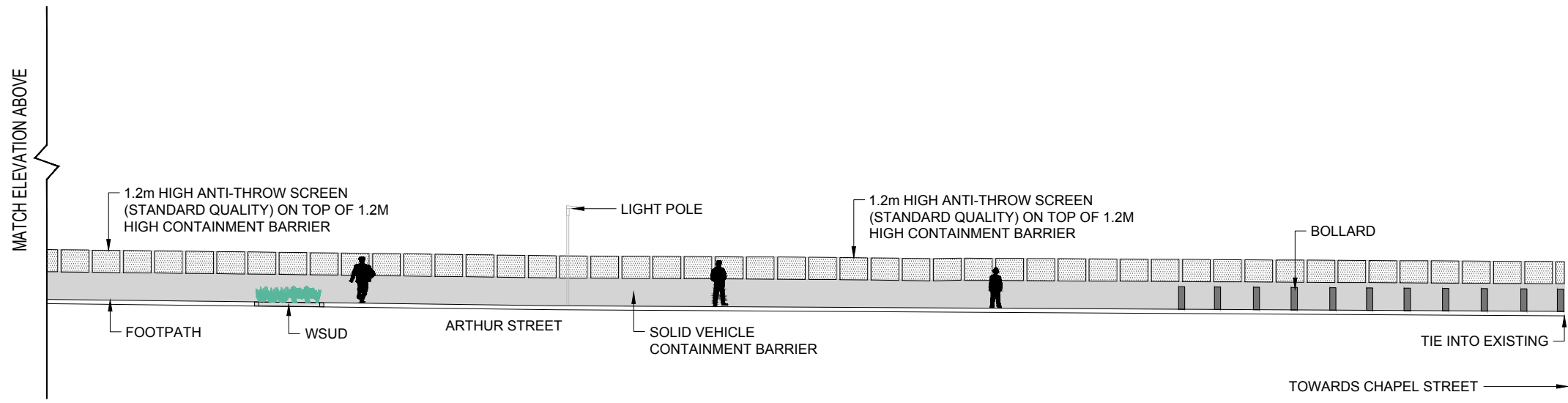
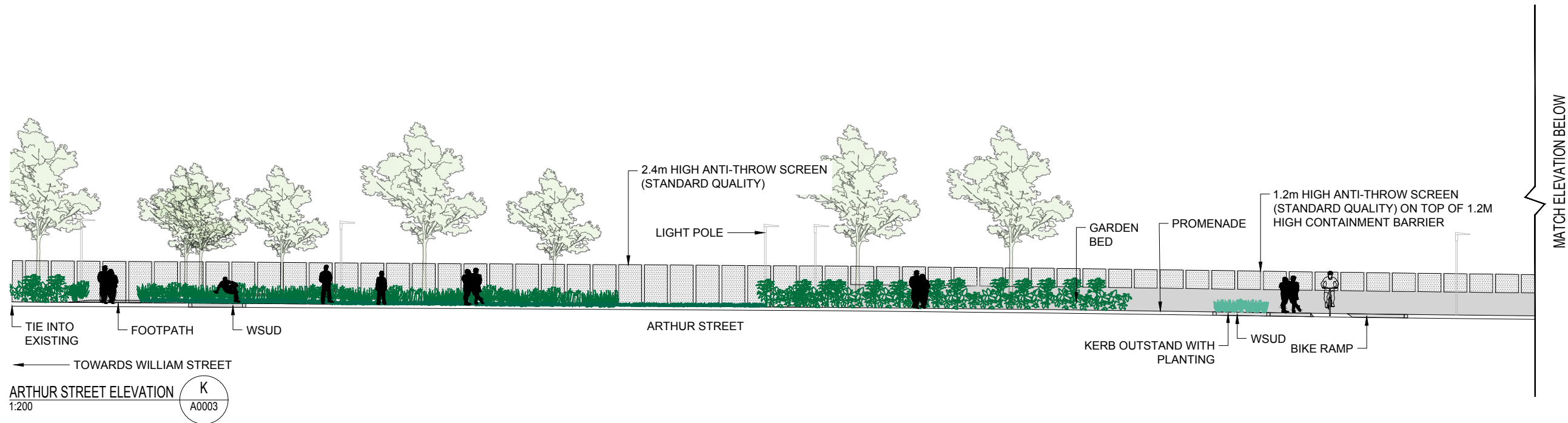
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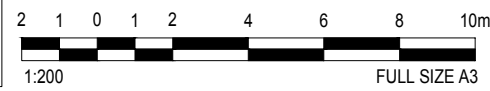
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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN ELEVATIONS - SHEET 03 OF 03			 File Name RIA-AEC-SKT-210-910-10-SYR-0403 Sheet No. 01 of 01		Drawn By R RUSSELL Designed By R RUSSELL Checked By A ROBERTS Ind. Review Approved Approval Date Drawing Number Revision
Up Location East. North. ID#	Down Location East. North. ID#	Datum MGA Z55	In Serv.	Scale 1:200	Sheet Size A3

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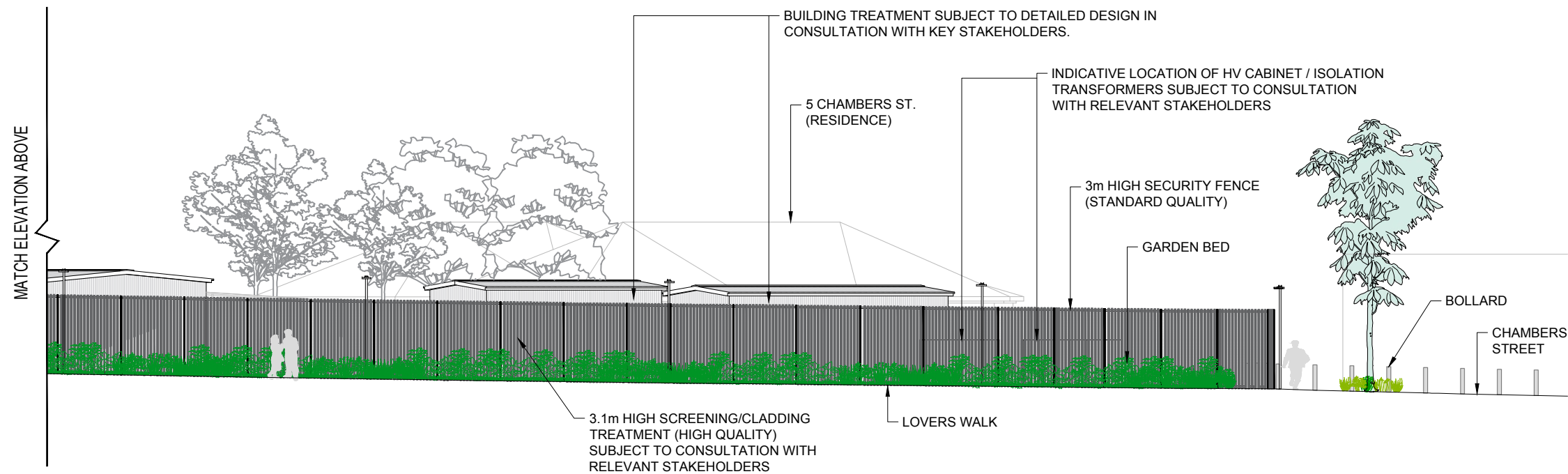
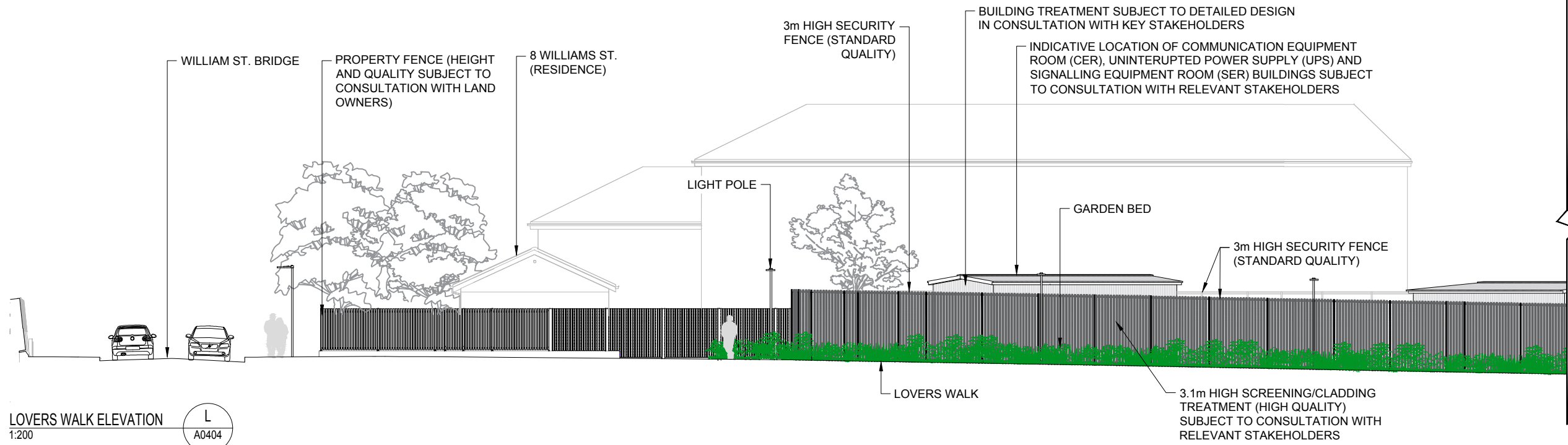
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RIA		C	30/06/2021	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		B	27/11/2020	ISSUED FOR DEVELOPMENT PLAN	W WHITE	A ROBERTS		
RIA		A	29/06/2020	DRAFT AMENDMENT FOR CONSULTATION	T MACDONALD	A ROBERTS		



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ARCHITECTURAL SOUTH YARRA EASTERN PORTAL DEVELOPMENT PLAN ELEVATIONS - SHEET 04 OF 04			PUBLIC TRANSPORT VICTORIA PT		Drawn By W WHITE Designed By W WHITE
Up Location East. North. ID#			File Name RIA-AEC-SKT-210-910-10-0404 Sheet No. 01 of 01		Checked By A ROBERTS Ind. Review
Down Location East. North. ID#			In Serv. Scale 1:200 Sheet Size A3		Approved Approval Date
Datum MGA Z55			Drawing Number		Revision

APPENDIX C: EASTERN PORTAL URBAN DESIGN STRATEGY DESIGN RESPONSE

Table 6 Eastern Portal Urban Design Strategy Objectives

Section	Clause	Design Guideline	Development Plan Response
3.1	Make New and Improved Connections		
	3.1.c.1	<ul style="list-style-type: none"> Station precinct environments must support safe and predictable movements that are prioritised along the following transport hierarchy: <ul style="list-style-type: none"> — 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. 	<p>The Eastern Portal sits south of the South Yarra station, separated by Toorak Road. The design response supports safe and predictable movement and satisfies Clause 3.1.c.1 by:</p> <ul style="list-style-type: none"> Creating new pedestrian and cycling links, including the new Promenade adjacent to South Yarra Siding Reserve and new Arthur Street pocket park, that will connect with existing pedestrian and cyclist routes and facilitate any future pedestrian link to Toorak Road (and South Yarra Station). Further, the redesign of the William Street bridge and the new universally accessible access bridge from Osborne Street to South Yarra Siding Reserve emphasise safe and predictable movement. Creating new, maintaining and enhancing existing pedestrian and cycling access, including: <ul style="list-style-type: none"> — The existing pedestrian and cycling link between Osborne Street and the Yarra River including Toorak Road and Yarra Street — The existing pedestrian link between Toorak Road and Chapel Street (Lovers Walk) — The existing pedestrian and cycling link along William Street — The existing pedestrian and cycling link along Arthur Street — The new pedestrian and cycling link between Osborne Street and Chapel Street, through the South Yarra Siding Reserve Ensuring that works within the Development Plan area provide for emergency vehicle access to local streets and South Yarra Siding Reserve. Ensuring pedestrian routes are designed to levels that can in future enhance connections between South Yarra station and other public transport modes.

Section	Clause	Design Guideline	Development Plan Response
	3.1.c.2	<p>Provide for integration of all transport modes in line with the modal hierarchy above:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.1.c.2 by improving the coherence and integration of cycling and pedestrian connections south of Toorak Road. This is achieved by:</p> <ul style="list-style-type: none"> • Creating new pedestrian and cycling links, including the new Promenade adjacent to South Yarra Siding Reserve and Arthur Street, that will connect with existing pedestrian and cyclist routes on Chapel Street and provide for its future extension to Toorak Road. • Maintaining and where possible enhancing existing pedestrian links, including the widening of pedestrian space along the William Street bridge, the provision of more visual permeability along Lovers Walk, and the provision of more even and level surfaces to renewed sections of existing pedestrian routes. • Ensuring the use of materials and landscape are consistent across the precinct and provide visual connections and wayfinding, encouraging enhanced, new and future movements for active transport modes. • Providing a design resolution that does not impact the existing integration of transport modes around South Yarra station, and which anticipates a future connection to the station (via Toorak Road).

Section	Clause	Design Guideline	Development Plan Response
	3.1.c.3	<p>Minimise conflicts between transport modes and intersecting routes of travel:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.1.c.3 through:</p> <ul style="list-style-type: none"> • The continuity of pavement materials for pedestrian spaces that identify the priority given to pedestrians and cyclists along the Promenade, especially where it crosses William Street, along the William Street Bridge and along Arthur Street. • Provision of clearly defined and paved pedestrian and cycling connections around the edge and through the open space of South Yarra Siding Reserve to provide separation between users moving through the Precinct and users of South Yarra Siding Reserve. • The use of visually permeable materials for throw screens and integrating safety barriers into bridges and rail trench edges to maximise pedestrian space, reduce clutter and improve safety. Further, the emphasis on local design influences ensures integration within the Metro Tunnel and between the Metro Tunnel and the local area. • Fencing surrounding the communication cabinets has been chamfered where possible to minimise obstruction to pedestrian and cycle flows and improve sightlines from William Street to the Promenade. • Ensuring that conflicts between pedestrian movements along Lovers Walk and vehicular access to the SER/CER compound area is minimised. • The siting of above ground infrastructure seeks to avoid creating any unnecessary barriers or obstructions to pedestrian flows and visually permeable materials have been selected for fencing and throw screens where possible to strengthen visual connections across the precinct. <p>Pedestrian access surrounding the Eastern Portal is addressed in Section 6.4.3 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.1.c.4	<p>Support ease of wayfinding:</p> <ul style="list-style-type: none"> • Create well-structured paths and clear sightlines so that wayfinding is intuitive and reliance on directional signage is minimised. • Orient station 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 Metro Tunnel and directional signage used in surrounding precincts. 	<p>Council has already undertaken a number of wayfinding initiatives throughout the <i>Chapel ReVision Structure Plan 2013 – 2031</i> area to assist pedestrians, cyclists and users of the precinct and has developed a comprehensive suite of public realm materials and signage.</p> <p>The design response continues the palette established by Council and enhances wayfinding through:</p> <ul style="list-style-type: none"> • The use of distinctive tree planting along the Promenade to make this route more visually prominent. • The use of a range of pavement materials and patterns that emphasize the prominence of the Promenade in the pedestrian network. • The use of materials and landscaping to provide visual cues and definition within the precinct. • Allowing for direct pedestrian pathways that provide for the most convenient route through larger spaces. • Utilising lighting within structures and key locations to inform the wayfinding landscape of the precinct in the early morning and after dark. • Provision of visually permeable fencing and chamfered edges where relevant to ensure clear sightlines are provided across the precinct and contribution to the openness of pathways such as Lovers Walk.

Section	Clause	Design Guideline	Development Plan Response
	3.1.c.5	<p>Create and improve strategic walking and cycling routes that connect the stations into surrounding areas:</p> <ul style="list-style-type: none"> • 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 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. 	<p>The design response recognises and improves key walking and cycling routes along the railway corridor between Toorak Road and Chapel Street and likely future needs by:</p> <ul style="list-style-type: none"> • Reinstating Lovers Walk and maintaining that pedestrian connection between Toorak Road and Chapel Street on completion of the Project. Lovers Walk has also been widened and landscaped where possible in order to improve the amenity of the pathway. • Creating a new Promenade for pedestrians and cyclists along the southern edge of South Yarra Siding Reserve and Arthur Street that will help meet anticipated long-term pedestrian and cyclist demands between Chapel Street and Toorak Road, particularly once a final connection is made to Toorak Road from South Yarra Siding Reserve. This connection is currently proposed by a planning permit application that has been approved by the Council at 162 & 164 Toorak Road for a new development. • Orientating the ramp of Osborne Street bridge to the south to provide for a future pedestrian and cycling link from the Yarra River, via Yarra Street and South Yarra Siding Reserve, to Prahran in line with the City of Stonnington's <i>Cycling Strategy</i> (2020-2025). • Designing a pedestrian-prioritised zone and crossing on William Street in areas that are also shared by vehicular traffic. • Ensuring that all new pedestrian pathways throughout the precinct are generous and provide suitable width and levels for universal access.
	3.1.c.6	<p>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.</p>	<p>The design provides for universal access from Osborne Street to South Yarra Siding Reserve, William Street and Arthur Street for those with restricted mobility. It also facilitates universally accessible connections to be made to Toorak Road and Chapel Street in the future.</p> <p>This is achieved through the levels established within the design, and by ensuring that the details of grades, kerbs, ramps and tactile paving are in line with relevant standards. This also resolves several existing and problematic accessibility challenges in the precinct, such as:</p> <ul style="list-style-type: none"> • The narrowness of the existing Lovers Walk pathway. • The lack of a direct connection from Osborne Street to South Yarra Siding Reserve. • The inconsistent pavement types and sizes throughout the precinct.

Section	Clause	Design Guideline	Development Plan Response
	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.	<p>Local roads within the precinct, including William Street and Arthur Street, will be reinstated as part of the proposed works and adopt existing design and engineering standards that provide for access and turning of vehicle types that currently use these streets.</p> <p>Vehicle access to the SER/CER compound is required for maintenance and is proposed from Chambers Street in order to allow vehicles to enter and exit the compound in a forward motion. The crossover from the compound to Chambers Street will be designed and constructed in accordance with relevant design standards.</p>
	3.1.c.8	Provide for vehicle parking, as appropriate, with consideration of locations and arrangements, management systems (ticket machines etc.) and motorcycle parking.	<p>Vehicle parking within the precinct is currently unmarked. Marked vehicle parking will be provided within the precinct with some exceptions to accommodate improved open spaces, pedestrian accessibility and strengthened landscape within streets. The equivalent of a total of four car spaces along Osborne Street have been removed in order to accommodate 5 medium street trees in Osborne Street. The equivalent of a total of one car space has been removed in Arthur Street in order to accommodate raingardens, verge widening and a cyclist ramp connection. It is noted that three existing crossovers that are no longer required have been removed and reinstated as footpath. The equivalent of a further 20-25 car spaces have been removed from William Street in order to:</p> <ul style="list-style-type: none"> • Increase existing verge widths on the William Street bridge from approximately 1.5 metres to a minimum 3 metres, increasing capacity for pedestrian movement within the precinct. • Provide for an integrated landscape. • Accommodate wide, generous and safe pedestrian and cycle links across William Street at both the Lovers Walk and Promenade alignments. <p>There will be no loss of car parking spaces at the front of existing residential dwellings on Chambers Street.</p> <p>Vehicular car parking is presented in Section 6.4.3 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
3.2	Making Great Public Places		
	3.2.c.1	<p>Ensure that all aspects of the design are of a high quality in concept, resolution and execution. Designs must be:</p> <ul style="list-style-type: none"> • fit for purpose • responsive to all users' needs • responsive to the site and associated cultural values • sustainable. 	<p>The design response satisfies Clause 3.2.c.1 by ensuring that the public realm design concept for the Eastern Portal is a high-quality concept that is fit for purpose and responsive to local needs and values. This includes:</p> <ul style="list-style-type: none"> • Re-instating South Yarra Siding Reserve as a local park for passive recreation that provides for a number of groups of users at the same time, as well as provide for local walking and cycling routes. • Creating the foundation for a future city-scale pedestrian and cycling connection along the south of the rail corridor from South Yarra station to Toorak Road. • Providing new pocket parks on William Street and Arthur Street are responsive to messages received during public consultation from Council and the community that emphasised the desire for more public open space. These areas provide additional passive recreational spaces for the precinct with a focus on soft landscaping and improving interfaces between the rail corridor and residential areas, in addition to new trees. • Providing an integrated public realm environment through the connection of the new William and Osborne Street bridge designs as part of an integrated system of fin walls and screens to read as one with the proposed design and safety treatments to Lovers Walk and the Promenade. • A consistent concrete treatment to the walls of the rail corridor to ensure a consistent, continuous and natural visual background. • Strengthening the landscape character of the whole precinct, through substantial and extended tree and multi-storey planting throughout Osborne, William and Arthur Streets, as well as throughout South Yarra Siding Reserve. Canopy coverage has been maximised within South Yarra Siding Reserve through the provision of large trees. • The amenity of Lovers Walk will be improved as part of the SER/CER works, with new landscaping, a widened walkway and a high quality, permeable architectural screen installed to improve the openness of the pathway and screen the SER/CER compound. <p>The public realm design concept for the Eastern Portal is presented in Section 6 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.2.c.2	<p>Design spaces to be activated by public use:</p> <ul style="list-style-type: none"> • Provide seating and other infrastructure to encourage people to inhabit the space. • Support the programming of spaces for a range of event scales and types. • 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. 	<p>In accordance with Clause 3.2.c.2, the proposed design response activates public use by:</p> <ul style="list-style-type: none"> • Providing park furniture and landscaping in consultation with Council and the community that enhances South Yarra Siding Reserve's usability as a local park, and in key locations along pedestrian routes in William Street, Arthur Street and Osborne Street. Orientation of park furniture considers residential, rail corridor and open space visual connections for safety. • Increasing the useable space of South Yarra Siding Reserve. • Supporting the use of South Yarra Siding Reserve for passive recreation, picnicking, informal play, and dog walking. • Improving the City of Stonnington's network of public open spaces with the creation of the new William Street and Arthur Street pocket parks for passive recreation. • Creating spaces that can be used concurrently by a range of people for both 'lightly' active and passive recreational use. • Encouraging people travelling between Toorak Road and Chapel Street to travel through the precinct, improving opportunities for passive surveillance. • Providing spaces that focus on recreation needs for the local community whilst providing the foundation for improved precinct-wide pedestrian connections to surrounding key destinations. These spaces are clearly distinguished through landscaping and materials. • Widening and landscaping of Lovers Walk where possible to improve the usability and amenity of the connection. • Including a new high quality, architectural screen along Lovers Walk to enhance the amenity of the path and provide an attractive walking environment for users. <p>The public realm design concept for the Eastern Portal is presented in Section 6.4.1 and 6.4.2 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.2.c.3	<p>Provide safe environments that promote safe behaviour and the feeling of safety:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.2.c.3 by improving natural and passive surveillance that discourages potential offenders and intruders, including the application of CPTED principles manifest in:</p> <ul style="list-style-type: none"> • Provision of pedestrian pathways that accommodate people who will contribute more 'eyes on the street'. • The use of visually permeable materials for throw screens and fencing along the rail corridors to maximise visibility throughout the precinct. • The new Promenade that will enhance passive surveillance of South Yarra Siding Reserve and the precinct generally. • The use of landscaping at South Yarra Siding Reserve which will maintain visibility at ground level across South Yarra Siding Reserve and Lovers Walk, Osborne Street and Arthur Street. • A design solution that will encourage users to the precinct, whether they be a local travelling to South Yarra Reserve or a user that is moving through the precinct along one of the enhanced pedestrian and cyclist routes. • The picnic area in South Yarra Siding Reserve has specifically been designed with public safety in mind to be an open, light, central space which will also act as a meeting place for the community. • The South Yarra Siding Reserve will be also be activated through informal play elements that encourage activity and use of the space, contributing to the passive surveillance of the area. • The new Arthur Street Pocket Park provides increased visual permeability and enhances passive surveillance of the Promenade. • New permeable screens and fencing along Lovers Walk will enable clear sightlines across the railway corridor and through the SER/CER compound between Chambers Street and Lovers Walk. • Chamfering of corners at key areas of Lovers Walk will contribute to the enhancement of sightlines across the SER/CER compound and safety of the area. • The provision of CCTV and appropriate lighting for surveillance across the precinct. <p>Crime prevention and safety through environmental design is presented in Section 6.4.4 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.2.c.4	<p>Respect heritage and respond to local cultural and indigenous heritage issues:</p> <ul style="list-style-type: none"> • Retain and protect significant heritage elements including spaces, views, vegetation, natural and designed landforms, and built fabric. • Design new works to complement heritage elements. • Integrate interpretative elements into designs to reflect local cultural and indigenous heritage where appropriate. 	<p>The proposed design response satisfies Clause 3.2.c.4 by:</p> <ul style="list-style-type: none"> • Incorporating and developing the former industrial character of South Yarra and the rail heritage within the rail corridor through the use of expressed steel in the bridge structures. • Extending the public realm palette established by the Council and present in Chapel Street and Toorak Road into the precinct. • Incorporating references to heritage and potentially local aboriginal heritage in the proposed integrated art piece at the Promenade near William Street. <p>The response to local culture and heritage is presented in Section 6.5.1 and Appendix D of this Plan.</p>
	3.2.c.5	<p>Make provision for stormwater drainage and management:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.2.c.5 by making the following provisions in relation to stormwater, drainage management and WSUD:</p> <ul style="list-style-type: none"> • Pits, covers and grates and discharges to drains that seek to protect water quality. • Storage of stormwater under South Yarra Siding Reserve to reduce the impact of 1 in 200-year flood events on downstream property and drainage infrastructure. • Inclusion of flood management devices along Arthur Street to manage stormwater and overland flow paths to avoid flooding of the rail corridors and urban areas. • Incorporation of drainage swales, bio-filtration beds, rain gardens and soil drainage along streetscapes. • Use of permeable surfaces wherever possible to enhance rainwater infiltration and passive irrigation of South Yarra Siding Reserve, Osborne Street Reserve, Lovers Walk, and new pocket spaces in William Street and Arthur Street. <p>Stormwater drainage and management is presented in Section 6.5.1 and Appendix D of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.2.c.6	Select and design paving and surface finishes to be fit for purpose, durable, sustainable and easy to maintain, and to enhance the character and use of the space.	<p>The design uses paving and surface finishes that will enhance the public realm and which are durable, sustainable and fit for purpose by:</p> <ul style="list-style-type: none"> • Extending existing materials already present in the precinct, and others identified in the City of Stonnington design standards for the <i>Chapel ReVision Structure Plan 2013 – 2031</i> including bitumen, bluestone, and coloured concrete. • Utilising bespoke detailing and patterning in select key areas to highlight its importance and limit the scale of maintenance for Council. • Selecting paving and surface finishes that are designed to provide wayfinding and visual connectivity to enhance pedestrian and cyclist pathways and highlight path hierarchies. • Selecting surfaces and finishes for rail infrastructure areas including the egress area and SER/CER compound that are fit for purpose and in keeping with the character of the area. <p>Materials and finishes for the Eastern Portal are presented in Section 6.4.8 of this Plan and Appendix A and B of this Plan.</p>
	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.	<ul style="list-style-type: none"> • The design response includes the provision of seating along Osborne Street, and key locations in William Street and Arthur Street and South Yarra Siding Reserve to provide for passive recreation and pause points along pedestrian routes in locations that provide shade and/or views. • Informal play elements will be integrated into the design of the public spaces, utilising natural components that harmonise with the materials and landscaping of South Yarra Siding Reserve. • Park furniture and informal play elements will be designed in consultation with Council.
	3.2.c.8	<p>Provide lighting for amenity, wayfinding, visual comfort, road safety and personal security:</p> <ul style="list-style-type: none"> • Provide a high quality of illumination with respect to supporting people's perception at night, including minimisation of glare 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. 	<p>The proposed lighting design for the Eastern Portal enhances lighting for amenity, wayfinding, visual comfort, safety and personal security. The design response will provide for the necessary lighting levels across the public spaces and streets. It also provides for architectural illumination of the William Street and Osborne Street bridges, Lovers Walk and the Promenade that highlight these movement paths, whilst minimising light spill to adjacent sensitive land uses, specifically adjoining properties and the rail corridor.</p> <p>Ten CCTV cameras will be provided across the precinct including along Lovers Walk, the South Yarra Siding Reserve and the Promenade to improve user safety and the security of the precinct.</p>

Section	Clause	Design Guideline	Development Plan Response
		<ul style="list-style-type: none"> Use responsible management systems, efficient technology and other forms of best practice energy conservation. Reinstate existing CCTV infrastructure where affected by the project. 	Proposed lighting will be designed in accordance with Australian Standards for pedestrian safety (AS1158.3.1 - Lighting for Roads and Public Spaces - Pedestrian Area (Category P) Lighting - Performance and Design Requirements), and the Urban Lighting Guidelines 2019. The design and location of lighting throughout the Eastern Portal will be subject to consultation with Council.
	3.2.c.9	Provide access to public amenities including public toilets.	Public toilets are not proposed in order to discourage overly-long occupation of South Yarra Siding Reserve by groups in what is a neighbourhood park, however a water fountain that provides for people and dogs will be provided at the South Yarra Siding Reserve, along with the picnic area, public seating, informal play elements and an off-leash dog area.
	3.2.c.10	Provide access to public transport facilities including passenger shelters, other forms of weather protection, ticket sales and validation machines, etc.	Direct access to public transport facilities is not proposed or required as part of the scope and extent of the Eastern Portal.
	3.2.c.11	Incorporate public art in appropriate places: <ul style="list-style-type: none"> 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. 	The design provides for an integrated art piece with the potential to reference local aboriginal culture and or more recent heritage at the William Street entrance to South Yarra Siding Reserve. Any public art within the precinct commissioned by RIA as part of the Metro Tunnel Project will respond to the <i>Metro Tunnel Creative Strategy</i> . Integrated Art at the Eastern Portal will be designed in accordance with the Metro Tunnel Integrated Art Strategy and in consultation with Council and other key stakeholders.
	3.2.c.12	Provide signage as appropriate and in accordance with Public Transport Victoria (PTV), VicRoads, land manager and authority standards and guidelines, including: <ul style="list-style-type: none"> traffic and parking management signs street signs, place / building name signage, and address numbers pedestrian directional signs and tourist information - interpretive signage and commemorative plaques temporary or events signage. 	Signage, where required, will be in accordance with PTV, VicRoads, land manager and authority standards and guidelines.

Section	Clause	Design Guideline	Development Plan Response
	3.2.c.13	<p>Integrate any advertising elements with public infrastructure and ensure that they complement the character, functionality and amenity of the precinct:</p> <ul style="list-style-type: none"> 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. 	No advertising is proposed as part of this Plan.
	3.2.c.14	<p>Incorporate plantings as an integral part of site designs:</p> <ul style="list-style-type: none"> Provide shade and shelter, screening, ornament and define of a sense of place that relates to each site and its landscape context. Create good 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 urban forest 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. 	<p>The landscape and urban realm design response provides appropriate shade and shelter and creates an improved sense of place for local users of South Yarra Siding Reserve and users moving through the precinct.</p> <p>The design satisfies Clause 3.2.c.14 by ensuring that:</p> <ul style="list-style-type: none"> Plantings will have good soil conditions to encourage growth and longevity. Suitable soil volumes have been provided for all trees to optimise future canopy growth. These soil volumes are designed to ensure the Project meets targets outlined in the <i>Metro Tunnel Living Infrastructure Plan</i>. Canopy coverage will be maximised through the inclusion of large trees where possible across South Yarra Siding Reserve. Proposed hardscaping materials include permeable paving materials where they might encroach within tree's drip zones. Selected plants will be suitable for the micro and local climate and contribute towards the biodiversity and resilience of plant communities within the area. <p>More specifically:</p> <ul style="list-style-type: none"> Feature trees along the Promenade will provide a key element of the environment and assist orientation and wayfinding, as well as provide shade along this route.

Section	Clause	Design Guideline	Development Plan Response
			<ul style="list-style-type: none"> • Additional street trees will be introduced into Osborne Avenue and William Street. • The Osborne Street Reserve landscape character will be reinstated with an emphasis on diverse, multi-storey planting along the railway corridor and an abundance of new trees to filter views of the bridge, ramp and rail corridor from Osborne Street. • South Yarra Siding Reserve has been designed with an emphasis on screening and multi-storey planting along its southern boundary, adjacent to residents and along the Sandringham Line railway corridor. • South Yarra Siding Reserve will also provide open lawn areas that are designed to provide flexible, and highly visible recreational activity. These areas will also include a picnic area and an off-leash dog area. • The northern section of South Yarra Siding Reserve will provide low level planting and canopy trees to prevent it from becoming an area with poor circulation. The landscaped garden bed prevents undesirable occupation of this more isolated part of South Yarra Siding Reserve, which has been identified for a potential future extension of the Promenade to Toorak Road (and South Yarra station). • The Arthur Street pocket park will allow for the reinstatement of trees to the Arthur Street interface and filter views towards the rail corridor. • Space requirements of the SER/CER compound have been minimised as much as practicable to maximise the width of Lovers Walk and enable the provision of planting between the compound and the walkway. The design solution has sought to utilise the land as efficiently as possible to meet rail infrastructure requirements and enhance Lovers Walk. • Low maintenance landscaping has been included within the SER/CER compound to improve the amenity of the area. <p>Any vegetation loss as a result of the Eastern Portal is appropriately offset through the landscape design response and the introduction of new plantings in accordance with the <i>Metro Tunnel Living Infrastructure Plan</i>.</p>

Section	Clause	Design Guideline	Development Plan Response
3.3	3.2.c.15	Address irrigation including passive irrigation and opportunities for rainwater infiltration into the soil, options for non-potable water supplies, irrigation zones and system types, control systems and equipment.	<p>The design response satisfies Clause 3.2.c.15 by integrating the following initiatives:</p> <ul style="list-style-type: none"> • The inclusion of a passive irrigation system of the lawn areas in South Yarra Siding Reserve. • WSUD systems in streetscapes with new street tree planting, specifically the collection of stormwater from the road reserve into raingardens (bioretention systems) which are specifically designed to passively irrigate vegetation as well as intercept and clean the water before it goes into the stormwater system. • Use of permeable surfaces in South Yarra Siding Reserve, Osborne Street reserve and the new William and Arthur Street pocket parks to enhance rainwater infiltration and passive irrigation. <p>Integrated WSUD initiatives for the Eastern Portal is presented in Section 6.4.9 and Appendix D of this Plan.</p>
	3.3 Balance Line-wide Consistency with Site Responsiveness		
	3.3.c.1	<p>Operational elements of the public transport system, involving the public and staff, must be consistent with the transport system as a whole both 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:</p> <ul style="list-style-type: none"> • ticket systems and barriers • timetable displays, directional signs and other information used to access platforms and services • ticket sales and other assistance • safety systems. 	Alterations to the operational elements of the public transport system are not proposed or required as part of the scope and extent of the Eastern Portal.
	3.3.c.2	<p>The character of individual stations may vary between sites, and should be responsive to their physical, social and functional context:</p> <ul style="list-style-type: none"> • 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. 	Alterations to South Yarra station are not proposed or required as part of the scope and extent of the Eastern Portal.

Section	Clause	Design Guideline	Development Plan Response
	3.3.c.3	<p>Locate and design aboveground infrastructure to integrate sensitively with its surroundings and to ensure the amenity and functionality of spaces it occupies:</p> <ul style="list-style-type: none"> • 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. • Respond to the setting and complement the design of adjoining buildings and open space. • Give each element of Metro Tunnel 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 and uses of spaces. • Where appropriate, minimise the visual impact of structures with screen plantings that are consistent in character with the site. 	<p>Works associated with the Eastern Portal include a number of aboveground infrastructure elements.</p> <p>The design response satisfies Clause 3.3.c.3 by ensuring that the aboveground infrastructure complements the local context and continues the suite of materials used throughout the public environment.</p> <p>The design response achieves this by:</p> <ul style="list-style-type: none"> • Ensuring that aboveground infrastructure associated with the William Street bridge complements the areas rich history and retains visual connections with South Yarra Siding Reserve through viewing points in the bridge and a colour scheme that reflects the materials of historic buildings in the area. • Providing an architectural response for the bridge that minimises fragmentation through a consistent colours and materials palette responding to the context of the precinct (particularly for connections with William Street, Lovers Walk and the Promenade). • Providing a high-quality architectural solution for the Osborne Street Bridge that minimises the appearance of visual bulk through the use of visually permeable and high quality materials where possible. Further, the proposed landscape design response provides a continuous green edge along the streetscape connected by vertical plantings on the ramp structure. • Ensuring that materials and architectural language of the Osborne Street bridge structure minimises visual fragmentation and integrates with the works being undertaken by CYP further to the north and within the rest of the precinct. This is achieved by providing visual connections between people on the bridge and its surrounds and repeating similar materials and other elements within the design of the bridge. • Locating and designing buildings and above ground infrastructure required by the Metro Tunnel so that they minimise impacts on public spaces and vice versa. This is achieved by eliminating above ground structures within the core of South Yarra Siding Reserve and incorporating structures and enclosures for infrastructure as part of the system of walls and screens that define the edge of the public realm while ensuring visual permeability where appropriate. The treatment of these walls and enclosures also extends the same suite of materials and treatments as the throw screens, and bridge structures. • Ensuring that the South Yarra Siding Reserve maintains full coverage over any underground buildings.

Section	Clause	Design Guideline	Development Plan Response
		<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Locating the SER/CER compound within land previously reserved for future rail purposes. The design solution of the compound includes visually recessive buildings, a widened Lovers Walk, permeable fence and new low-level landscaping in order to improve the openness of Lovers Walk. A new high quality, architectural screen will also be installed along Lovers Walk at the perimeter of the SER/CER compound in order to reduce the visual impact of the rail utilities buildings and provide an appropriate response to the residential context of the area. Locating landscaping near hard surfaces and above ground infrastructure to soften the appearance of the structures. Maximising views and pedestrian/cyclist visibility and minimising opportunities for damage and graffiti. Providing high quality landscape design finishes including the use of consistent materials across garden edges, retaining walls, bench seating and the infrastructure-related hardscape elements. <p>The public realm design concept for the Eastern Portal and how it integrates with its surrounds is presented in Section 6.4.1 and 6.4.2 of this Plan.</p>
	3.3.c.4	<p>Design streetscapes and open spaces to integrate with their context:</p> <ul style="list-style-type: none"> 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 Metro Tunnel, 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. 	<p>In accordance with Clause 3.3.c.4, the proposed design response integrates works with the existing conditions around the precinct, and with the works proposed by the <i>CYP Eastern Portal Development Plan (June 2018)</i> and the Council public realm materials palette.</p> <p>The design response ensures that works undertaken read as a single cohesive entity that integrates with surrounding open space, residential and commercial and industrial areas. This is achieved by paying particular attention to interfaces between the Project and surrounding infrastructure and development, and the careful selection of compatible materials, colours, finishes and planting solutions.</p> <p>These initiatives will continue to be developed with key stakeholders and are consistent with relevant local plans and strategies.</p> <p>The public realm design concept for the Eastern Portal is presented in Section 6.4.1 and 6.4.2 of this Plan.</p> <p>Material palettes are presented in Section 6.4.8 of this Plan.</p> <p>Architectural, landscape, public realm and urban design plans can be found in Appendix A and B.</p>

Section	Clause	Design Guideline	Development Plan Response
3.4	Support Integrated Site Redevelopment		
	3.4.c.1	Avoid limiting future redevelopment potential of residual properties acquired for the project at the Western Portal and Eastern Portal.	All properties acquired at the Eastern Portal are required for rail and public space infrastructure and have been incorporated into the design of the public realm.
	3.4.c.2	Consider future precinct-wide redevelopment at Arden, as well as over-site development of the station.	Not applicable to this 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.	Not applicable to this 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.	<p>The design response complies with Clause 3.4.c.4 by ensuring that permanent infrastructure is located within and immediately adjacent to the existing railway corridor wherever possible. Where permanent infrastructure extends into the public realm, the design response seeks to integrate the appearance of infrastructure through a comprehensive approach to the design of built forms, fences and screens to ensure visual permeability, screening with landscaping and avoiding creating hidden spaces or enclaves.</p> <p>In relation to the SER/CER compound, space requirements of the compound have been minimised as much as practicable, whilst balancing siting of buildings and vehicular access requirements. It is noted that the vehicle access within the compound provides a buffer between the public space provided by Lovers Walk and the above ground infrastructure. Further, the interface of the compound with Lovers Walk has been considered in the design with the intention to retain sightlines along the walkway through a permeable fence and low-level landscaping. A high quality, architectural screen will be installed along Lovers Walk to ensure that the compound responds to the context of the area and provide an attractive walking environment along the pedestrian connection.</p> <p>The public realm design concept for the Eastern Portal is presented in Section 6.4.1 of this Plan as well as Appendix A and B.</p>
	3.4.c.5	Development plans for station infrastructure should consider, and integrate with, over-site development to provide for coordinated design outcomes.	Not applicable to this Plan.
	3.4.c.6	Consolidate infrastructure within over-site developments so as to minimise impacts on the public realm, including: <ul style="list-style-type: none"> minimise above ground infrastructure in the public realm. 	South Yarra Siding Reserve will completely cover the underground substation and the surface use of the area as a park will remain. Constraints as a result of underground infrastructure have been minimised

Section	Clause	Design Guideline	Development Plan Response
3.5		<ul style="list-style-type: none"> minimise constraints on surface features and uses in the public realm due to underground infrastructure. 	through a considered urban design and landscape response that allows for an overall positive outcome for South Yarra Siding Reserve.
	3.4.c.7	Integrate redevelopment for complementary uses with the station entries in the CBD, including: <ul style="list-style-type: none"> over-site development of properties acquired at the La Trobe-Little La Trobe Sub-Precinct and the Cocker Alley Sub-Precinct redevelopment of the City Square underground car park reconstruction of the eastern and western shards in Federation Square. 	Not applicable to this Plan.
	3.4.c.8	Not preclude possible future bridging across, decking over or development above rail cuttings at South Yarra.	The design response anticipates possible future bridging across, decking over or development above the rail cutting. It does this by ensuring that the levels of South Yarra Siding Reserve anticipate and facilitate the potential for connection to the approved development above the rail corridor abutting Toorak Road, and recognises the existing above corridor development at Chapel Street.
	3.5 Design to Help Manage Construction Impacts		
	3.5.c.1	Maintain circulation and transport operations during the construction process: <ul style="list-style-type: none"> 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. 	RIA will satisfy Clause 3.5.c.1 the maintenance of circulation and transport operations during the construction process. Where there may be short term impacts to pedestrians or cyclists, this will be managed through consultation with relevant road management authorities and addressed in the WTMP. In addition, aspect specific management plans will be in place to manage construction impacts as required.

Section	Clause	Design Guideline	Development Plan Response
	3.5.c.2	<p>Protect the viability of, and amenity for, activities at and near construction work sites:</p> <ul style="list-style-type: none"> • 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. 	<p>RIA will comply with Clause 3.5.c.2 through the protection of the viability of, and amenity for, activities at and near the construction work sites that might be affected by construction activities through the implementation of CPTED principles and wayfinding material, as required. In addition, aspect specific management plans will be in place to manage construction impacts as required.</p>
	3.5.c.3	<p>Protect features from damage:</p> <ul style="list-style-type: none"> • 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 arboricultural 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. 	<p>RIA will comply with Clause 3.5.c.3 through the minimisation of impacts on trees, services and materials, and will reinstate trees, services and materials where possible.</p> <p>RIA has prepared and implemented a Tree Management Plan which includes maximising possible tree retention and a protocol for tree removal established in consultation with the Council. The majority of mature trees along the southern boundary of South Yarra Siding Reserve will be retained.</p> <p>There are no trees to be removed as part of this Development Plan that require approval under Clause 4.7 of the Incorporated Document.</p> <p>In addition, other aspect specific management plans will be in place to manage construction impacts as required.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.5.c.4	<p>Maintain an attractive presentation to surrounding areas:</p> <ul style="list-style-type: none"> • 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 enclosures, hoardings, screens and other temporary features with increasing quality in proportion to the time they will be 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 history of the site and the Metro Tunnel 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 festivities. • 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. 	<p>RIA will comply with Clause 3.5.c.4 through the preparation of an Urban Design Management Plan whereby impacts on the attractiveness of the presentation to the surrounding area during construction will be managed. The design will aim to maintain an attractiveness of the presentation to the surrounding area and during construction aspect specific management plans will be in place to manage impacts as required.</p>

Section	Clause	Design Guideline	Development Plan Response
3.6	Design For The Future		
	3.6.c.1	<p>Anticipate growth of Melbourne's population and future changes in activity patterns and development in response to the new Metro Tunnel services:</p> <ul style="list-style-type: none"> Reinstate or redesign open spaces and infrastructure to a standard that responds to heavier pedestrian traffic, heightened public profile and other changes that will be generated by Metro Tunnel, 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. 	<p>The design response complies with Clause 3.6.c.1 by enhancing pedestrian and cyclist north-south and east-west connections through the precinct, by:</p> <ul style="list-style-type: none"> Creating the new, wide pedestrian and cyclist Promenade next to South Yarra Siding Reserve. These connections will accommodate anticipated population growth and the likely need for increased pedestrian and cyclist movement between Toorak Road and Chapel Street (once linked to Toorak Road via the adjacent proposed development). Prioritising pedestrian and cyclist movement over vehicular movement in design at William Street and widening the footpath along Arthur Street to ensure that the area supports increased numbers of pedestrians and cyclists. Providing a new local access shared path between Osborne Street and South Yarra Siding Reserve that will strengthen existing east-west connections to existing pedestrian and cycling networks. Using a mix of robust materials and finishes that will enhance the amenity of the area and withstand the demands of a highly populated urban area. Upgrading South Yarra Siding Reserve to include large areas of lawn for passive recreation that will provide both shaded and sunlit areas. Provision of William and Arthur Street pocket parks increase the total amount of public open space provided by the Project. Widening and landscaping Lovers Walk where possible to improve the functionality and amenity of the connection. An architectural screen utilising a high standard of materials and finishes will also be installed along Lovers Walk between William Street and Chambers Street to ensure an attractive walking environment is provided for users. <p>Materials, finishes and design solutions are addressed in Section 6.4.1 and 6.4.8 of this Plan and Appendix A and B.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.6.c.2	<p>Although RPV will take possession of various areas to enable construction of Metro Tunnel, 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:</p> <ul style="list-style-type: none"> 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. 	<p>In accordance with the requirements of Clause 3.6.c.2, RPV and RIA have worked closely with key stakeholders including agencies such as Council, VicRoads and MTM, who will manage the land upon completion of the works.</p> <p>Streetscapes will be completed to the satisfaction of the Council and the design solution provides clear delineation between assets to minimise conflicts in the long-term management and maintenance of the precinct.</p>
	3.6.c.3	<p>Allow for long-term flexibility in the uses of public spaces and in the provision of facilities and services:</p> <ul style="list-style-type: none"> 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. 	<p>The design response for South Yarra Siding Reserve complies with Clause 3.6.c.3. The design response allows for long-term flexibility of public areas by:</p> <ul style="list-style-type: none"> Incorporating feedback from the Council, other key stakeholders and the community to create flexible public spaces that are animal friendly and appropriate for passive recreation. Providing for improved and multiple access opportunities to and through the precinct. Designing underground structures to withstand vehicular loadings as appropriate to a trafficable roadway. Where structures are required for railway purposes such as signalling or power, they have been located away from, or under, South Yarra Siding Reserve to ensure that any future adaptive re-design (if and when required) does not impact areas of public open space. <p>The public realm design concept for the Eastern Portal and how it integrates with its surrounds is presented in Section 6.4.1 and 6.4.2 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.6.c.4	<p>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:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response seeks to support the healthy growth of canopy trees in accordance with 3.6.c.4 by:</p> <ul style="list-style-type: none"> • Locating trees and structures to avoid root systems coming onto conflict with underground structures. • Incorporating WSUD solutions, including the inclusion of a passive irrigation system of the lawn areas in South Yarra Siding Reserve to help protect trees through periods of drought and extreme heat. • Creating garden beds and landscaping opportunities that raise the finished surface level to ensure satisfactory depth and cover for canopy trees. For example, a spoil depth of 1.5 metres is achieved above the proposed stormwater detention tank. • The use of the land fall to terrace the design response. • Where possible, underground services have been relocated into areas with other underground services to create service clusters and maximise tree planting opportunities. <p>Refer to Appendix A and B for landscaping design solutions. For information regarding soil depth and quality management, refer to Section 6.5.1 and Appendix D of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.6.c.5	<p>Create robust and durable landscapes:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.6.c.5 by creating a robust and durable landscape that:</p> <ul style="list-style-type: none"> • Contains a range of plant species including multi-storey planting, that are appropriate for the microclimate and will be resistant to further changes in their environment. • Provides drainage across the Precinct, both within the Reserves and the streetscapes will divert stormwater to areas where the soft landscape can benefit from it. • Incorporates hardwearing, durable surfaces that deter and discourage graffiti and will appropriately service a highly urbanised area. • Provides landscaped areas that will be designed to require low levels of irrigation and maintenance, whilst lawn areas at South Yarra Siding Reserve will be irrigated to ensure a useable surface throughout the year, in line with local community and Council feedback. <p>Refer to Sections 6.4.1, 6.4.2 and 6.4.8 for further information regarding the durability and robustness of the design response and Appendix A and B for further information regarding plans and materials.</p>

Section	Clause	Design Guideline	Development Plan Response
	3.6.c.6	<p>Respond to changing climate and microclimate conditions to improve thermal comfort and create enjoyable places for use throughout the year:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response satisfies Clause 3.6.c.6 through a number of techniques that seek to respond to changing climate and microclimate conditions. These techniques include:</p> <ul style="list-style-type: none"> • Maximising tree planting in South Yarra Siding Reserve and Osborne Street Reserve, both along the edge of open spaces through multi-storey planting and in open lawn areas to increase shade for both users and the soft landscape underneath. • Providing additional large street tree planting in Arthur, Osborne and William Streets as important local pedestrian routes. • Provision of tree planting along South Promenade to provide a continuous canopy of shade along this key pedestrian and cycling route, which, in future will provide direct access from South Yarra station to Chapel Street (via Toorak Road). • Minimising tree loss at South Yarra Siding Reserve and retention of trees along its southern boundary. • Provision of William and Arthur Street pocket parks, reducing the amount of concreted areas further contributing to the reduction of impacts to the localised urban heat island effect. • Providing a new street tree at the end of Chambers Street • Incorporating landscaping and small trees in key areas of the SER/CER compound to reduce the amount of hard surfaces contributing to the urban heat island effect within the precinct. <p>Collectively, this will maximise tree canopy, mitigate heat island effect and provide for a more comfortable environment that can retain more moisture during sustained periods of heat. In addition, climate risks for the Metro Tunnel will be identified in the Climate Change Risk and Adaptation Report. For further information regarding the consideration of the climate, refer to Section 6.5.1 and Appendix D of this Plan.</p>
	3.6.c.7	<p>Integrate water-sensitive urban design initiatives:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response complies with Clause 3.6.c.7 by integrating the following initiatives:</p> <ul style="list-style-type: none"> • The inclusion of a passive irrigation system of the lawn areas in South Yarra Siding Reserve. • WSUD systems in streetscapes with new street tree planting, specifically the collection of stormwater from the road reserve into raingardens (bioretention systems) which are specifically designed to passively irrigate vegetation as well as intercept and clean the water before it goes into the stormwater system.

Section	Clause	Design Guideline	Development Plan Response
			<ul style="list-style-type: none"> Use of permeable surfaces in South Yarra Siding Reserve, Osborne Street reserve and the new William Street Reserve to enhance rainwater infiltration and passive irrigation. <p>Integrated WSUD initiatives for the Eastern Portal is presented in Section 6.4.9 and Appendix D of this Plan.</p>
	3.6.c.8	<p>Practice sustainable use of materials and resources:</p> <ul style="list-style-type: none"> Use durable, high performance materials and finishes that are designed for the long-term and align with land managers' requirements. Use sustainable materials with low embodied energy or lifecycle impacts. Avoid and minimise waste and recycle where possible. Use rainwater harvesting and passive irrigation to support plantings. Apply energy efficient and renewable technologies in the design. 	<p>The design response complies with Clause 3.6.c.8 by integrating the following initiatives:</p> <ul style="list-style-type: none"> The use of energy efficient lighting throughout the precinct. The incorporation of WSUD garden beds along sections of streetscape on Arthur Street and along the Promenade. The selection of construction materials and activities will consider sustainability practice as one of a number of criteria. The use of robust and hard-wearing materials that will reduce maintenance requirements throughout the precinct, including the use of metal screens and fences that are resistant to impact and have a long design life. <p>Integrated WSUD initiatives for the Eastern Portal is presented in Section 6.4.9 and Appendix D of this Plan.</p> <p>Materials and finishes for the Eastern Portal are presented in Section 6.4.8 of this Plan.</p>

Section	Clause	Design Guideline	Development Plan Response
4.8	Precinct 8: Eastern Portal		
	4.8.d.1	Retain and improve walking and cycling links connecting to activity centres, local streets, South Yarra station, and the open space network.	<p>The design response complies with Clause 4.8.d.1 by:</p> <ul style="list-style-type: none"> • Creating the new Promenade within South Yarra Siding Reserve and along Arthur Street, enhancing the link between South Yarra Siding Reserve and Chapel Street and helping to realise aspirations to connect Toorak Road to South Yarra Siding Reserve by building over the railway cutting at some point in the future. • Retaining Lovers Walk as a link between Toorak Road and Chapel Street. Works to Lovers Walk include widening and levelling where possible as well as low level landscaping associated with the SER/CER compound. • Improving the design of the SER/CER compound through consideration of the interface with Lovers Walk. The incorporation of planting and a visually permeable fence along the edge of the compound has sought to enhance sightlines along the walkway and improve safety the feeling of openness to Lovers Walk. A high quality, permeable architectural screen will be installed along the perimeter of the compound to provide an appropriate response to the context of the area and ensure that an attractive walking environment is created for users of Lovers Walk. • Encouraging better pedestrian and cyclist connections between Lovers Walk and the new Promenade via the proposed William Street Bridge will. • Improve connectivity between Osborne Street and South Yarra Siding Reserve through the proposed Osborne Street Bridge.

Section	Clause	Design Guideline	Development Plan Response
	4.8.d.2	Maximise the amount of accessible, usable and relatively level public open space in the precinct.	<p>The design response satisfies Clause 4.8.d.2 by:</p> <ul style="list-style-type: none"> • Improving the accessibility of the park for surrounding residents and visitors to the area with generous paths and suitable levels across the area. • Providing usable areas of public open space that are delineated through design to create passive and active recreational areas. • Creating a new pedestrian and cycling Promenade on the southern side of the rail corridor between Chapel Street, South Yarra Siding Reserve and Osborne Street that will enhance connections to and from the precinct. • Expanding street corridors, similar to the Osborne Street Reserve, to create new pockets of open space along William Street (both on the bridge (200 square metres) and space adjacent to it (300 square metres), and 100 square metres in Arthur Street. • Widening and landscaping Lovers Walk where possible to improve the accessibility and usability of the pathway.

Section	Clause	Design Guideline	Development Plan Response
	4.8.d.3	Improve the quality, amenity and safety of existing public open space and walking and cycling links.	<p>The design response satisfies Clause 4.8.d.3 by improving the amenity, safety and quality of South Yarra Siding Reserve for local residents and visitors to the area through good design and the selection of high quality, robust materials and fittings.</p> <p>The design of South Yarra Siding Reserve adds a wide Promenade to the precinct along with new pedestrian and bicycle connections along with creating precincts for passive recreation, picnics and dogs.</p> <p>Landscaping of South Yarra Siding Reserve has considered feedback from key stakeholders and the community to incorporate planting types and areas to provide for different and concurrent uses.</p> <p>The new Osborne Street bridge creates a further connection, adding to the amenity and safety of the precinct. In addition, the bridge opens South Yarra Siding Reserve to a much greater catchment of users, increasing the number of residents and households that live within a 400 metre walk of South Yarra Siding Reserve.</p> <p>The design response improves the safety of South Yarra Siding Reserve by improving the accessibility of South Yarra Siding Reserve, which in turn, will increase local patronage and encourage improved levels of passive surveillance along with the new Promenade, making South Yarra Siding Reserve a more desirable place with greater accessibility, lighting, quality and amenity.</p> <p>Additional pocket parks at William Street and Arthur Street provide for additional public open space. Arthur Street provides a widening and extended continuation of the Promenade, promoting additional activation and added visibility.</p> <p>The widening and landscaping of Lovers Walk where possible and provision of a high quality, permeable architectural screen will also improve the amenity of this pedestrian connection. This is achieved by maximising opportunities for visual connections, passive surveillance and providing an attractive walking environment for users.</p>

Section	Clause	Design Guideline	Development Plan Response
	4.8.d.4	Design all aboveground structures as part of an integrated high quality design that respects the public realm and local built form	<p>The design response includes a number of aboveground structures, including the Osborne Street bridge, the William Street bridge, throw screens and railway infrastructure such as the SER/CER compound.</p> <p>The design has developed a suite of wall, fence and screen types to provide a system of responses that provide for visual permeability, safety and protection from the rail corridor, whilst responding to the heritage of rail infrastructure in this location. This includes a continuity of steel and aluminium as a robust materials that form solid sections of wall, permeable screens and fencing.</p> <p>These surfaces provide a consistent edge treatment to the public realm, which is complemented with the use of hard wearing pavement materials present in the precinct, including bluestone, bitumen and concrete, and contrasted and softened with the soft landscape present in streetscapes and open spaces that layer the edges of the public environment.</p> <p>This continuous suite of materials extends the local built form pattern, materials and tones, and provides an integrated design solution that enhances the public realm and strengthens the local character. In addition, the works will integrate with works proposed as part of the <i>CYP Eastern Portal Development Plan</i>, ensuring a cohesive and high quality design solution.</p> <p>Above ground rail infrastructure at the SER/CER compound also utilises a material palette that seeks to visually recede into the background and improve the visual connection between Chambers Street and Lovers Walk. A high quality permeable architectural screen will be installed to provide an appropriate response to the context of the area and integrate the compound with Lovers Walk. A consistent concrete treatment is proposed to the walls of the rail corridor to ensure a consistent, continuous and natural visual background.</p>

Section	Clause	Design Guideline	Development Plan Response
	4.8.d.5	Design to help manage sensitive interfaces between neighbouring properties, project infrastructure and public spaces.	<p>The design response for the Eastern Portal satisfies Clause 4.8.d.5 by:</p> <ul style="list-style-type: none"> • Creating safe, appropriate and dense landscaping solutions that will discourage the congregation of people in areas of South Yarra Siding Reserve where the park has residential interfaces and isolated sections. • Ensuring that above ground infrastructure solutions respect the existing built form of the area and ensure that existing access, amenity and visual permeability is retained. • Providing a design response for the Osborne Street bridge ramp that utilises vertical planting, vegetated garden beds and consistent materials in order to ensure visual screening is provided to the bridge. In addition, the provision of permeable screening along the rail corridor will provide a visual treatment to the corridor while maintaining sight lines across the precinct. • Providing canopy trees along Osborne Street to screen the rail corridor and the infrastructure within it from nearby residences. • Utilising the Arthur Street pocket park to soften the interface between residents and the rail corridor. • Managing the interface between the SER/CER compound and residential properties through the inclusion of new fencing, provided in consultation with the adjoining landowners. • Ensuring that the SER/CER buildings are single storey and consistent with the neighbouring properties in height. • Installing a high quality, permeable screen and fencing along the perimeter of the SER/CER compound at the interface to the public realm to appropriately screen the compound, ensure an attractive walking environment and facilitate clear sightlines between Lovers Walk and Chambers Street. • Positioning the compound primarily to the south of all existing secluded private open space on neighbouring properties to ensure there is minimal overshadowing as a result of the buildings. • Ensuring that the buildings within the SER/CER compound are adequately setback from boundaries.

Section	Clause	Design Guideline	Development Plan Response
	4.8.d.6	Contribute to a continuous corridor of vegetation along the rail lines	<p>In accordance with Clause 4.8.d.6, the design response contributes to the creation of a continuous corridor of vegetation along the rail corridors by:</p> <ul style="list-style-type: none"> Planting of trees and multi-storey planting along both sides of the Sandringham Railway Line – extending the characteristics of the Osborne Street Reserve. Planting of a row of distinctive feature trees along the Frankston/Cranbourne/Pakenham Railway Line that will highlight visibility of the Promenade.
	4.8.d.7	Minimise impacts on the amount and quality of open space arising from service access to the rail lines.	<p>Pursuant to Clause 4.8.d.7, the design response seeks to maximise the amount of available public open space by:</p> <ul style="list-style-type: none"> Service access to the rail lines is limited to a single vehicle access point via maintenance track along South Yarra Siding Reserve. This arrangement allows for balustrade rather than a throw screen to the north-east boundary of South Yarra Siding Reserve improving its openness. Service access to the underground substation will be provided by the maintenance track along South Yarra Siding Reserve that also provides access to the rail lines. A secondary access point is provided within the rail corridor cutting along the Sandringham railway line tracks. The layout and access points of South Yarra Siding Reserve allow for safe vehicle turning movements. Other service access points are limited to lockable gates alongside overhead structures in the rail corridor, which will be integrated into the design of the throw screens.

Section	Clause	Design Guideline	Development Plan Response
	4.8.e.1	<p>Provide and improve shared use paths along the rail corridors with generous path widths to support local recreational and commuter use:</p> <ul style="list-style-type: none"> 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. 	<p>The proposed design response is consistent with the requirements of Clause 4.8.e.1 as follows:</p> <ul style="list-style-type: none"> Lovers Walk has been widened where possible, will be made more level and allow more visual permeability, with a widened 'pause point' at William Street, which will provide a more generous space to meet and rest before continuing a journey. The introduction of the SER/CER compound enables an improved Lovers Walk between William Street and Chambers Street, with the introduction of low level landscaping and a widened walkway adjacent to the above ground infrastructure. A high quality, permeable architectural screen will also be installed to improve the amenity of the connection and create an attractive walking environment for users. A new and generous Promenade on the southern side of the rail corridor between Chapel Street, South Yarra Siding Reserve and Osborne Street will be provided that will enhance east-west connections and help realise aspirations for a future pedestrian and cyclist connection between South Yarra Siding Reserve and Toorak Road. Pathways along Osborne Street will be maintained and enhanced to support universal access through the precinct.

Section	Clause	Design Guideline	Development Plan Response
	4.8.e.2	<p>Improve walking and cycling access across the rail lines:</p> <ul style="list-style-type: none"> • 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. 	<p>The proposed design response developed the Osborne Street and William Street bridges as part of the system of vertical surfaces that continue throughout the Precinct, with structural forms selected that maintain the continuity of the height of these perimeters at 2.4 metres in height.</p> <p>In greater detail this includes:</p> <ul style="list-style-type: none"> • Adopting a high quality, integrated architectural and structural design for the new William Street bridge that also complies with MTM design requirements within the railway corridor. The MTM design requirements have meant that the bridge must be a single span bridge with a 2.4 m high metre girder (measured from footpath height). Therefore, the design has incorporated viewing points to visually maintain connections to the surrounding environment and reflect the character of the precinct. The bridge space itself provides a widening of William Street that accommodates generous spaces for pedestrians with a minimum width of three metres for the western footpath from 17 William Street to South Yarra Siding Reserve. • The Osborne Street bridge complementing the William Street bridge with similar colour schemes and materiality, enabling a transition of character across the precinct. The design enables universal access from Osborne Street to the South Yarra Siding Reserve and then Toorak Road or Chapel Street. • Incorporating balustrades, throw screens, pathways and lighting into the design response to enhance safety and enhance universal accessibility through the area in accordance with the lighting strategy and in consultation with Council.

Section	Clause	Design Guideline	Development Plan Response
	4.8.e.3	<p>Maximise permanent usable public open space in the precinct, including:</p> <ul style="list-style-type: none"> 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. 	<p>The design response for the Eastern Portal satisfies Clause 4.8.e.3 by:</p> <ul style="list-style-type: none"> Backfilling in suitable locations along the railway corridor to levels that have increased opportunities for landscaping and usable open space within South Yarra Siding Reserve. Improving the accessibility of South Yarra Siding Reserve for surrounding residents and visitors to the area via additional access points and DDA compliant access points. Providing usable areas of public open space that are delineated through design and land form to create passive and active recreational areas. Creating a new pedestrian and cycling Promenade on the southern side of the rail corridor between Chapel Street, South Yarra Siding Reserve and Osborne Street that will enhance east-west connections and help to realise aspirations for a future pedestrian and cyclist connection between South Yarra Siding Reserve and Toorak Road. Providing a design response that help to realise Council's vision of the future decking of the railway for a public plaza that enhances pedestrian and cyclist connections through the area. Provision of two new pocket parks on William Street and Arthur Street. Improvement of Lovers Walk where possible in order to provide a widened public pathway and an expanded entrance from Chambers Street.
	4.8.e.4	<p>Provide a direct link through a new pedestrian bridge from the South Yarra Siding Reserve to Osborne Street to connect to Toorak Road.</p>	<p>The design response satisfies Clause 4.8.e.4 by providing a direct link from South Yarra Siding Reserve to Osborne Street that will enhance pedestrian and cyclist connections between Osborne Street, South Yarra Siding Reserve, Chapel Street and Toorak Road. In addition, the design also does not preclude any future pedestrian link to Toorak Road (and South Yarra Station).</p>

Section	Clause	Design Guideline	Development Plan Response
	4.8.e.5	<p>Provide high quality contemporary public open spaces that are accessible, safe and responsive to the needs of current and future local communities:</p> <ul style="list-style-type: none"> • 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. 	<p>The design response provides a contemporary public open space that includes:</p> <ul style="list-style-type: none"> • Additional pocket public spaces along William Street and Arthur Street. • Enhances accessibility to South Yarra Siding Reserve through the construction of a new DDA compliant local access shared path to Osborne Street. • Provision of universally accessible pathways and recreational spaces that can be enjoyed by everybody, including the widening of Lovers Walk where possible. • Provides a balance of hard and soft landscape solutions and associated furniture that is flexible enough to facilitate a range of passive recreational users. • Incorporates a mix of landscaping including canopy trees that provide for shade and allow sunlight in different sections of South Yarra Siding Reserve.

Section	Clause	Design Guideline	Development Plan Response
	4.8.e.6	<p>Design all structures required for and in association with the project as part of an integrated site design:</p> <ul style="list-style-type: none"> 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. 	<p>In accordance with the provisions of Clause 4.8.e.6, all structures required for and in association with the Metro Tunnel at the Eastern Portal have been integrated into the site design by:</p> <ul style="list-style-type: none"> Implementing a design strategy that provides for a comprehensive public realm design suite that integrates the key built elements to be delivered into the precinct, including the William Street and Osborne Street bridges, balustrades and throw screens along the rail corridors, and screen walls that surround the precinct and infrastructure compounds. Using materials for structural elements including retaining walls, balustrades, crash barriers, throw screens and security fencing that respect and reflect the history and built form context of South Yarra. Providing a considered design response that considers the view lines of infrastructure elements from all different viewpoints including Lovers Walk, William Street Bridge, South Yarra Siding Reserve and Osborne Street. Utilising landscaping and tree planting throughout the precinct in order to screen and soften structural elements of the design and the rail corridor. Incorporating materials and elements into all structures that maintain or enhance visual permeability, personal security and passive surveillance between different parts to the precinct Using materials and design solutions that are resistant to graffiti and discourage vandalism. Designing rail infrastructure that is visually recessive and set back or screened from public open spaces as appropriate.

APPENDIX D: EASTERN PORTAL ENVIRONMENTAL PERFORMANCE REQUIREMENTS DESIGN RESPONSE

Table 7 Eastern Portal EPRs Design Response

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Environmental Management Framework	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.	RIA has prepared and implemented an EMS that is certified to ISO 14001:2015 Environmental Management Systems – requirements with guidance for use for construction and operation.
Environmental Management Framework	EMF2	<ol style="list-style-type: none"> 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). 	RIA has prepared and implemented a CEMP in accordance with EPA Publication 480, Environmental Guidelines for Major Construction Sites (EPA 1996). Site specific controls are detailed in the SEIP. Aspect specific management plans have been prepared and implemented as required by the EPRs. Consultation with relevant stakeholders has been undertaken during the preparation of the CEMP, SEIP and aspect specific management plans in accordance with EPR requirements.
Environmental Management Framework	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.	RPV has appointed an Independent Environmental Auditor to undertake environmental audits as required in the Metro Tunnel EMF.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Environmental Management Framework	EMF4	<ol style="list-style-type: none"> 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). 	RIA has developed a complaints management system within the CSEMP. The CSEMP was prepared in accordance with AS/NZS 10002: 2014 Guidelines for Complaint Management in Organisations, the RIA EMS and the RPV CSEMF and BSGC. The CSEMP will be approved by RPV and will be subject to audit by the Independent Environmental Auditor, as required by the Metro Tunnel EMF.
Aquatic Ecology and River Health	AE1	<ol style="list-style-type: none"> 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). 	RIA has prepared a Surface Water Management Plan for temporary works with site specific controls in the SEIP to manage stormwater compliance with SEPP (Waters of Victoria) and SEPP (Waters). The controls follow the guidelines for major construction sites (EPA Victoria Publication 480).
Aquatic Ecology and River Health	AE2	<ol style="list-style-type: none"> 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. 	RIA has prepared a Surface Water Management Plan with site specific controls in the SEIP to manage stormwater compliance with Best Practice Environmental Management: Environmental Guidelines for Major Construction Sites – EPA publication 480 (1996) and the approved CEMP.
Aquatic Ecology and River Health	AE7	<ol style="list-style-type: none"> 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). 	The design of the Eastern Portal will not impact on stormwater quality as the design includes a stormwater detention tank and include WSUD principles with the use of stormwater harvesting and re-use for the South Yarra Siding Reserve, to treat collected water prior to discharge. Specific WSUD

Discipline	EPR Ref	Environmental Protection Requirements			Development Plan Response																	
			<table><tr><th>Pollutant type</th><th>Receiving water objective</th><th>Current best practice performance objective(1)</th></tr><tr><td>Suspended solids (SS)</td><td>Comply with SEPP (not to exceed the 90th percentile of 80 mg/L) (2)</td><td>80% retention of the typical urban annual load</td></tr><tr><td>Total phosphorus (TP)</td><td>Comply with SEPP (base flow concentration not to exceed 0.08 mg/L) (3)</td><td>45% retention of the typical urban annual load</td></tr><tr><td>Total nitrogen (TN)</td><td>Comply with SEPP (base flow concentration not to exceed 0.9 mg/L) (3)</td><td>45% retention of the typical urban annual load</td></tr><tr><td>Litter</td><td>Comply with SEPP (No litter in waterways) (2)</td><td>70% reduction of typical urban annual load (4)</td></tr><tr><td>Flows</td><td>Maintain flows at pre-urbanisation levels</td><td>Maintain discharges for the 1.5 year ARI at pre-development levels</td></tr></table> <p>Notes</p> <p>(1) Best practice performance objectives are based on the Best Practice Environmental Management Guidelines for Urban Stormwater – CSIRO.</p> <p>(2) An example using SEPP (Waters of Victoria), general surface waters segment.</p> <p>(3) SEPP Schedule F7 – Yarra Catchment – urban waterways for the Yarra River main stream.</p> <p>(4) Litter is defined as anthropogenic material larger than five millimetres.</p> <p>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.</p>	Pollutant type	Receiving water objective	Current best practice performance objective(1)	Suspended solids (SS)	Comply with SEPP (not to exceed the 90th percentile of 80 mg/L) (2)	80% retention of the typical urban annual load	Total phosphorus (TP)	Comply with SEPP (base flow concentration not to exceed 0.08 mg/L) (3)	45% retention of the typical urban annual load	Total nitrogen (TN)	Comply with SEPP (base flow concentration not to exceed 0.9 mg/L) (3)	45% retention of the typical urban annual load	Litter	Comply with SEPP (No litter in waterways) (2)	70% reduction of typical urban annual load (4)	Flows	Maintain flows at pre-urbanisation levels	Maintain discharges for the 1.5 year ARI at pre-development levels	measures have been developed to suit the overall design in consultation with Council. Drainage will be designed to manage stormwater compliance with SEPP (Waters of Victoria).
Pollutant type	Receiving water objective	Current best practice performance objective(1)																				
Suspended solids (SS)	Comply with SEPP (not to exceed the 90th percentile of 80 mg/L) (2)	80% retention of the typical urban annual load																				
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Flows	Maintain flows at pre-urbanisation levels	Maintain discharges for the 1.5 year ARI at pre-development levels																				
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.	There is an area of Aboriginal Cultural Heritage Significance located at South Yarra Siding Reserve (artefact scatter (VAHR 7822-4006)). This area has been protected and identified on the SEIP. No intrusive works will be undertaken in this area. The Eastern Portal design is within the activity area defined in the Cultural Heritage Management Plan (CHMP 13967). Construction works will be undertaken in accordance with the requirement of the Cultural Heritage Management Plan.																		

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).	RIA has prepared an Air Quality Management Plan in consultation with the Environment Protection Authority (EPA) with site specific controls in the SEIP to maintain air quality in accordance with the <i>SEPP (Air Quality Management)</i> and <i>SEPP (Ambient Air Quality)</i> .
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).	RIA has prepared an Air Quality Management Plan to minimise dust and other emissions in accordance with EPA Publication 480, Environmental Guidelines for Major Construction Sites (EPA 1996).
Air Quality	AQ3	2. 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.	RIA has prepared an Air Quality Management Plan with site specific controls in the SEIP to maintain air quality in accordance with the <i>SEPP (Air Quality Management)</i> and <i>SEPP (Ambient Air Quality)</i> . Once in operation, it is not expected that the Eastern Portal will produce emissions of smoke, dust, fumes and other pollutions into the atmosphere.
Arboriculture	AR1	<ol style="list-style-type: none"> 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. Comply with any requirements of Heritage Victoria if the trees are on the VHR. 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: <ol style="list-style-type: none"> Trees to be removed or retained. Condition and significance of the trees to be removed. Options for temporary re-location of palms and reinstatement at their former location or another suitable location. Options for re-location of all trees and, if feasible for the tree species, reinstatement of the trees at their former location. 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. 	<p>A total of 134 trees were present within the Development Plan area. As part of preparatory and early works at the Eastern Portal, 102 trees were removed within the Development Plan Area and 32 trees are retained and protected. Trees will be replaced with having regard to the <i>Metro Tunnel Living Infrastructure Plan</i> and increase the overall tree canopy of the area.</p> <p>The trees removed were located in the railway corridor, South Yarra Siding Reserve, William Street, Chambers Street and acquired properties. There are no trees to be removed as part of this Development Plan that require approval under Clause 4.7 of the Incorporated Document. No trees within the Development Plan area are identified as trees on the VHR.</p> <p>RIA has prepared and implemented a Tree Management Plan which includes maximising possible tree retention and a protocol for tree removal established in consultation with the Council.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Arboriculture	AR2	<ol style="list-style-type: none"> 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. 	<p>There are no trees to be removed as part of this Development Plan that require approval under Clause 4.7 of the Incorporated Document.</p> <p>The reinstatement of trees removed for the Project will be undertaken in accordance with the Urban Ecology Management Plan.</p>
Arboriculture	AR3	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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. c) The City of Stonnington's General Local Law 2008 (No 1) and City of Stonnington Street Tree Strategy. d) Any associated precinct plans. 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). 	<p>There are no trees to be removed as part of this Development Plan that require approval under Clause 4.7 of the Incorporated Document.</p> <p>The reinstatement of trees removed for the Project will be undertaken in accordance with the Urban Ecology Management Plan.</p>
Arboriculture	AR4	<ol style="list-style-type: none"> 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. 	<p>RIA has prepared and implemented a Tree Management Plan with site specific controls in the SEIP.</p> <p>The Tree Management Plan requires that retained trees within the works area or adjacent to (where relevant) will be managed through a Tree Protection Plan which is prepared by the Metro Tunnel Arborist.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		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).	
Business	B1	<ol style="list-style-type: none"> 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. 	RIA has prepared a CSEMP and a Business Disruption Plan, and has undertaken consultation with business and land owners.
Business	B2	<ol style="list-style-type: none"> 1. Prior to commencement of relevant works, prepare a business disruption plan consistent with the contractors Community and Stakeholder Engagement Management Plan (SC4) to: <ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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.). 	RIA has prepared a CSEMP and a Business Disruption Plan, and has undertaken consultation with business and land owners.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		<ul style="list-style-type: none"> 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 upskilling 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. 	
Contaminated Land and Spoil Management	C1	<ol style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. 	RIA has prepared a Spoil Management Plan in accordance with RPVs Spoil Management Strategy, which includes an Acid Sulfate Soil and Rock Management Sub-Plan. Consultation with EPA is ongoing regarding the management of spoil.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		3. 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).	
Cultural Heritage - Historical	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 1995.	There is no impact expected to heritage fabric within the scope of the Eastern Portal. The cultural heritage values of HO150, the Former South Yarra Post Office (VHR# H0210) and the Former South Yarra Railway Station (VHR# H1068) have been considered and avoided in the design.
Cultural Heritage - Historical	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.	RIA has prepared a Heritage Management Plan with site specific controls in the SEIP in consultation with relevant stakeholders.
Cultural Heritage - Historical	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. 3. The heritage interpretation strategy should consider the RPV Creative Strategy.	There are no VHR or VHI sites within the Development Plan area or in the vicinity of the area that would be impacted by the Eastern Portal.
Cultural Heritage - Historical	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.	There is no impact expected to heritage fabric within the scope of the Eastern Portal.
Cultural Heritage - Historical	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.	There is no impact expected to heritage fabric within the scope of the Eastern Portal.
Flora and Fauna - Terrestrial	FF2	1. Develop and implement measures to avoid the spread or introduction of weeds and pathogens during construction, including vehicle and equipment hygiene.	RIA has prepared a Tree Management Plan which includes measures to avoid the spread or introduction of weeds and pathogens during construction.
Greenhouse Gas	GHG1	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.	RIA has prepared a Sustainability Management Plan.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Greenhouse Gas	GHG2	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.	RIA has prepared a Sustainability Management Plan with Carbon and Energy sub-plan developed in accordance with Project targets and requirements for greenhouse gas emission reductions. RIA is required to report to RPV on a monthly basis regarding sustainability performance of the RIA Project.
Ground Movement and 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: <ol style="list-style-type: none"> Use monitored ground movement and ground water levels prior to construction to identify pre-existing movement. Inform tunnel design and the construction techniques to be applied for the various geological and groundwater conditions. Assess potential drawdown and identify trigger levels for implementing additional mitigation measures to minimise potential primary consolidation settlement. 2. Assess potential ground movement effects from excavation and identify trigger levels for implementing additional mitigation measures to minimise potential ground movement effects.	Ground movement modelling and monitoring has been undertaken in accordance with EPR requirements. The Eastern Portal design response considers the impact of ground movement from excavation and dewatering.
Ground Movement and 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.	Ground movement modelling and monitoring has been undertaken in accordance with EPR requirements. The Eastern Portal design response considers the impact of ground movement from piling, excavation and dewatering and limits ground movements to within appropriate acceptability criteria as determined in consultation with relevant stakeholders. RIA has prepared and implemented a Ground Movement Management Plan (GMMP). The GMMP includes recommendations regarding monitoring.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Ground Movement and Stability	GM4	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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. 	<p>RIA has prepared and implemented a GMMP and has prepared a CSEMP.</p> <p>Pre-construction condition surveys will be undertaken for assets or structures potentially impacted by ground movement in accordance with the CSEMP.</p> <p>If, during design development, any third party assets are identified as crossing the works site these will be investigated, assessed and protected as required.</p>
Groundwater	GW1	<ol style="list-style-type: none"> 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. 	<p>The Eastern Portal design response does not include long term lowering of the water table, such that there will be little or no long term changes to the local groundwater levels, flow patterns, or groundwater quality.</p> <p>The Groundwater Management Plan (GWMP) has been prepared to validate the predicted minimal impacts to groundwater dependent values, ground movement and contamination plume migration.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Groundwater	GW2	<ol style="list-style-type: none"> 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. 	<p>The Eastern Portal design is informed, in part, on a numerical groundwater model.</p> <p>The predictive groundwater modelling has been undertaken according to the modelling guidelines and has been subject to an audit by the Independent Environmental Auditor, as required by the Metro Tunnel EMF.</p> <p>Ongoing groundwater monitoring, water level and quality, is being conducted as developed in the GWMP, to validate the model predictions and implement any mitigation measures, if required.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Groundwater	GW3	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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 borefields. 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. 5. The GWMP should also address RPV's sustainability requirements where appropriate. 	The GWMP for the Eastern Portal has been prepared and implemented prior to the main works, and includes recommendations regarding groundwater monitoring.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Land Use and Planning	LU1	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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). 	<p>Consultation with Council is ongoing regarding the design of the Eastern Portal in accordance with EPR requirements.</p> <p>The Eastern Portal works will minimise the duration of impacts to existing public open space and existing residential areas, in addition residents will be notified in advance of works being undertaken.</p> <p>The Eastern Portal is very constrained, and RIA has proposed a design that ensures minimisation of the construction footprint.</p> <p>The Project seeks to return public open space and provide additional parks and landscaping where possible.</p> <p>Any impacts to the local road network will continue to be managed in accordance with the Transport Management Plan (TMP) and Worksite Traffic Management Plans (WTMP's) in accordance with EPR requirements.</p> <p>In addition, an assessment of the Eastern Portal against the UDS is located at Section 6 and Appendix C.</p>
Land Use and Planning	LU2	<ol style="list-style-type: none"> 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. 	<p>Consultation with Council is ongoing regarding the design of the Eastern Portal in accordance with EPR requirements.</p> <p>This Development Plan considers relevant Open Space Master Plans and other strategic documents in addition to consultation with Council.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		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.	An assessment of the Eastern Portal design against the relevant master plans Urban Design Guidelines is located at Section 6 and Appendix C.
Land Use and Planning	LU4	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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). 	<p>The design of the Eastern Portal has and continues to be developed in consultation with UDAAP and Council.</p> <p>An assessment of the Eastern Portal design and construction against the relevant Urban Design Guidelines is located at Section 6 and Appendix C. In addition, the Urban Design Management Plan (Temporary Works) has been prepared for the management of urban design related construction impacts.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Landscape and Visual	LV1	<p>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:</p> <p>g) Eastern Portal: South Yarra Siding Reserve, Osborne Street, Lovers Walk Pedestrian Walk.</p>	<p>Consultation with the Office of the Victorian Government Architect and Council is ongoing regarding the design of the Eastern Portal in accordance with EPRs.</p> <p>Visual impacts to sensitive receptors and heritage places will be appropriately responded to including:</p> <ul style="list-style-type: none"> • Reinstatement of the landscape character of Osborne Street Reserve through replanting of trees and multi-storey planting, which will also soften the appearance of the Osborne Street bridge.. • Reinstatement of the views from South Yarra Siding Reserve to the nearby South Yarra skyline, as well as maintained ground level visual connection to Lovers Walk. • Strengthening of the landscape character of South Yarra Siding Reserve through substantial tree planting, and multi-storey planting along its southern and western boundaries. • Reinstatement of visual connection between Lovers Walk and South Yarra Siding Reserve and Lovers Walk and Arthur Street. • Ensuring that sightlines along Lovers Walk are improved by the SER/CER compound through the use of visually recessive elements, permeable fencing and landscaping. • Inclusion of high quality, architectural screening at the SER/CER compound to minimise the visual impact of rail infrastructure to the public realm. <p>An assessment of the Eastern Portal design and construction against the relevant Urban Design Guidelines is located at Section 6 and Appendix C. In addition, the Urban Design Management Plans (Temporary Works and Permanent Works) have been prepared for the management of urban design related construction impacts.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Landscape and Visual	LV2	<ol style="list-style-type: none"> 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. 	<p>Consultation with the Office of the Victorian Government Architect and Council is ongoing regarding the design of the Eastern Portal through the design development process in accordance with EPRs.</p> <p>The Eastern Portal will reinstate and improve connections to South Yarra Siding Reserve through the implementation of the new Osborne Street bridge and facilitating the completion of the Promenade between Chapel Street and Toorak Road, south of the rail corridor.</p> <p>An assessment of the Eastern Portal design against the relevant public realm Urban Design Guidelines is located at Section 6 and Appendix C.</p>
Noise and Vibration	NV3	<ol style="list-style-type: none"> 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). 	<p>This Plan presents the surface works for the Eastern Portal. RIA has prepared a Noise and Vibration Management Plan with site specific controls in the SEIP. These controls have been informed by a Construction Noise and Vibration Impact Assessment and modelling undertaken by a suitably qualified acoustic and vibration consultant for works during this stage.</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response									
Noise and Vibration	NV16	<div>1. Design Phase<div><div>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</div><div>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</div></div></div> <div>2. Commissioning / Operation<div><div>a) Appoint a suitably qualified acoustic and vibration consultant to undertake commissioning noise and vibration measurements to assess levels with respect to the EPRs.</div></div></div>	Nosie and vibration impacts for the Eastern Portal have been assessed by an acoustic consultant to confirm that the design can meet the relevant EPRs. The outputs of this assessment have been documented in an Operation Noise and Vibration Report.									
Noise and Vibration	NV17	<div>1. Avoid, minimise or mitigate rail noise where the following PRINP (April 2013) Investigation Thresholds are exceeded during operation:</div> <table><tr><th>Time</th><th>Type of Receiver</th><th>Investigation Thresholds</th></tr><tr><td>Day (6 am - 10 pm)</td><td>Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise sensitive community buildings, including schools, kindergartens, libraries</td><td>65 dBLAeq and a change in 3 dB(A) or more or 85 dBLAmax and a change in 3 dB(A) or more</td></tr><tr><td>Night (10 pm - 6 am)</td><td>Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks</td><td>60 dBLAeq and a change in 3 dB(A) or more or 85 dBLAmax and a change in 3 dB(A) or more</td></tr></table> <div>Notes<div><div>(1) If an investigation shows that the Investigation Thresholds are not exceeded, then no further action is considered under the PRINP.</div><div>(2) The barrier thresholds of the PRINP are to be used as the design targets for the barrier heights and configuration.</div><div>(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:<div><div>a. Maximum noise levels of trains should not exceed 50 dB LAmax in bedrooms.</div></div></div></div></div>	Time	Type of Receiver	Investigation Thresholds	Day (6 am - 10 pm)	Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise sensitive community buildings, including schools, kindergartens, libraries	65 dBLAeq and a change in 3 dB(A) or more or 85 dBLAmax and a change in 3 dB(A) or more	Night (10 pm - 6 am)	Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks	60 dBLAeq and a change in 3 dB(A) or more or 85 dBLAmax and a change in 3 dB(A) or more	Operational noise from rollingstock has been assessed in accordance with Passenger Rail Infrastructure Noise Policy (PRINP) for the Eastern Portal.
Time	Type of Receiver	Investigation Thresholds										
Day (6 am - 10 pm)	Residential dwellings and other buildings where people sleep including aged persons homes, hospitals, motels and caravan parks Noise sensitive community buildings, including schools, kindergartens, libraries	65 dBLAeq and a change in 3 dB(A) or more or 85 dBLAmax and a change in 3 dB(A) or more										
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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response																									
		<p>b. Maximum noise level of trains should not exceed 60 dB LAmax in living areas.</p> <p>(4) LAmax, is defined as maximum A-weighted sound pressure level and is the 95 percentile of the highest value of the A-weighted sound pressure level reached within the day or night</p> <p>(5) For Melbourne Metro the location of assessment is at 1m from the centre of the window of the most exposed external façade.</p>																										
Noise and Vibration	NV18	<p>1. For operation, noise from fixed plant associated with Melbourne Metro must:</p> <p>a) Comply with State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No. N-1 (SEPP N-1).</p> <p>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:</p> <p>i. Teaching spaces</p> <p>ii. Laboratories</p> <p>iii. Conference rooms</p> <p>iv. Libraries</p> <p>v. Music studios</p> <p>vi. Operating Theatres / Surgeries</p> <p>vii. Wards / Recliners</p> <p>viii. Performance spaces / Galleries</p> <p>ix. Places of worship</p> <p>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.</p> <p>3. This does not apply to noise generated by trains and/or trams.</p>	Noise from infrastructure has been designed to comply with SEPP N-1 at the Eastern Portal. An addendum to the Project Wide – Noise and Vibration – Operational Rail Noise & Vibration Assessment Report has been undertaken to capture the SER/CER compound. A summary of the Eastern Portal SER/CER compound indicates there would be no adverse noise impacts from the rail corridor to the public realm as the noise emitted from the compound is equivalent to a residential air conditioner and is situated away from nearby residences.																									
Noise and Vibration	NV20	<p>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:</p> <table><tr><td></td><td colspan="4">VDV (M/s1.75)</td></tr><tr><td>Location</td><td colspan="2">Day 7am-10pm</td><td colspan="2">Night 10pm-7am</td></tr><tr><td>Residences</td><td>0.2</td><td>0.4</td><td>0.1</td><td>0.2</td></tr><tr><td>Offices, schools, educational institutions, places of worship</td><td>0.4</td><td>0.8</td><td>0.4</td><td>0.8</td></tr><tr><td>Workshops</td><td>0.8</td><td>1.6</td><td>0.8</td><td>1.6</td></tr></table>		VDV (M/s1.75)				Location	Day 7am-10pm		Night 10pm-7am		Residences	0.2	0.4	0.1	0.2	Offices, schools, educational institutions, places of worship	0.4	0.8	0.4	0.8	Workshops	0.8	1.6	0.8	1.6	Future rolling stock movement has been designed to meet vibration targets during operation at the Eastern Portal. The scope of the Eastern Portal is not expected to result in a change to existing vibration levels nearby sensitive receivers.
	VDV (M/s1.75)																											
Location	Day 7am-10pm		Night 10pm-7am																									
Residences	0.2	0.4	0.1	0.2																								
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Workshops	0.8	1.6	0.8	1.6																								

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		<p>Notes</p> <p>(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.</p> <p>(2) Compliance with these values implies no structural damage due to operation.</p>	
Social and Community	SC3	<ol style="list-style-type: none"> 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. <ol style="list-style-type: none"> 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 CSEMF prepared by each contract works package. 2. The CSEMF must provide for any interested stakeholder to be able to register their contact details to the Project webpage to ensure they are included and automatically advised of planned construction activities, Project progress, mitigation measures and intended reinstatement measures where applicable. 3. The CSEMF must document a complaints management process in accordance with EPR EMF4. 4. The CSEMF must be approved by the Minister for Planning prior to the commencement of early works. 	The CSEMF, prepared by RPV, has been approved by the Minister for Planning.

Social and Community	SC4	<ol style="list-style-type: none"> 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: <ol style="list-style-type: none"> 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 <i>Guidelines for Complaint Management in Organisations</i>. 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: <ol style="list-style-type: none"> a) Local councils b) Land managers c) Potentially affected residents d) Potentially affected businesses 	<p>RIA has prepared a CSEMP in accordance with the CSEMF to engage potentially affected stakeholders.</p>
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Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		<ul style="list-style-type: none"> e) Recreation, sporting and community groups and facilities f) Other public facilities in proximity. 	
Social and Community	SC6	<ol style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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. 	The Eastern Portal is not expected to affect any major public events. The CSEMP considers potential impacts to major public events and provides for coordination with affected stakeholders.
Social and Community	SC7	<ol style="list-style-type: none"> 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. 	The Eastern Portal will not displace sports clubs or directly impact recreational facilities. Traffic management measures (through TMPs and WTMP's) are in place to ensure that access to sports clubs and recreational facilities will be retained during construction in accordance with EPR requirements.
Social and Community	SC8	<ol style="list-style-type: none"> 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: <ul style="list-style-type: none"> a) Re-establish sites impacted by construction works, to be generally in accordance with adopted open space master plans, and conservation management plans (where appropriate). 	The reinstatement of areas impacted by construction works at the Eastern Portal will be undertaken in consultation with Council and other key stakeholders. RIA has also undertaken informal engagement via community pop ups to seek opinion on what the community values and is delivering a design workshop with community members and CRG members. There are no master plans within the Development Plan area. An assessment of the Eastern Portal design against the relevant master plan Urban Design Guidelines is located at Section 6 and Appendix C.
Social and Community	SC12	<ol style="list-style-type: none"> 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. 	A Community Reference Group has been established for the Eastern Portal. Key stakeholders have been consulted with regarding the design and aspect specific management plans for the Eastern Portal.

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
Surface Water	SW1	<ol style="list-style-type: none"> 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. 	<p>RIA has prepared a Surface Water Management Plan with site specific controls in the SEIP. Consultation with the responsible waterway management authority has been undertaken during the preparation of the Surface Water Management Plan in accordance with EPR requirements. The design includes a detention tank to be located under South Yarra Siding Reserve to manage stormwater discharge rates, as well as a floodwall at Arthur Street. The design includes allowance for climate change through considering increased rainfall intensities and sea level rise. An assessment of the Eastern Portal design against the relevant Urban Design Guidelines is located at Section 6 and Appendix C.</p>
Surface Water	SW2	<ol style="list-style-type: none"> 4. For all precincts, to the satisfaction of the responsible waterway management authority: <ol style="list-style-type: none"> 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. 5. 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. 	<p>RIA has prepared a Surface Water Management Plan with site specific controls in the SEIP. Consultation with the responsible waterway management authority has been undertaken during the preparation of the Surface Water Management Plan in accordance with EPR requirements. The design includes a detention tank to be located under South Yarra Siding Reserve to manage stormwater discharge rates, as well as a floodwall at Arthur Street. The design includes allowance for climate change through considering increased rainfall intensities and sea level rise. An assessment of the Eastern Portal design against the relevant Urban Design Guidelines is located at Section 6 and Appendix C.</p>
Transport	T7	<ol style="list-style-type: none"> 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 	<p>Roadworks at the Eastern Portal will be managed through the TMP and WTMPs in accordance with EPR requirements. Once in operation the Eastern Portal will not affect the public road network surrounding the</p>

Discipline	EPR Ref	Environmental Protection Requirements	Development Plan Response
		<p>facilitate public transport and minimise carpark loss to the extent practicable.</p> <p>8. Where vehicle 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.</p>	<p>Development Plan area In accordance with Council and local community consultation, two kerbside car spaces along Osborne Street, and three kerbside car spaces along Arthur Street have been removed to provide additional street tree planting and wider pedestrian space. Furthermore, the SER/CER compound will ensure that no car parking is removed from outside existing residential properties on Chambers Street.</p>
Transport	T8	<p>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.</p> <p>4. Provide adequate wayfinding to facilitate passenger transfers (see EPR LU4).</p>	<p>South Yarra station does not interface with the Eastern Portal precinct, however the provision of the Promenade will facilitate a future link to Toorak Road which will substantially reduce congestion at the station through provision of a wide and continuous pedestrian and cycling link from Toorak Road to Chapel Street.</p> <p>The Eastern Portal project does not accommodate facilities for the transfer of rail passengers.</p>
Transport	T9	<p>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.</p> <p>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.</p> <p>6. Provide wayfinding information to enhance connectivity for pedestrians and public transport users, in consultation with relevant local councils and user groups.</p> <p>7. Consult with the TTWG on active transport, where required.</p>	<p>No on-road bicycle lanes will be removed during construction at the Eastern Portal.</p> <p>Pedestrians pathways will be reinstated along Lovers Walk, Arthurs Street, William Street, and Osborne Street, which will be further enhanced through the creation of the Promenade and a new pedestrian and cycling link from Osborne Street to South Yarra Siding Reserve and William Street.</p> <p>Wayfinding will be provided in consultation with Council to continue to the signage suite developed by Council.</p> <p>Consultation with the TTWG has been undertaken and will be ongoing through the design and construction phases.</p>