St Marys Station footbridge
Place, Urban Design and Corridor Landscape Plan (PUDCLP)

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Approval Record

Function	Position	Name	Date
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Approved by	Project Manager	Luke Palmer	18.12.2024

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Executive Summary

This Place, Urban Design and Corridor Landscaping Plan (PUDCLP) has been prepared to address the requirements of the Sydney Metro – Western Sydney Airport project approval SSI-10051 for St Marys Station footbridge.

Condition E77 requires that:

A PUDCLP must be prepared to document and illustrate the permanent built works and landscape design of the Critical State Significant Infrastructure (CSSI) and how these works are to be maintained. The PUDCLP must be:

(a) prepared by a suitably qualified and experienced person(s) in consultation with the community (including the affected landowners and businesses or a representative of the businesses), Western Parklands City Authority, Western Sydney Planning Partnership and relevant council(s);

(b) reviewed by an independent and suitably qualified and experienced person nominated by the DRP;

(c) submitted to the Planning Secretary prior to the construction of permanent built surface works and/or landscaping, excluding those elements which for ecological requirements, or technical requirements, or requirements as agreed by the Planning Secretary do not allow for alternate design outcomes; and

(d) implemented during construction and operation of the CSSI.

Note: The PUDCLP may be developed and considered in stages to facilitate design progression and construction. Any such staging and associated approval would need to facilitate a cohesive final design and not limit final design outcomes.

The Condition notes that the PUDCLP may be submitted in stages to facilitate design progression and construction of the project and that any such staging and associated approval would need to facilitate a cohesive final design and not limit final design outcomes. This PUDCLP is for the St Marys Station footbridge and northern plaza. This PUDCLP has been prepared by Architectus and Arcadia Landscape Architecture in collaboration with Arcadis and Laing O'Rourke.

Compliance with Condition E77 and other relevant conditions of approval is detailed within the compliance matrix in Section 1.8 of this PUDCLP.

A separate PUDCLP is being developed that will include St Marys Metro Station Stations, Systems, Trains, Operations and Maintenance (Sydney Metro Station), Parklife Metro.

This PUDCLP presents an integrated landscape, urban and place making outcome for the St Marys Station footbridge and northern plaza. The design has been based on an examination of site context, the functional, natural, and cultural drivers of the project, consultation with stakeholders, and an agreed process of iterative design.

The PUDCLP proposes a coordinated response to the integration of the proposed St Marys Station footbridge and northern plaza facilities, into the existing St Marys Train Station setting and the proposed St Marys Metro and southern plaza.

Features of this PUDCLP include:

- A footbridge architectural typology which responds to Place as well as satisfying the functional and operational requirements of the St Marys Metro Station northern access
- Station environs design which integrates the new footbridge with the northern precinct, and maximises the potential to derive lasting social, cultural, economic, and environmental benefits for the community over time
- A landscape design respectful of the regional and local natural and cultural setting, directed towards providing a comfortable and sustainable setting for the benefit of the community and the natural environment
- A functional design which promotes pedestrian and cyclist access, and facilitates multi-modal transport integration
- An architectural design which responds to both the new St Marys Metro building and to the existing heritage of the St Marys Train Station

This PUDCLP report is structured as follows:

- Section 1: outline of the PUDCLP purpose, scope, approach, structure, and compliance with CSSI conditions of approval
- Section 2: collaboration and consultation process
- Section 3: project context and the over arching objectives, principles, and standards which have informed the planning and design of the PUDCLP
- Section 4: precinct plans which describe the overall site wide design, and the measures to integrate it with the adjacent precinct
- Section 5: architectural design elements including the footbridge and ancillary structures
- Section 6: landscape design and planting strategies
- Section 7: details of how staged construction will facilitate a cohesive final design
- Section 8: sustainability initiatives
- Section 9: timing and responsibility for implementation and maintenance of the elements covered by this PUDCLP

This Place, Urban Design, and Corridor Landscape Plan will make a strong contribution to the integration of the St Marys Station footbridge project with its environment and communities. It will be a catalyser for a new era of transport service and urban development possibilities for the people of St Marys and adjacent communities.

Introduction

1

1 Introduction

1.1 Purpose of the Place, Urban Design and Corridor Landscape Plan

This plan has been prepared to document the Place, Urban Design and Corridor Landscape Plan (PUDCLP) for the St Marys Station footbridge and northern station plaza component of the Sydney Metro – Western Sydney Airport project.

The PUDCLP has been prepared to present an integrated urban and place making outcome to guide the design of the permanent built surface works and landscaping associated with the project.

Condition E63 of the Consent identifies the overall strategic outcomes for the Project:

E63 The CSSI must be designed with consideration of:

a. the design objectives, principles and guidelines identified in documents listed in Condition A1;

b. the principles and objectives of the draft Connecting with Country Framework;

c. relevant land use changes, masterplans and initiatives, where this information is known and/or available;

d. existing and proposed future local context and character; and

e. transport and land use integration and system functionality in the context of precincts, to the extent it is known and/or defined.

Responses to items (a) – (e) must be reviewed by the Design Review Panel (DRP) to inform the design of permanent built works and landscape design of the CSSI. The outcome of the DRP review must be provided to the Planning Secretary prior to the submission of the Place, Urban Design and Corridor Landscape Plan (PUDCLP).

An integrated urban and place making outcome must be achieved through the consideration of existing and planned public domain and private developments adjacent to the project and effective consultation and collaboration with relevant stakeholders.

As required by Condition of Approval E77, this PUDCLP addresses the St Marys Station footbridge permanent built works and landscape design.

The preparation of the PUDCLP is a requirement of Condition of Approval E77 of the Sydney Metro – Western Sydney Airport project approval SSI-10051. Condition of Approval E77 allows the PUDCLP to be submitted in stages and, as identified in the project's Staging Report, staging of the project is represented on a construction stage basis. Consistent with the requirements of Condition E77, E78 and E79, this PUDCLP:

- documents and illustrates the design of permanent built works and landscape works relevant to the construction stage
- includes plans for the northern station precinct
- details specific design objectives, principles and standards
- identifies landscaping and building design opportunities to mitigate visual impacts and minimise light spill
- describes the key design features
- details strategies for rehabilitation, regeneration or revegetation
- outlines implementation of the plan, including maintenance and monitoring
- provides evidence of consultation.

The different PUDCLPs to be prepared by each package are in accordance with the staging provision. The PUDCLPs will work together to deliver integrated urban and place making outcomes.

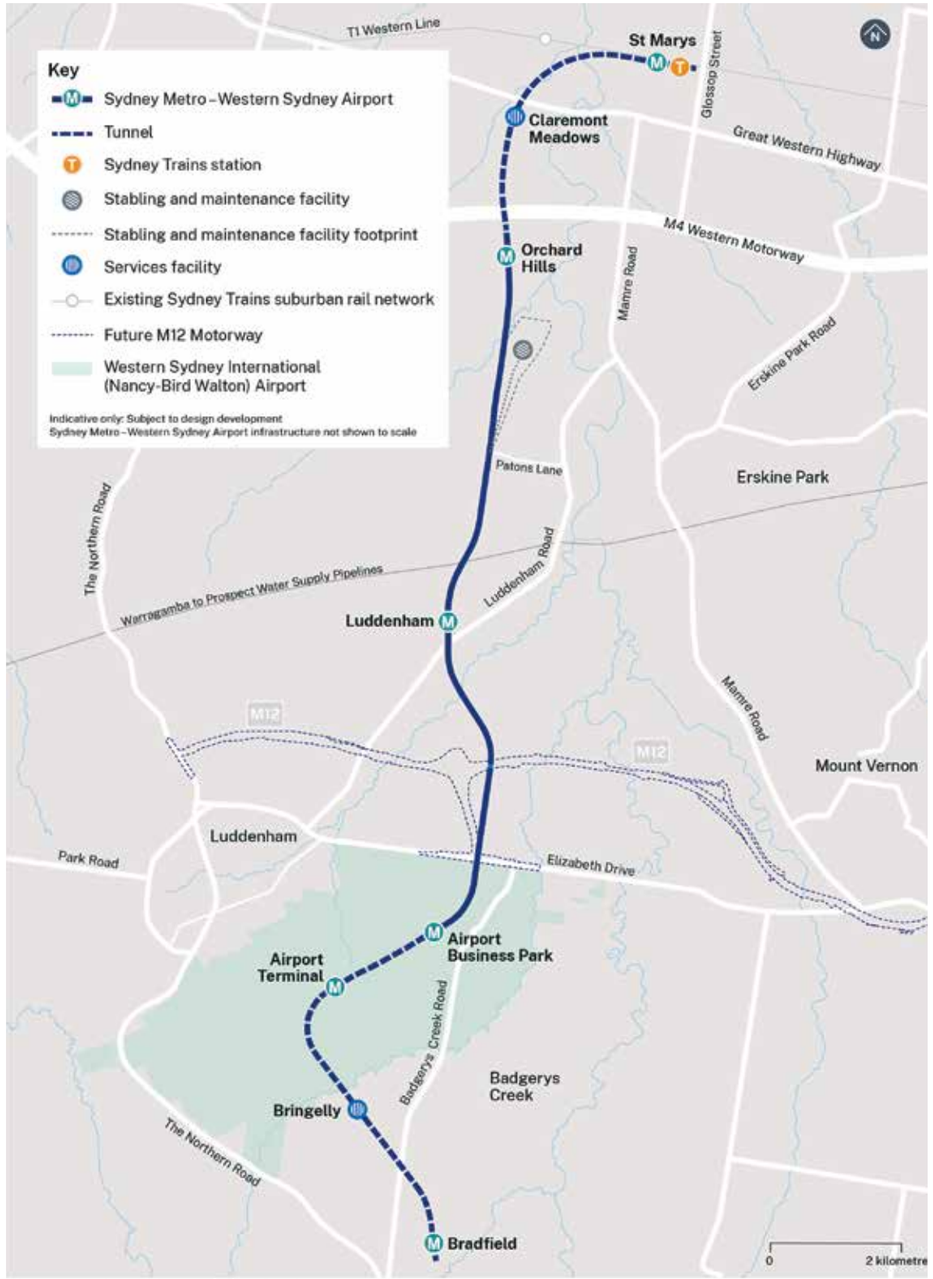

Figure 1: Overview of the Project

1 Introduction
1.2 Project Overview

New metro rail will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport and the growing region. The city-shaping project, from St Marys through to the new airport and the Western Sydney Aerotropolis, will provide a major economic stimulus for western Sydney, supporting more than 14,000 jobs during construction for the NSW and national economies.

The 23 kilometre new railway will link residential areas with job hubs including the new Aerotropolis, and connect travellers from the new airport to the rest of Sydney's public transport system.

Key operational features of the project include:

• around 4.3 kilometres of twin rail tunnels (generally located side by side) between St Marys (the northern extent of the project) and Orchard Hills
• a cut-and-cover tunnel around 350 metres long (including tunnel portal), transitioning to an in-cutting rail alignment south of the M4 Western Motorway at Orchard Hills
• around 10 kilometres of rail alignment between Orchard Hills and Western Sydney International, consisting of a combination of viaduct and surface rail alignment
• around two kilometres of surface rail alignment within Western Sydney International
• around 3.3 kilometres of twin rail tunnels (including tunnel portal) within Western Sydney International
• around three kilometres of twin rail tunnels between Western Sydney International and the Aerotropolis Core
• six new metro stations:
- four off-airport stations:
• St Marys (providing interchange with the existing Sydney Trains suburban rail network)
• Orchard Hills
• Luddenham Road
• Aerotropolis Core
- two on-airport stations:
• Airport Business Park
• Airport Terminal
• grade separation of the track alignment at key locations including:
- where the alignment interfaces with existing infrastructure such as the Great Western Highway, M4 Western Motorway, Lansdowne Road, Patons Lane, the Warragamba to Prospect Water Supply Pipelines, Luddenham Road, the future M12 Motorway, Elizabeth Drive, Derwent Road and Badgerys Creek Road
- crossings of Blaxland Creek, Cosgroves Creek, Badgerys Creek and other small waterways to provide flood immunity for the project
• modifications to the existing Sydney Trains station and rail infrastructure at St Marys (where required) to support interchange and customer transfer between the new metro station and the existing Sydney Trains suburban rail network
• a stabling and maintenance facility and operational control centre located to the south of Blaxland Creek and east of the proposed metro track
• new pedestrian, cycle, park-and-ride and kiss-and-ride facilities, public transport interchange infrastructure, road infrastructure and landscaping as part of the station precincts.

The project will also include:
• turnback track arrangements (turnbacks) at St Marys and Aerotropolis Core to allow trains to turn back and run in the opposite direction
• additional track stubs to the east of St Marys Station and south of Aerotropolis Core Station to allow for potential future extension of the line to the north and south respectively without impacting future metro operations
• an integrated tunnel ventilation system, including at services facilities at Claremont Meadows and Bringelly during construction
• all operational systems and infrastructure such as crossovers, rail sidings, signalling, communications, overhead wiring, power supply, lighting, fencing, security and access tracks/paths
• retaining walls at required locations along the alignment
• environmental protection measures such as noise barriers (if required), on-site water detention, water quality treatment basins and other drainage works.

Off-airport project components

The off-airport components of the project will include the track alignment and associated operational systems and infrastructure north and south of Western Sydney International, four metro stations, the stabling and maintenance facility, two services facilities and a tunnel portal.

On-airport project components:

The on-airport components of the project will include the track alignment and associated operational systems and infrastructure within Western Sydney International, two metro stations and a tunnel portal. The on-airport components are subject to approvals from the Commonwealth and are not dealt with in this report.

The key project features as described are indicative only and subject to design development in accordance with the process identified in Chapter 6 (Project development and alternatives) of the Environmental Impact Statement.

Key operational features of the project are shown on Figure 1.

St Marys Station will have an important role to play as a major transport gateway that will connect the Western Parkland City to the rest of Sydney, with thousands of people interchanging at St Marys Station each day once metro services commence. The footbridge will connect the north and south of the station precinct, providing platform-to-platform connections between the metro and suburban trains

1 Introduction
1.3 Scope of this Place, Urban Design and Corridor Landscape Plan

This PUDCLP presents integrated urban, landscape and architectural design outcomes for the St Marys Station footbridge, which will connect the existing northern St Marys Station Multi-Storey Carpark to the new southern St Marys Metro Station Box.

Permanent Works include:

- A raised footbridge that provide a new connection over the railway line which will link the new St Marys Metro Station building to the existing St Marys station platforms, and to the transport facilities and Harris Street community on northern side
- A northern plaza and gateway, including new pavement, bicycle racks, seating, landscaping, and tree planting.
- Landscaping and footpath refurbishment linking the northern plaza to the existing Sydney Trains entrance, including secure enclosed bicycle parking.
- Public domain enhancements to Harris Street, including new pavement and street trees, and new transport interchange facilities (taxi, kiss and ride).

Sydney Metro has considered the design and visual impacts of the permanent built works and landscape design within the new footbridge and northern plaza, that have not been identified in the dot points above (i.e. drainage infrastructure, electrical works). However, the PUDCLP and associated design objectives and principles do not override the detailed design of these elements as their design requirements are governed by engineering and / or safety standards.

Further, in accordance with Condition E77, construction of enabling works including OHW (Overhead Wiring), platform strengthening works, lighting, communication, CCTV, access points, contamination removal, and substructure works has commenced prior to submission of this PUDCLP to the Planning Secretary because for technical requirements.

The St Marys Station footbridge landscape and public domain scope extends from Harris Street to the St Marys Station footbridge station entry, including the Station Plaza, and a western pathway towards the existing Sydney Trains entry and Forrester Road.

The study area and PUDCLP boundary considered in this PUDCLP is shown in the following diagram.

The study area has been identified to determine the key design drivers and influences of the broader urban context on the project. The PUDCLP boundary is the area within which works identified in this PUDCLP will be delivered as part of the project.

The PUDCLP also contributes to the sustainable design of the St Marys Station footbridge project through implementing urban design best practice principles and innovative design. These principles will contribute to the project's Transport Sustainability Design Guidelines (SDG) Version 4.0, under which the Project is targeting a 'Gold' rating.

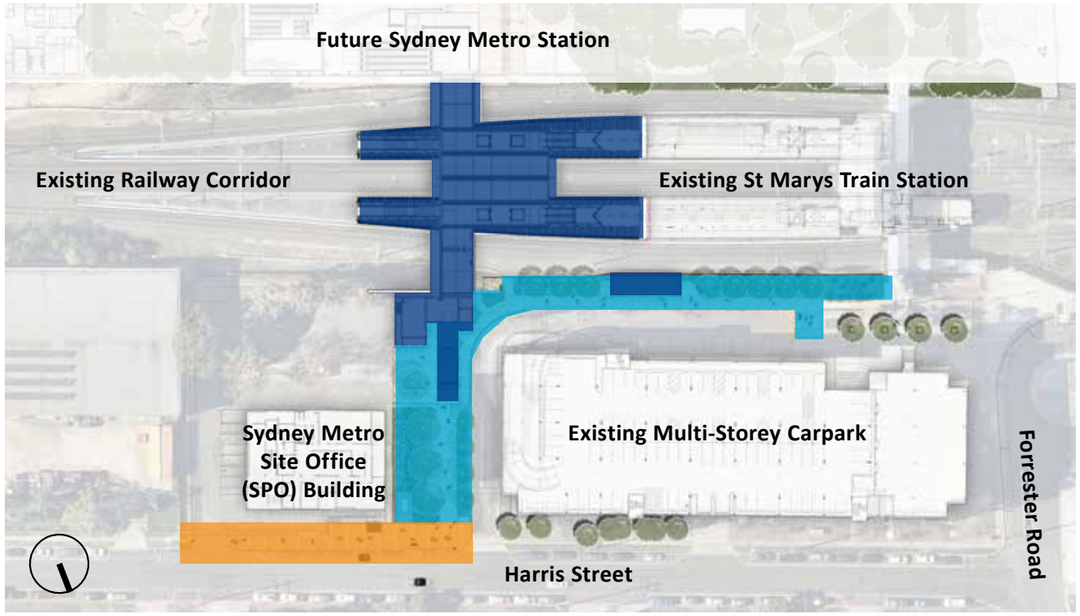

Figure 2: Scope of the Project

LEGEND

St Marys Station footbridge Architectural Scope

St Marys Station footbridge Northern Plaza Landscape Scope

St Marys Station footbridge Public Domain Upgrades (Harris Street)

1 Introduction

1.4 Status of this Place, Urban Design and Corridor Landscape Plan

The information contained in this report is the latest available at the time of writing. The nature of the design process on a project of this scale is one that requires continuous development and refinement until the project is constructed. Notwithstanding this, the material herein provides a clear appreciation of the scale, nature and treatment of the facilities proposed and their interactions with the environment.

Where substantial changes to the design are made following the preparation of this PUDCLP, an updated PUDCLP would be prepared for submission to the Planning Secretary.

1.5 Qualified Persons

As required by Condition E77, the PUDCLP has been prepared by suitably qualified and experienced person(s).

Dario Spralja, Principal, Architectus
Bachelor of Architecture (Hons.), University of Canberra
Bachelor of Applied Science in Environmental Design, University of Canberra
Qualified British Architect 2003, ARB UK No. 067854F

Key Experience:
- Sydney Metro Western Sydney Concept Design
- Sydney Metro USDTS, NSW
- Epping to Chatswood Rail Link, Sydney
- Parramatta Station, Sydney

Andrew Van Zanten, Associate, Architectus
Master of Science (Architecture), Delft University of Technology, 2006

Key Experience:
- Pitt Street Station + ISD, Sydney
- Sydney Metro West

Lynette Gurr, Senior Associate, GML Heritage
Master of Heritage Conservation, University of Sydney
Bachelor of Architecture, University of Sydney
Bachelor of Science Architecture (Honours), University of Sydney
Bachelor of Arts (Honours), University of Sydney

Key Experience:
TAP3 projects for various railway stations including Wahroonga, Beecroft, Erskineville, Pymble, St Peters, Bexley North, Killara and Turrella,
Heritage Advice for Design Development and Approvals Reporting

Chris Tidswell, Principal, Arcadia Landscape Architecture
M.Land Arch M.Arch B.DesSt Dip.PM RAILA #001858
IFLA APR Honorary Secretary

Key Experience:
- Barangaroo Metro Station
- Sydney Metro West
- Sydney Metro Northwest

Andrew Mason, Senior Associate, Arcadia Landscape Architecture
Bachelor of Landscape Architecture
RLA AILA #5876

Key Experience:
- Barangaroo Metro Station
- Sydney Metro West
- Sydney Metro Southwest - Stabling and Ancillary Buildings

Yiling Jiang, Senior Landscape Architect and Horticulturalist, Arcadia Landscape Architecture
BLA, Horti. Cert III, Dip PM, RLA AILA # 014948

Key Experience:
- Canberra Light Rail
- Cross River Rail Brisbane
- Sydney Metro West
- Sydney Metro Northwest

Refer to CV's in appendix E.

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1 Introduction
1.6 Design Development Process

The design for the Sydney Metro - Western Sydney Airport project has developed from an initial scoping design through to the detailed design (refer to flow chart below). At each stage a range of consultation and stakeholder engagement activities have occurred.

This PUDCLP draws upon the design work that occurred prior to obtaining planning approval (i.e. during the scoping, definition and reference design) for context, and then details the design work and associated consultation activities that have occurred since planning approval was obtained (i.e. during the concept and detailed design stage).

It is noted that this PUDCLP relates to the St Marys Station footbridge design and surrounding precinct subject to the project approval SSI-10051. The approval and design of any development on residual land or over station development component is subject to that relevant planning approval and associated design process.

Figure 3: Sydney Metro Design Process

1 Introduction
1.7 Compliance with CSSI Conditions of Approval

Table 1: Sydney Metro Western Sydney Airport Conditions of Approval specific to St Marys Station footbridge

Condition number	Requirement	Where it has been addressed in this PUDCLP
A1	The Proponent must carry out the CSSI in accordance with the terms of this approval and generally in accordance with the: (a) Sydney Metro – Western Sydney Airport Environmental Impact Statement dated 21 October 2020; and (b) Sydney Metro – Western Sydney Airport Submissions Report submitted April 2021.	The Conditions of Approval identify the key studies and their submission requirements. This PUDCLP is one of a number of reports to be developed during design and construction of St Marys Station footbridge works.
B1	The Overarching Community Communication Strategy as provided in the documents listed in Condition A1, or updated Strategy must be implemented for the duration of the work.	Refer to Section 2.1 Consultation during the preparation of this PUDCLP The consultation process to date and outcomes for the St Marys Station footbridge project are recorded in this PUDCLP. Sydney Metro is responsible for the Overarching Community Communication Strategy. The consultation process and outcomes for the St Marys Station footbridge project are recorded in the PUDCLP.
E12	Prior to vegetation clearing, the Proponent must identify where it is practicable for the CSSI to reuse native trees and vegetation that are to be removed. If it is not possible for the CSSI to reuse removed native trees and vegetation, the Proponent must consult with the relevant council(s), NSW National Parks & Wildlife Service, Western Sydney Parklands Trust, Greater Sydney Local Land Services, Landcare groups, DPI Fisheries and any additional relevant government agencies to determine if: (a) hollows, tree trunks (greater than 25-30 centimetres in diameter and 2-3 metres in length), mulch, bush rock and root balls salvaged from native vegetation impacted by the CSSI; and (b) collected plant material, seeds and/or propagated plants from native vegetation impacted by the CSSI, could be used by others in habitat enhancement and rehabilitation work, before pursuing other disposal options.	Opportunities for the reuse of native trees to be removed during St Marys Station footbridge works have been reviewed and determined not to be feasible for the St Marys Station footbridge project.
E13	Revegetation and the provision of replacement trees must be informed by a Tree Survey undertaken during detailed design. The Tree Survey must identify the number, type and location of any trees to be removed, except for trees that are offset under Condition E4. The Tree Survey must be submitted to the Planning Secretary for information with the Place, Urban Design and Corridor Landscape Plan required under Condition E79. Where trees are to be removed, the Proponent must provide a net increase in the number of replacement trees at a ratio of 2:1, except trees that are offset under Condition E4. Replacement trees must have a minimum pot size consistent with the relevant authority's plans / programs / strategies for vegetation management, street planting, or open space landscaping, or as agreed by the relevant authority(ies). Note: For the purposes of this condition, the relevant authority is that State or local government authority that owns or manages the land on which the replacement trees will be planted.	Refer to Section 6.2.2 Trees Refer to Arborist Report The St Marys Station footbridge project will require the removal of existing trees to make way for permanent surface works. The provision of replacement trees has been informed by a Tree Survey undertaken by a suitably qualified Arborist. The provision of replacement trees is a key outcome of the project. New tree planting is to be at a ratio of 2:1, except trees that are offset under Condition E4 (biodiversity credits). SSTOM and CLW contractors will undertake tree planting. St Marys Station footbridge will be responsible for the completion of a tree survey during detailed design that identifies the number, type, and location of any trees to be removed (except for trees that are offset under Condition E4).

Table 1 identifies the requirements of the relevant conditions of approval of SSI-10051 and where these have been addressed within this plan. Not all Conditions of Approval are included in the PUDCLP. Separate submissions and approvals are required across a range of elements. As required in Condition of Approval E77, the PUDCLP has been reviewed by an independent and suitably qualified and experienced person nominated by the DRP (Independent Reviewer), prior to the final PUDCLP submission to the Planning Secretary.

Condition number	Requirement	Where it has been addressed in this PUDCLP
E63	Design Requirements and Strategic Context The CSSI must be designed with consideration of: the design objectives, principles and guidelines identified in documents listed in Condition A1; the principles and objectives of the draft Connecting with Country Framework; relevant land use changes, masterplans and initiatives, where this information is known and/or available; existing and proposed future local context and character; and transport and land use integration and system functionality in the context of precincts, to the extent it is known and/or defined. Responses to items (a) – (e) must be reviewed by the Design Review Panel (DRP) to inform the design of permanent built works and landscape design of the CSSI. The outcome of the DRP review must be provided to the Planning Secretary prior to the submission of the Place, Urban Design and Corridor Landscape Plan (PUDCLP). Note: In accordance with Condition A10 and Condition A16, the requirements of this condition can be staged.	 Refer to Section 3.1 and 3.2- The design builds on the Sydney Metro design objectives, principles, and guidelines listed in Condition A1. The St Marys Station footbridge contractor is not required to respond to the Connecting with Country Framework or the Sydney Metro West Connecting with Ngura (Country) document. The Sydney Metro Station contractor's PUDCLP will address the requirement in consultation with the Sydney Metro Western Sydney Airport Connecting with Country Working Group. Refer to Section 3.5- the design considers relevant landuse changes, masterplans, and initiatives for St Marys. Refer to Section 3.6- the design considers the existing and proposed future local context and character. Refer to Section 3.6, 4.1, and 4.5 - the design considers the transport and landuse integration and system functionality to the broader St Marys Station Precinct, to the extent that it is defined. This PUDCLP responds to high level principles and available information. This PUDCLP deals only with St Marys Station footbridge components.

Condition number	Requirement	Where it has been addressed in this PUDCLP
E64	Design Guidance and Standards- Lighting and Security The CSSI must be constructed and operated with the objective of minimising light spill to surrounding properties. All lighting associated with the CSSI must be consistent with the requirements of: ASINZS 4282:2019 Control of the obtrusive effects of outdoor lighting, relevant Australian Standards in the series ASINZS 1158- Lighting for Roads and Public Spaces; NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports; and NASF Guideline C: Managing the risk of wildlife strikes in the vicinity of airports. Mitigation measures must be provided to manage residual night lighting impacts	Refer to Section 6.3.4 Precinct Lighting The lighting locations, design, and impacts achieve minimum and maximum light level requirements and are consistent with all stakeholder requirements and ASINZS 4282:2019. NASF Guidelines are not applicable to St Marys Station footbridge. Existing Harris St is lit by Utility – Endeavour Energy's Road lighting network. After consultation sessions with Penrith City Council, no additional lighting is proposed for Harris St as a lighting assessment was undertaken to confirm the existing light fixtures are sufficient for AS 1158 compliance including the pedestrian footpath, the kiss and ride parking and the accessible parking. The lighting design is compliant to AS/NZS 4282:2019 Control of the obtrusive effects of outdoor lighting. Given the proposed lighting is outside the 6km buffer radius from the centre of the runway as stipulated in the National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports, and outside the 13km buffer radius from the aerodrome as stipulated in the National Airports Safeguarding Framework Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports, the guidelines set out above do not apply to the project.

1 Introduction
1.7 Compliance with CSSI Conditions of Approval

Condition number	Requirement	Where it has been addressed in this PUDCLP
E65	Design Guidance and Standards- Active Transport Designs must have regard to the Movement and Place Framework relevant guidance including the Walking Space Guide: Towards Pedestrian Comfort and Safety (Transport, 2020) and the Cycleway Design Toolbox: Designing for Cycling and Micromobility (Transport, 2020).	Refer to Sections: 3.8 Pedestrian modelling 4.5 Access and Circulation 5.1 Vision and Objectives 6.1 Landscape Plan 6.3 Hardscape Elements The requirements of the Movement and Place Framework have been integated into the design of St Marys Station footbridge where applicable. Refer to Appendix D - Interchange Access Plan (IAP). Walking Space Guide: Towards Pedestrian Comfort and Safety (Transport 2020) has been included in Section 2.7 of the IAP. There is no dedicated cycleway as part of the St Mary's Station footbridge project. the general principles of the Cycle Design Toolbox: Designing for Cycling and Micromobility guideline have been applied where applicable however, the technical requirements for cycleways is not relevant to the project.
E66	Design Guidance and Standards- Active Transport Active transport facilities must be designed, constructed and/or rectified in accordance with the Guide to Road Design Part 6A: Paths for Walking and Cycling (Austroads, 2017) and relevant Australian Standards (AS) such as AS 1428.1-2009 Design for access and mobility. The active transport links must also incorporate relevant Crime Prevention Through Environmental Design principles.	Refer to Sections: 3.8 Pedestrian modelling, 4.5 Access and Circulation 5.1 Vision and Objectives 6.1 Landscape Plan The requirements of the Guide to Road Design Part 6A and relevant Australian Standards including AS1428.1-2009 have been integated into the design of St Marys Station footbridge where applicable. Refer to Appendix D - Interchange Access Plan (IAP), which provides further detail on the transport requirements and principles that are applied to the St Marys Station footbridge precinct.

Condition number	Requirement	Where it has been addressed in this PUDCLP
E75	Operation of the Design Review Process DRP advice and recommendations, as issued by the Panel, and the Proponent's response to each recommendation must be included when submitting the final PUDCLP to the Planning Secretary for information.	Refer to Section 2.2 Involvement of the Design Review Panel The design has been regularly reviewed by the DRP. Refer to Appendix D - How DRP advice and recommendations has been addressed. The DRP recommendations and the Proponents responses are included.
E77	Place, Urban Design and Corridor Landscape Plan A PUDCLP must be prepared to document and illustrate the permanent built works and landscape design of the CSSI and how these works are to be maintained. The PUDCLP must be: (a) prepared by a suitably qualified and experienced person(s) in consultation with the community (including the affected landowners and businesses or a representative of the businesses), Western Parklands City Authority, Western Sydney Planning Partnership and relevant council(s); (b) reviewed by an independent and suitably qualified and experienced person nominated by the DRP; (c) submitted to the Planning Secretary prior to the construction of permanent built surface works and/or landscaping, excluding those elements which for ecological requirements, or technical requirements, or requirements as agreed by the Planning Secretary do not allow for alternate design outcomes; and (d) implemented during construction and operation of the CSSI. Note: The PUDCLP may be developed and considered in stages to facilitate design progression and construction. Any such staging and associated approval would need to facilitate a cohesive final design and not limit final design outcomes.	This document in its entirety fulfils the requirement Refer to Section 1.5 Qualified Persons Refer to Section 2 Collaboration and Consultation Refer to Appendix A- Evidence of collaboration and consultation This PUDCLP has been reviewed by an independent and suitably qualified and experienced person nominated by the DRP, prior to the final St Marys Station footbridge PUDCLP submission to DPHI. The final St Marys Station footbridge PUDCLP will be submitted to DPHI prior to the construction of permanent built surface works and landscaping. The St Marys Station footbridge PUDCLP will be implemented during the construction and operation phase of the project. This PUDCLP deals only with St Marys Station footbridge components.

Condition number	Requirement	Where it has been addressed in this PUDCLP
E78	Place, Urban Design and Corridor Landscape Plan- Documentation The PUDCLP must document how the following matters have been considered in the design and landscaping of the project: (a) the requirements of Conditions E63 to E65, and (b) advice and recommendations from the DRP.	Refer to Section 1.7 Compliance with CSSI Conditions of Approval, response to Conditions E63 to E65 (this section) Refer to Appendix D - How DRP advice and recommendations has been addressed
E79	The PUDCLP must include descriptions and visualisations (as appropriate) of: (a) design of the permanent built elements of the CSSI, including stabling and maintenance and ancillary facilities, service facilities and tunnel portals;	Refer to Section 4 Station Precinct Plans, Section 5 Design of Permanent Built Elements Descriptions and visualisations of the St Marys Station footbridge are included in this PUDCLP.
	(b) plans for station precincts including but not limited to: (i) justification of the spatial scope of each station precinct plan; (ii) provision for public art and heritage interpretation installations; (iii) placemaking opportunities, having regard to placemaking initiatives in Western Sydney Aerotropolis planning documents; (iv) interchange access plans developed in consultation with the Traffic and Transport Liaison Group; (v) active transport connections and end of trip facilities, design of pedestrian and cycle access, facilities and fixtures; (vi) design of commuter car parking elements, where relevant;	Refer to Section 4 Station Precinct Plans, Section 5 Design of Permanent Built Elements Plans for the St Marys Station footbridge precinct are included in this PUDCLP. Refer to Section 4.4 Interchange Access Plan Refer to Appendix D - An Interchange Access Plan (IAP) developed in consultation with the Trac and Transportation Liaison Group is provided. While public art is not within the scope of the St Marys Station footbridge project, as part of the project, we will deliver three Community Benefit Initiatives. Consultation is ongoing with Penrith City Council regarding a mural, which is intended for either East Lane or West Lane in St Marys Town Centre. As part of the St Marys Station footbridge project, we will deliver three Community Benefit Initiatives. Consultation is ongoing with Penrith City Council regarding a mural, which is intended for either East Lane or West Lane. There are no car parking elements currently in the scope of the St Marys Station footbridge project.
	(c) landscaping and building design opportunities to mitigate visual impacts and minimise light spill on the nearby residences;	Refer to Section 6.3.4 Precinct Lighting Strategies for mitigating visual impacts of the stations and facilities and minimising light spill on the nearby residences are outlined in this PUDCLP.

Condition number	Requirement	Where it has been addressed in this PUDCLP
E79	(d) the design of watercourse crossings and east-west corridor movements to give to effect of Condition E14;	Not relevant to St Marys Station footbridge
	(e) landscaping: (i) landscape plan, hard and soft elements, for the corridor and the station precincts; (ii) use of native species from the relevant native vegetation community (or communities), where identified as appropriate;	Refer to Section 6 Landscaping Landscape plans including hard and soft elements, and the proposed use of native species, are included in this section of the PUDCLP.
	(iii) water sensitive urban design initiatives	Refer to Section 8 Sustainability Water sensitive urban design initiatives are included in this section of the PUDCLP.
	(vii) management and routine maintenance standards and regimes for design elements and landscaping work (including weed management) to ensure the success of the design;	Refer to Section 9 Management, Maintenance, and Implementation. The management and routine maintenance standards and regimes for the design elements and landscaping work are included in this PUDCLP.
	(viii) measures to prevent wildlife strike risk in proximity to Western Sydney International Airport;	Not relevant to St Marys Station footbridge
	(f) details of strategies to rehabilitate, regenerate or revegetate disturbed areas, where relevant;	Not relevant to St Marys Station footbridge
	(g) management and routine maintenance standards and regimes for design elements and landscaping work (including weed management) to ensure the success of the design; (h) operational maintenance standards; and (i) the timing and responsibilities for implementation of elements included within the PUDCLP.	Refer to Section 9 Management, Maintenance, and Implementation. The management and routine maintenance standards and regimes for the design elements and landscaping work, and project operational maintenance standards, are included in this PUDCLP.

Revised Environmental Mitigation Measures (REMMs)	Requirement	Where it has been addressed in this PUDCLP
ONAH1	Design development for the project would endeavour to minimise adverse impacts to heritage buildings, elements, fabric, and heritage significant settings and view lines that contribute to the overall heritage significance of heritage items	Refer to Section 5.1 Vision and Objectives Refer to Section 5.7 Heritage Interface The St Marys Station footbridge architectural design language has been developed to be sympathetic to adjacent significant heritage buildings, including existing settings and view lines which contribute to their overall heritage significance.
ONAH2	The architectural design for the project would take account local heritage context and be sympathetic to local heritage character. This would include using sympathetic building materials, colours and finishes. Design should aim to minimise visual impacts by ensuring that significant elements are not obstructed or overshadowed Design should adhere to Sydney Metro – Western Sydney Airport Design Guidelines. The Design Review Panel and Heritage Working Group would be consulted in regard to the design, form and material of new built structures that may impact heritage items	Refer to Section 5 Design of Permanent Built Elements The St Marys Station footbridge architectural design language has been developed to be sympathetic to adjacent significant heritage buildings. The design adheres to Sydney Metro – Western Sydney Airport Design Guidelines. Refer to Appendix D - How DRP advice and recommendations has been addressed
ONAH3	Consultation with the Heritage Council and relevant stakeholders would occur for the design of works that have the potential to impact State significant items including St Marys Railway Station	Refer to Section 2.1 Consultation during preparation of this PUDCLP While REMM ONAH3 requires consultation with the Heritage Council, it is noted that the Heritage Council does not have an approval role. FSM presented the design to the Sydney Metro Heritage Working Group, which includes Heritage NSW as a delegate of the Heritage Council, in September 2023 and July 2024. Refer to Section 2.1, Consultation during preparation of this PUDCLP. Consultation with relevant stakeholders is ongoing.
LV3	All structures (including potential acoustic sheds, site offices, workshop sheds and site hoarding) would be finished in a colour which aims to minimise their visual impact where appropriate. This finish is to be applied to all visible fixtures and fittings (such as exposed down pipes)	Refer to Section 5 Design of Permanent Built Elements The St Marys Station footbridge architectural design proposed finishes have been selected to be sympathetic to existing heritage elements and to tie in with integrated precinct outcomes.
OLV1	The landscape design for the project would include consideration of appropriate species lists to minimise opportunities to attract wildlife at levels likely to present a hazard to aviation operations. The landscape design would have regard to relevant requirements and species lists under Western Sydney Airport's Wildlife Management Plan and other relevant guidelines, including the National Airports Safeguarding Framework (Guideline C) and Recommended Practices No. 1 – Standards for Aerodrome Bird/Wildlife Control (International Birdstrike Committee 2006)	Refer to Section 6 Landscaping The landscape design has selected plant species with consideration of minimising opportunities to attract wildlife at levels likely to present a hazard to aviation operations
OLV7	The landscape design for the project would: • incorporate salvaged native trees (including tree hollows androot balls), to enhance fauna habitat in suitable locations,including riparian corridors, where practicable • use native species from the relevant native vegetation communities within the local area for tree planting programs	Refer to Section 6.2 Use of Native Species The landscape design incorporates native species from relevant native vegetation communities within the local area.

Collaboration and Consultation

2

2 Collaboration and Consultation

2.1 Consultation during preparation of this PUDCLP

Collaboration and consultation are vital aspects of the preparation process for this Place, Urban Design and Corridor Landscape Plan (PUDCLP).

During the public exhibition period, key stakeholders and the broader community including commuters, residents and local businesses, were invited to provide feedback on the PUDCLP.

Key consultation activities included:

- Community newsletter delivered to residents and commuters
- Two community information events held at St Marys Station and St Marys Village Shopping Centre
- A digital interactive newsletter to provide information on the rich history of the St Marys area and an overview the project benefits
- Posters placed at St Marys Station and town centre
- Email campaign delivered to the St Marys stakeholder database
- Advertisement placed in local newspaper.

Following the exhibition period, this PUDCLP has been updated to reflect the outcomes of the consultation. Feedback received during the community consultation period was considered by the St Marys Station footbridge project team. A summary of comments and responses has been published in a report available on the project webpage. All published feedback will remain anonymous.

The Sydney Metro Overarching Community Communications Strategy (OCCS) serves as a guide for community and stakeholder engagement during the construction phase of the project.

At the time of the release of this PUDCLP for public exhibition, consultation had been undertaken with a range of stakeholders as outlined in Table 2.

Table 2: Consultation Register

Stakeholder Group	Date	Method of Consultation	Purpose and Topics Discussed
Penrith City Council	23.11.2023	Meeting	Technical and Engineering
	15.12.2023	Meeting	Technical and Engineering
	09.02.2024	Meeting	Technical and Engineering
	23.04.2024	Meeting	St Marys Station footbridge PUDCLP
	29.05.2024	Presentation	Urban Design
	27.06.2024	Meeting	Harris Street Parking
	28.06.2024	Presentation	St Marys Station footbridge Legacy Initiatives
	12.07.2024	Meeting	Urban Design, Services and Legacy Initiatives
	21.08.2024	Meeting	Harris Street Urban Design
	01.10.2024	Meeting	CPTED
Sydney Metro	05.04.2023	Meeting	Architecture
	20.05.2024	Meeting	Urban Design
	06.06.2024	Meeting	Urban Design
	09.07.2024	Meeting	Pedestrian Modelling
	17.07.2024	Meeting	Pedestrian Modelling
	24.07.2024	Meeting	Pedestrian Modelling
	30.08.2024	Meeting	FSM Signage & Wayfinding CASID Review
Heritage Working Group	20.09.2023	Meeting	Architecture / Heritage
	17.07.2024	Meeting	Architecture / Heritage
Parklife Metro / SSTOM	02.02.2024	Meeting	Materials & Finishes
	20.04.2024	Meeting	Architecture
	02.05.2024	Meeting	Architecture / ICDs
	03.05.2024	Meeting	Acoustics
	17.05.2024	Email	Urban Design
	30.05.2024	Meeting	Architecture / Structure / Services
	07.06.2024	Meeting	Architecture / Structure / Services
	13.06.2024	Meeting	Architecture / Structure / Services
	14.06.2024	Meeting	St Marys Station footbridge ICDs
	20.06.2024	Meeting	Architecture / Structure
	21.06.2024	Meeting	St Marys Station footbridge ICDs
	27.06.2024	Meeting	Architecture / Structure
Parklife Metro / SSTOM	02.07.2024	Email	Urban Design
	08.07.2024	Meeting	Architecture / Structure / Services
	15.08.2024	Meeting	FSM ICDs
	22.08.2024	Meeting	PLM Structural ICD
Sydney Trains	26.05.2023	Meeting	Services Building / Structure / OHW / Hydraulic
	02.06.2023	Meeting	Services Building / Civil
	13.12.2023	Meeting	Drainage
	19.01.2024	Meeting	Access & Maintenance
	16.02.2024	Meeting	Customer Services
	03.05.2024	Meeting	Access & Maintenance
	17.05.2024	Meeting	Station Shut Down Scenarios
	19.06.2024	Meeting	Fire Life Safety
	25.06.2024	Meeting	OHW Consultation
	13.08.2024	Meeting	Help Point Consultation
FRNSW	06.08.2024	Meeting	Presentation on Fire Engineering Brief
Bradfield Development Authority (previously Western Parkland City Authority)	19.08.2024	Email	A briefing was offered via email on 19 August 2024, but no reply was received.
Western Sydney Planning Partnership	19.08.2024	Email	A briefing was offered via email on 19 August 2024, with a reply received on 1 October 2024 advising that a briefing was not required.
Residents (Within 500m of St Marys Station)	12.08.2024	Newsletter (hardcopy)	Detailing and inviting feedback on the PUDCLP
Businesses (Within 500m of St Marys Station)	12.08.2024	Newsletter (hardcopy)	Detailing and inviting feedback on the PUDCLP
Commuters	27.08.2024	Pop-up information stand at St Marys Station (top of Forrester Road)	Detailing and inviting feedback on the PUDCLP
Shoppers	29.08.2024	Pop-up information stand (St Marys Village)	Detailing and inviting feedback on the PUDCLP
Public Exhibition Period	12.08.2024 until 08.09.2024	Multiple	Inviting the community to view the PUDCLP and provide feedback

2 Collaboration and Consultation
2.2 Involvement of the Design Review Panel

2.2.1 Review of response to Condition E63

In accordance with Condition E63, the CSSI must be designed with consideration of the following design requirements and strategic context:

a. the design objectives, principles and guidelines identified in documents listed in Condition A1;

b. the principles and objectives of the draft Connecting with Country Framework;

c. relevant land use changes, masterplans and initiatives, where this information is known and/or available;

d. existing and proposed future local context and character; and

e. transport and land use integration and system functionality in the context of precincts, to the extent it is known and/or defined.

Responses to these items have been reviewed by the DRP to inform the design of permanent built works and the landscape design of the CSSI. The outcome of the DRP review will be provided to the Planning Secretary prior to the submission of this PUDCLP and is summarised below.

Table 3: DRP Meetings

Meeting Date	Agenda
15.09.2022	Architecture
20.04.2023	Architecture and Urban Design
01.06.2023	General
24.07.2023	Architecture and Urban Design
27.07.2023	Architecture
10.08.2023	Architecture
22.10.2023	Architecture and Urban Design
16.11.2023	Architecture and Urban Design
14.12.2023	Urban Design
15.12.2023	Urban Design
16.12.2023	Urban Design
17.12.2023	Urban Design
15.02.2024	Architecture
28.03.2024	Architecture
14.06.2024	Urban Design
25.07.2024	Urban Design
02.10.2024	Comment Close-out

2.2.2 Advice and Recommendations from the DRP

The design development process has followed an iterative approach, incorporating advice and recommendations from the DRP at key design stages.

Consultation with the DRP is now complete, with agreement that all comments have been resolved or transferred to the appropriate person(s) for close-out.

In accordance with Condition E75, the DRP advice and recommendations, as issued by the Panel, along with Laing O'Rourke's responses to each recommendation, are included in Appendix C.

It is noted that the design elements reviewed by the DRP extend beyond those required to be addressed in the PUDCLP. Appendix C provides a detailed record of all items relevant to the St Marys Station footbridge package that were discussed and reviewed with the Design Review Panel.

Design Objectives, Principles, Guidelines and Standards

3

3 Design Principles
3.1 Design Objectives

3.1.1 Vision and Design Objectives

Sydney Metro has established the following vision and objectives in support of the architectural and urban design aspirations for the Sydney Metro Western Sydney Airport project. As it forms a critical component of SMWSA, this vision and design objectives apply equally to the St Marys Station footbridge part of the project.

Architectural and Urban Design Vision

Transport for NSW's vision for Sydney Metro is "Transforming Sydney with a new world class metro".

Sydney Metro's mission is to deliver a world class, connected metro, which will provide more choice to customers and opportunities for our communities now and in the future. Sydney Metro presents a unique opportunity to demonstrate an exemplary approach to integrated transport and land use planning. Quality architecture, good urban design and a user friendly and interconnected transport system are critical to ensuring that Sydney Metro meets customer needs and expectations and maximizes their city shaping potential and broader urban benefits.

The development of the design and PUDCLP has been guided by a range of design objectives, principles and standards.

The Sydney Metro - Western Sydney Airport Design Guidelines, as included in the planning approval documents for SSI-10051, provide guidelines for the design of the interface between stations and their surrounding locality, rail corridor works and station and service buildings.

The Design Guidelines identify the five project design objectives to help meet the transformational vision and world class aspirations of the project. These are supported by design principles which describe the intent of the objectives for the design of the stations, station precincts and the wider metro corridor.

The relevant project design objectives and supporting principles, as have been reviewed by the Design Review Panel, in order to inform the design of permanent built works and landscape design that is documented in this plan. In accordance with Condition E63, the outcome of the DRP review will be submitted to the Planning Secretary and is reproduced in Appendix D.

Objective 1:
Ensuring an easy customer experience

Principle – Sydney Metro places the customer first. Stations are welcoming and intuitive with simple, uncluttered spaces that ensure a comfortable, enjoyable and safe experience for a diverse range of customers.

Objective 2:
Being part of a fully integrated transport system

Principle – Sydney Metro is a transit-oriented project that priorities clear and legible connections with other public and active transport modes within the wider metropolitan travel network that intersect with this new spine.

Objective 3:
Being a catalyst for positive change

Principle – Sydney Metro is a landmark opportunity to regenerate and invigorate the city with new stations and associated development that engage with their precincts, raise the urban quality and enhance the overall experience of the city.

Objective 4:
Being responsive to distinct contexts and communities

Principle – Sydney Metro's identity is stronger for the unique conditions of centres and communities through which it passes. This local character is to be embraced through distinctive station architecture and public domain that is well integrated with the inherited urban fabric of existing places.

Objective 5:
Delivering an enduring and sustainable legacy for Sydney

Principle – Sydney Metro is a positive legacy for future generations. A high standard of design across the corridor, stations and station precincts, that sets a new benchmark, is vital to ensuring the longevity of the Metro system, its enduring contribution to civic life and an ability to adapt to a changing city over time.

3.2.1 Sydney Metro – Western Sydney Airport Urban Design Principles

The urban and public domain design must be developed with reference to the existing and potential future urban context and infrastructure.

Since the Submissions Report was lodged and project approval granted, the Sydney Metro – Western Sydney Airport Design Guidelines have been updated. The following corridor- wide urban design principles are identified in the updated Sydney Metro – Western Sydney Airport Design Guidelines to ensure that the design responds to the urban design context.

Interface and activity
Activation of the urban realm of station precincts is important to ensure stations and supporting infrastructure are integrated with their existing and future urban settings and have a considered relationship to Country.

Connectivity
Walkable urban environments and integration with Country through the planned Blue-green Grid of the Western Parkland City, including the provision of safe, permeable and well-connected station precincts.

Place Making
Sydney Metro will support and contribute to vibrant, attractive urban centres with a distinct sense of place that reflect Country. Centres that provide well-connected and designed streets and spaces that will resonate with both local communities and visitors.

Culture
Opportunities to reflect and build on the rich Aboriginal and non-Aboriginal heritage of Western Sydney will strengthen design and place outcomes, and contribute to contemporary cultural expression.

Sustainability
Sydney Metro will contribute to the evolution of a new urban development paradigm in which environmentally sustainable elements, processes, designs and a consideration of Country are incorporated in the project.

Transport Network
The Transport for NSW's transport modal hierarchy will guide the design of stations, interchanges and associated developments, prioritising walking and other modes of active transport.

Project Vision and Design Principles

In addition to the overarching design objectives from Sydney Metro, the St Marys Station footbridge design team established an additional set of design principles that would serve as the guiding force behind the project. These principles shape our approach and ensure alignment with the broader vision and goals of the Sydney Metro initiative.

Project Design Principles

Principle 1: Integration with the Sydney Metro Sydney Metro Station station, station facilities and urban design:
Strong form that provides legible North-South connection.
Have appropriate human scale at interfaces / public realm.
Visual links to heritage.

Principle 2: Develop an intuitive, logical sequence of spaces to enhance customer experience:
The form of architecture to serve the multidirectional paths of travel, by the articulation and the sequence of spaces.

Principle 3: Create clear connections between architecture and urban design spaces and the broader public realm; a dialogue at large and smaller scale:
Respond in a meaningful way to the surroundings and the multiple scales and forms across the site.

Principle 4: Develop a legible design, avoiding conflicting design approaches and overly complex built form:
A holistic design approach in a singular language.
Have a reserved expression; present as a background element.
Apply modular approach where appropriate.

Principle 5: Respond to the challenges of climate change and the impact of heat-island effect.

Principle 6: Deliver fit-for-purpose and safe design.

3.2.2 Heritage Design Principles

Principle

Heritage structures are a valued and positive legacy of rail's contribution to a growing city. Retaining and integrating them with the station design underlines their value now and for future generations.

Design outcomes sought

Heritage built fabric is retained, re-used and adapted

Contemporary elements are complementary and responsive to heritage scale, form and materials

Existing heritage vistas and views within and around the station are maintained and enhanced

New architecture elements are sensitively integrated and sympathetic in scale

New services are rationalised, consolidated and concealed as far as possible.

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 5 Design of Permanent Built Elements

3.2.3 Public Domain Principles

Principle

Station forecourts and plazas extend the public domain to contribute to their shared use and enjoyment by Metro users and the community.

Design outcomes sought

Plazas that are active and lively; that encourage pedestrian activity and form a place to stay and stop rather than just a space to walk through

Station forecourts that extend seamlessly from adjacent public footpaths and 'read' as fully accessible public spaces

Street furniture, lighting and paving palettes that achieve consistency across the corridor while also matching into Councils' desired public domain character

Interpretive signage to describe the cultural, historical, natural and built characteristics of the environment – helping to tell the story of the area

Where large retaining walls are unavoidable, they are designed and detailed to be visually interesting for pedestrians and cyclists, including referencing cultural narratives in places of significance.

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 6 Landscaping

3.2.4 Sustainability Principles

Principle

Urban, landscape and architectural design follow Transport Urban Design Best Practice Guidelines and are assessed under performance based sustainable design tools

Design outcomes sought

Draw on a comprehensive site and context analysis to inform the design direction

Provide value-for-money design solutions that achieve high quality low maintenance architectural and urban design outcomes that have longevity

Provide connectivity and permeability for pedestrians

Integrate the project with the surrounding area

Maximise the amenity of the public domain

Protect and enhance heritage features and significant trees

Maximise positive view opportunities

Design an efficient and functional transport solution which enhances and contributes to local amenity and prosperity.

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 5 Design of Permanent Built Elements
Section 6 Landscaping

3.2.5 CPTED Principles

Principle

Movement networks are legible: people can easily see where they are going, with clear and direct lines of sight and minimal spaces for concealment

Design outcomes sought

New connections (including pedestrian overbridges) tie into and support existing and future desire line

Landscape planting that softens the corridor while still enabling passive surveillance and good forward sightlines for pedestrians

A signage strategy that provides directional details including time and distance to ensure clarity of route for path users.

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 6 Landscaping

3.2.5 CPTED Principles Continued

Principle

Stations and their approaches are designed to increase activity and opportunities for casual surveillance

Design outcomes sought

Visual connections between the public domain and station concourse, stairs and platforms

Multiple paths of travel through plazas, for movement choice and the ability to exit paths and walkways with long paths of travel

Landscape planting that deters vandalism of potentially targeted areas through creating physical and visual barriers to restrict access

Lighting that enables the use of such parts of the shared path network that are required after dark and that discourages the use of areas that are not intended to be used; and that provides a consistent level of illumination so as to avoid the creation of pools of light or dark that can create potential areas of isolation or entrapment

Design of retaining walls and fences edging public spaces, shared paths and cycleways to minimise their size and their apparent scale.

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 5 Design of Permanent Built Elements
Section 6 Landscaping

3.2.6 Architectural Design Principles

Principle

Architectural design is well integrated with the Sydney Metro Sydney Metro Station station, station facilities, and urban design. Develop an intuitive, logical sequence of spaces, with clear connections between architecture and urban design spaces

Design outcomes sought

Strong form which provides legible North-South connection

Appropriate human scale at interfaces and at the public realm

Visual links to heritage

Form of architecture to serve the multi-directional paths of travel, by the articulation and sequence of spaces

Respond in a meaningful way to the surroundings and the multiple scales and forms across the site

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 5 Design of Permanent Built Elements

Principle

Develop a legible design, avoiding conflicting design approaches and overly complex built form

Design outcomes sought

A holistic and singular design language

A reserved expression, present as a background element

Apply a modular approach where appropriate

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 5 Design of Permanent Built Elements

3.2.7 Landscape Design Principles

Principle

Landscape design and species selection reinforce the local landscape and streetscape character. Landscape design responsive to climate change and urban heat island effect.

Design outcomes sought

Existing vegetation is protected and retained where possible. Where not possible, identify areas for replacement and new planting that priorities pedestrian amenity

Planting design that retains or frames views to heritage and character buildings

Use of naturally occurring indigenous species, or species that have a connection to the local community and environment

Tree Canopy Cover targets of 40% to Station Plazas, 70% to Streets, 25% to Public Domain

Environmentally responsive and integrated design and maintenance, for example: grading pavements to drain to garden beds, Water Sensitive Urban Design, and robust and low maintenance species selection

Maximise soft landscape surfaces in lieu of hard pavements, and maximise tree canopy shade coverage where appropriate, contributing to protection from solar heat gain

Where this report demonstrates these outcomes:

Section 4 Station Precinct Plans
Section 6 Landscaping

3 Design Principles
3.3 Key Documents

A series of key documents were referenced in development of the PUDCLP:

- Sydney Metro – Western Sydney Airport Design Guidelines
- Sydney Metro – Western Sydney Airport Sustainability Plan
- Sydney Metro Corridor Landscape Strategy
- Sydney Metro Sustainability Framework
- Sydney Metro Environment and Sustainability Statement of Commitment
- Crime Prevention through Environmental Design
- Western Sydney Street Design Guidelines
- Transport for New South Wales Walking Space Guide
- Transport for New South Wales Cycleway Design Toolbox
- Aerotropolis Development Control Plan
- Government Architects Better Placed
- Government Architects Design and Place SEPP
- Government Architects Connecting with Ngura (Country)
- Government Architects Greener Places
- Sydney Metro - Western Sydney Airport - Landscape Concept Design Report (SMWSAEDSSMD-1NL-LA-REP-006003)
- Aboriginal cultural heritage design principles, interpretation and integration strategy (SMWSAEDS-SMD-1NL-HE-RPT-006001)
- Sydney Metro - Western Sydney Airport - Interchange Requirements and Access Plan Report (SMWSA-SMD-1NL-TP-PLN-006001)
- Conditions of Approval for Sydney Metro – Western Sydney Airport (SSI 10051) (23.07.2021)
- Footbridge at St Marys Station Stage 1 Design EIS Compliance Report (05.11.2021)
- Penrith City Council - St Marys Town Centre Structure Plan (November 2022)
- Penrith City Council - Street and Park Tree Management Plan
- Penrith City Council Development Control Plan (2014)

In addition to the above, the following architectural and urban design standards and guidelines will inform development of the detailed design.

Government Architect NSW

The Government Architect NSW (GANSW) provides strategic design leadership in architecture, urban design and landscape architecture, providing a set of principles and guidance to support good design in NSW.

In acknowledging the traditional Aboriginal custodians of the land and their unique cultural relationships to place, GANSW seeks to uphold the idea that If we care for Country - It will care for us.

Local Government Context

The provision of the landscape design is to be considered within City of Penrith's overall planning framework.

There are also numerous other strategic documents that have informed the Landscape and Public Domain Report. These key planning documents with outcomes as they relate to the St Marys Station Site are as shown.

Design Guides

Other relevant design guides for the project.

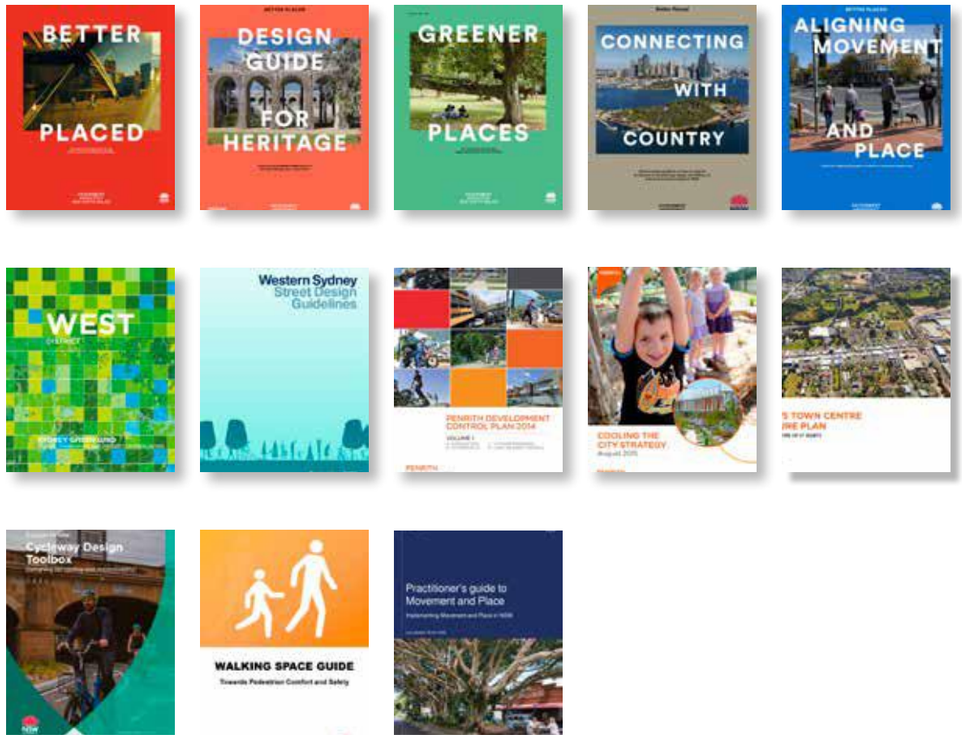


Figure 4: Key documents thumbnail images

Design Guidance and Standards - Lighting and Security

In accordance with Condition E64, the following standards apply to lighting associated with construction and operation of the CSSI:

- ASINZS 4282:2019 Control of the obtrusive effects of outdoor lighting, relevant Australian Standards in the series ASINZS 1158 - Lighting for Roads and Public Spaces;
- NASF Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports; and
- NASF Guideline C: Managing the risk of wildlife strikes in the vicinity of airports.

Design Guidance and Standards - Active Transport

Active transport links and connections that are built as part of the Sydney Metro – Western Sydney Airport project will be designed with regards to the Movement and Place Framework relevant guidance including the Walking Space Guide: Towards Pedestrian Comfort and Safety (Transport for New South Wales, 2020) and the Cycleway Design Toolbox: Designing for Cycling and Micromobility (Transport for New South Wales, 2020).

Any active transport facilities will be designed, constructed and/or rectified in accordance with the Guide to Road Design Part 6A: Paths for Walking and Cycling (Austroads, 2017) and relevant Australian Standards (AS) such as AS 1428.1-2009 Design for access and mobility. The active transport links will also incorporate relevant Crime Prevention Through Environmental Design (CPTED) principles.

St Marys

'The Study Area for the St Marys Town Centre Structure Plan is centred around the existing St Marys train station and the proposed metro station along the Sydney Metro Western Sydney Airport line. It covers approximately 245 ha across the suburbs of St Marys and North St Marys, extending Glossop Street to the north and east, South Creek to the west and the Great Western Highway to the south.

This area comprises service, retail, hospitality and commercial businesses as well as a part of the industrial lands (Dunheved Business Park) in North St Marys. The area has a variety of key destinations including supermarkets, a couple of schools, civic and recreational facilities and open spaces.'

(St Marys Town Centre Structure Plan)

The St Marys Station footbridge project has been designed with regard to broader strategic planning for the St Marys Town Centre, and the future integrated St Marys Station Precinct. The Sydney Metro Station package (subject to separate PUDCLP) will consider the detail of the St Marys Metro Station.

The St Marys Station footbridge project has considered the St Marys community profile.

St Marys Town Centre Structure Plan Precinct Interventions relevant to St Marys Station footbridge

The St Marys Station footbridge and northern plaza will contribute a key part of the vision for the Arrival and Interchange Precinct as outlined in the St Marys Town Centre Structure Plan. The project will provide a seamless north-south cross-rail connection, linking train and metro services to buses, intermodal transport, and active transport links including cycleways and footpaths.

The northern plaza will provide a landmark northern gateway to the Arrival and Interchange Precinct, connecting train and metro services to the St Marys North community and Dunheved Business Park precinct. This northern plaza will deliver streetscape improvements, high quality street furniture, and new trees and landscaping to contribute towards a pleasant experience for the community.

The footbridge and northern plaza will link wider precinct cycle access and facilities to the proposed future cycleway along Harris Street and Forrester Road, which will be the primary walking and cycle link to many key destinations and residential areas of St Marys North.

This includes residents of St Marys North commuting to other parts of the city, commuters accessing the Dunheved Business Park places of work, and children commuting to St Marys Public School, in addition to general community access to a range of open spaces within St Marys North, including:

- Poplar Park
- Whalan Reserve and Ropes Creek
- Boronia Park
- Robin Wiles Park

Future potential bicycle baths through Dunheved Business Park industrial zone are also proposed to link up with Little Creek and DeBrincat Avenue.

The St Marys Structure Plan identifies that St Marys North could benefit from increased permeability and proposes future investigations of additional pedestrian and bicycle paths through the Dunheved Business Park industrial zone to link up with Little Creek and DeBrincat Avenue.

Future potential commercial and residential densification of sites to the east of the Arrival and Interchange Precinct northern gateway will have a significant impact on the urban character of Harris Street and the northern plaza, with the following likely impacts on landscape and urban design outcomes:

- Harris Street built form and landscape character
- Increased pedestrian and cyclist movements
- Increased built form bulk and overshadowing
- Impacts on pedestrian sightlines
- Solar access to public realm

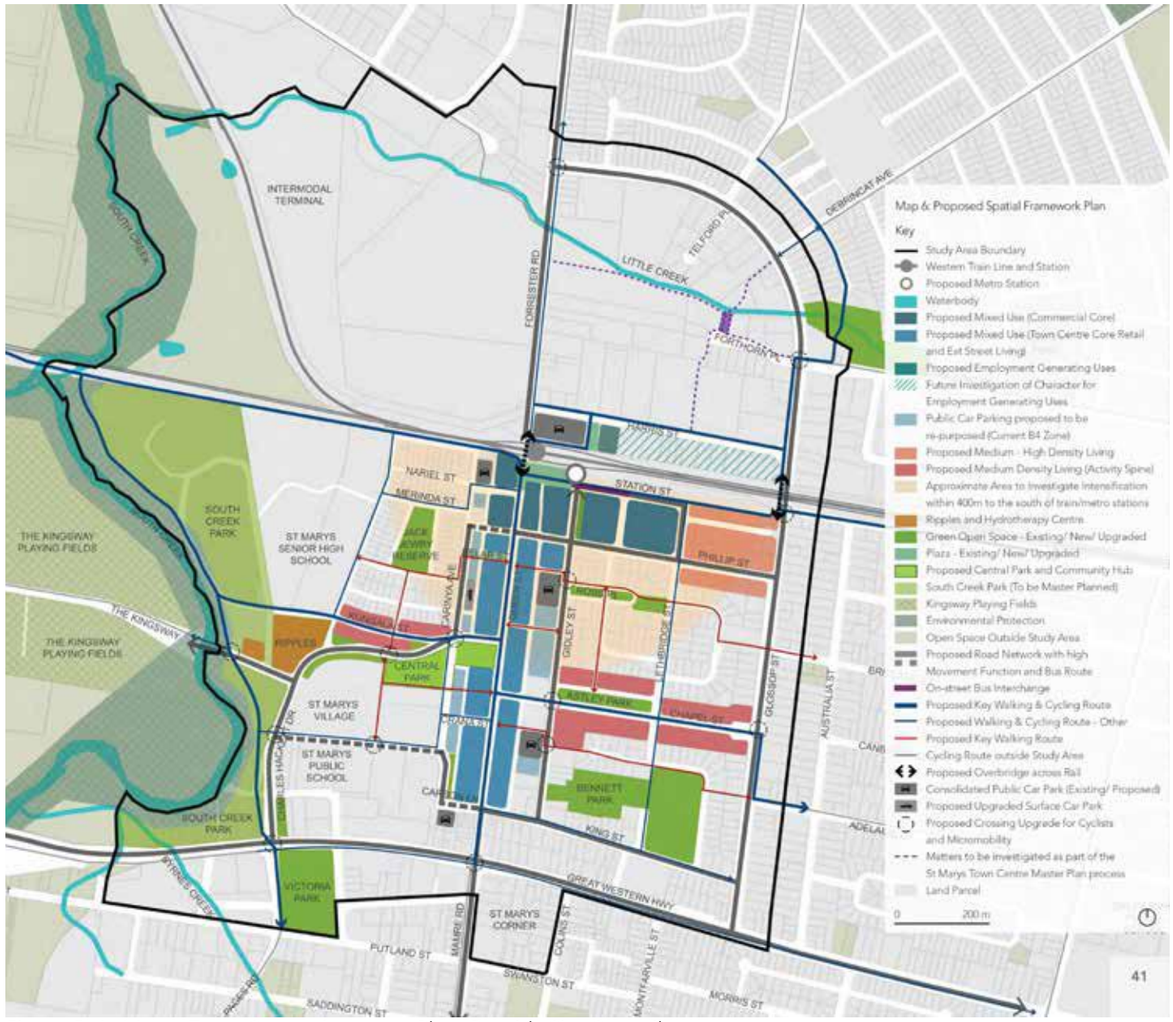


Figure 5: St Marys Town Centre Structure Plan, Penrith City Council

3.6.1 Geological history

The geological history of St Marys, New South Wales, is characterized by the formation and evolution of the Sydney Basin, which is a large sedimentary basin located in the southeastern part of Australia.

The Sydney Basin formed during the Permian period, about 250 million years ago, when tectonic activity caused the Earth's crust to sink and become filled with sediment. Over time, this sediment was compacted and cemented to form sedimentary rocks, including sandstones, shales, and mudstones.

In the St Marys area, the sedimentary rocks that make up the Sydney Basin are primarily sandstones and shales, with some inter bedded mudstones. These rocks have been uplifted and eroded over time, exposing their strata and creating the topography of the area.

The land in St Marys is also influenced by the Hawkesbury Sandstone, a geological formation that is a prominent feature of the Sydney Basin. The Hawkesbury Sandstone is a layer of sandstone that was formed from sand dunes and is now the dominant rock type in the area. It is highly resistant to erosion and weathering, and forms many of the cliffs, ridges, and valleys in the area.

In addition to the Hawkesbury Sandstone, the St Marys area is also influenced by a number of other geological features, including fault lines and dykes, which have shaped the local geology and influenced the development of the area over time.

Overall, the geological history of St Marys is a complex story of sedimentation, uplift, erosion, and tectonic activity, which has shaped the landscape and influenced the development of the area over millions of years.

3.6.2 Aboriginal Heritage

Evidence of Aboriginal occupation in NSW dates back to around 50,000 to 60,000 years at Lake Mungo (in NSW's southwestern region, about 110 kilometres northeast of Mildura) and up to 30,000 years at Parramatta.
Prior to the appropriation of their land by Europeans, Aboriginal people lived in small family or clan groups that were associated with particular territories or places.

Before European exploration in the Nepean Valley, the Hawkesbury-Nepean River forms the natural western and northern border of Sydney, beginning in highland tributaries at the south east and emptying into Broken Bay. The Nepean River and its surrounds have been significant to Aboriginal Australians of various language groups for thousands of years. The Nepean, known as the Dyarubbin, was an important resource, providing a constant supply of water, creating arable soils that grew edible plants and attracted wildlife and birds, which all would have served as food sources. Furthermore, Dyarubbin remains a culturally significant aspect of Aboriginal country and culture, with hundreds of culturally important places located in the area. It may have also served as a travel corridor, linking various groups of Aboriginal peoples from Broken Bay to Camden.

The language group spoken across Sydney was known as Darug. The Darug language group is thought to have covered the area south from Port Jackson, north from Botany Bay, and west from Parramatta (Attenbrow, 2010).

The Darug language group consisted of fourteen tribes or clans and the Gomerrigal-Tongarra clan was the one that inhabited both sides of South Creek. The Gomerrigal-Tongarra lived in open camp sites along the creek, unlike the Blue Mountains clans who resided in rock shelters. Their dwelling, the simple gunyahs, were made of three poles leaning against each other at the top and covered with bark on two sides. To protect themselves from the weather and insects, they smeared mud on their skin and wore animal skins in winter for warmth. (Penrith City Council, 2014)

Surface and subsurface Aboriginal artefacts have been identified across the SMSWA study area, and generally near water sources and areas that have been subject to low levels of past disturbance. Development of the project has largely avoided direct impacts to known Aboriginal sites and minimised the potential interface with areas with high Aboriginal archaeological potential, particularly with the provision of bridges and viaduct structures over waterways. None of the sites identified within the study are within proximity of the St Marys Station footbridge. It is acknowledged however that the project site may be of significance to the Aboriginal community.

Figure 6: Bents Basin at the Nepean River, located just west of Bringelly. Painted by Conrad Martens, c.1835. Sydney Living Museums (SLM)34

3.6.3 Non-Aboriginal Heritage

St Marys Railway Station is also known as St. Marys Railway Station Group. The property was added to the New South Wales State Heritage Register on 2 April 1999.

St Marys Railway Station is also on the Transport Asset Holding Entity (TAHE) Section 170 (s170) Heritage and Conservation Register and Penrith Local Environmental Plan 2010.

The following physical description for the site has been extracted from the State Heritage Inventory:

Goods Shed (c.1880)

External: A Subtype 2 rectangular face brickwork goods shed with corrugated metal pitched roof. It is the only brick example of a Subtype 2 shed and remains relatively intact. The shed features simply detailed timber bargeboards at both gable ends, semi-circular arched tall window openings (boarded externally) with cement rendered sills, flat cement rendered lintels and timber thresholds to two-panel timberboard loading doors on both station side and street side elevations, and a single segmental arched door on the western side facing the bus interchange. Facades of the Goods Shed are emphasised by recessed bays with dentilated tops around the arched windows. A brick platform with bullnosed capped brick retaining walls along the edges and the sides of brick steps is located on the rail side of the Goods Shed.

Internal: The Shed is essentially a large single space with exposed timber framed truss roof underneath of the corrugated metal roofing visible and timberboard flooring. Configuration of the multi-paned steel windows with fanlights and toughened glazing is evident from the interior. The brick walls are painted. Horizontal steel mechanisms for the sliding loading doors cross over the fanlights of the windows.

Platforms 3/4 Building (1888)

External: St Marys station building is a type 3 second class station building and is constructed of brick with centrally located waiting room flanked by attached two small wings on both ends. The waiting room has no wall on the rail side and extends by a wide corrugated metal awning supported on timber posts and beams featuring exposed rafters and decorative timber boards at both ends. The street elevation of the waiting room consists of four vertically proportioned timber box framed windows and a door opening with no glass or door panels. Both wing rooms are locked and secured by security grills installed on both window and door openings. Each wing features one face brick tall chimney with corbelled top above the relatively new corrugated metal roof of the building. A pitched modern metal canopy with awnings on both elevations supported on steel frame and columns extends on Down and Up ends of the building.

Internal: Internal access to the enclosed side wings was not possible, however they could be viewed from the windows and appear to have remained relatively intact. The central waiting room features painted brick walls, timber board ceiling lining and tile floor finish.

Signal Box (1942)

External: A two-storey signal box accommodating the control room on the first floor level with staff amenities and the relay room on the ground floor. The timber framed walls are clad in flat asbestos cement sheets. The first floor roof, which is extended over the roof of the relay room together with the top roof are of flat membrane concealed behind wide moulded fascias that project over wide eaves. The control room has curved walls and aluminium curved windows at the western end. Ground floor doors and windows are timber framed. The box is situated at ground level a short distance from the western end of the station island platform. Designed by New South Wales Government Railways.

Internal: The spaces are original but the electric control console and wall panel have been replaced in recent years by computerised console system placed behind a high bench. Access to the ground floor and relay room was not available. The curved observation windows of the control room have been covered by blinds from inside and metal sun control panel from outside as direct visual communication is no longer required.

Crane (1943)

A type 1 jib crane that was manufactured by Frederick Gregory & Co and placed at St Marys on the 24 August 1943. It is of five-ton capacity with official number of “T 166”. It is placed on an octagonal concrete foundation and currently preserved as an industrial archaeological item within a brick dwarf wall and aluminium palisade fencing around its perimeter. A mature tree is also located within the protected space. It is one of approximately 8 jib cranes remaining in the Sydney area, other cranes also remain at Fairfield and Windsor.

Figure 7: Goods Shed (c.1880)

Figure 8: Crane (1943)

Figure 9: Platforms 3/4 building (1888)

Figure 10: Signal Box (1942)

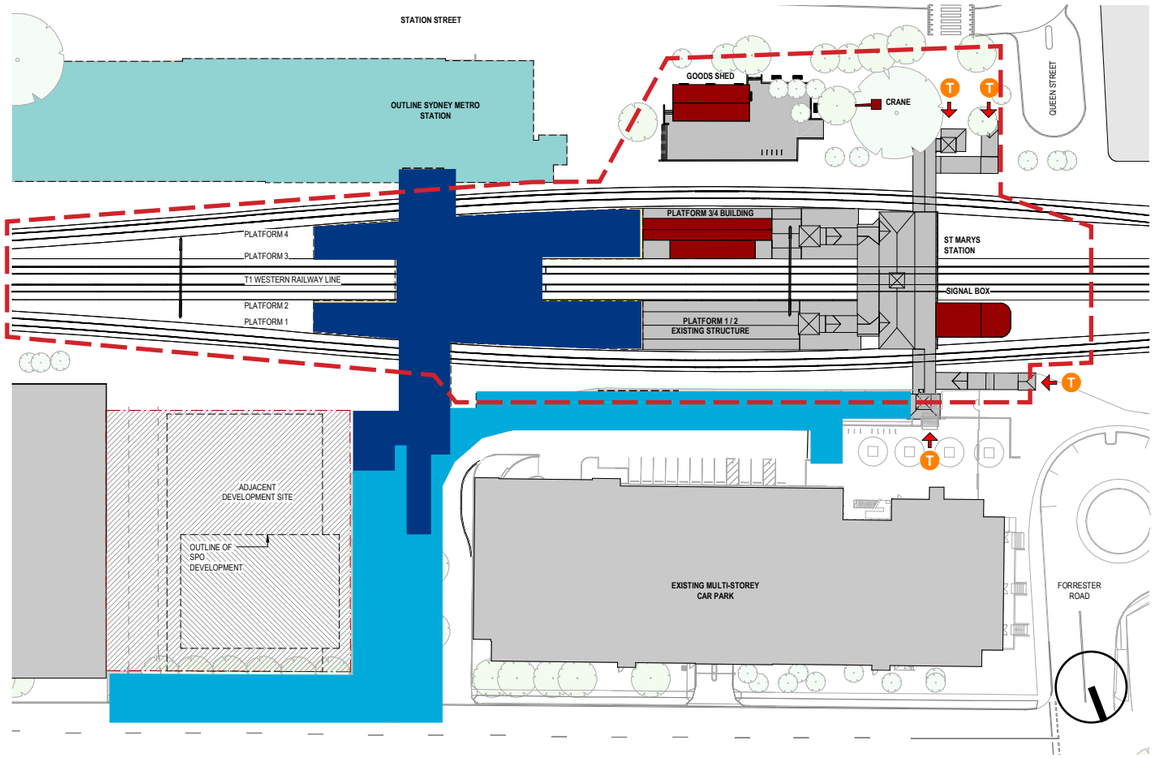


Figure 11: site plan diagram showing heritage elements adjacent St Marys Station footbridge

LEGEND

- St Marys Station footbridge | Architectural Scope
- St Marys Station footbridge | Northern Plaza Landscape Scope
- Heritage Elements
- St Marys Railway Station group - State Heritage Register Curtilage

3.6.4 St Marys Station Precinct Character

Existing Architecture

The historic St Marys station is typical of the inter-war style of railway buildings and features a discarded signalling building built in the art-deco style. The 1863 Goods Shed and heritage building on platform 3 & 4 feature gabled roofs and terracotta coloured brick.

The main station elevated concourse was rebuilt in 1994 and has a roof that is also reminiscent of the gable form referenced from its heritage buildings, also incorporating Dutch gables in the roof above the stairs.

The existing multi-storey commuters car park was built around 2014, the car park has an open facade system with decorative slats vertically spanning the facade. The colour of the facade also takes inspiration from the station, with heritage colours such as Deep Indian Red and terracotta from ASA heritage painting standard comprising its main colour palette.

Existing Station footbridge

The existing footbridge at St Marys station is a typical Station footbridge constructed with a steel structural frame supported on steel columns. The footbridge is connected to four sets of stairs and lifts, all of the stairs and lifts provide access to the street level and platforms to the station. The original 1942 steel footbridge is also connected to an overhead booking office added in 1995. The footbridge is largely unmodified in the St Marys Station footbridge proposal.

Existing Station Platform

St Marys station has two island platforms consisting of concrete vertical faces and the platforms topped with an asphalt finish. On platform 1 and 2 the canopies are constructed with metal cladding with steel frames, these canopies were added in 1995. On platform 3 and 4 is a heritage listed waiting room first constructed in 1888, surrounded with a metal canopy similar to the canopies on platforms 1 and 2. The existing platforms have a fall towards the coping with a slope between 1:25 to 1:60. The canopies and gradient of platforms are proposed to be modified.

Proposed Harris Street Entry location

On the Harris Street side of the proposed footbridge is an existing car park with a multi-storey building on the west side and at-grade section on the east side. The multi-storey car park and associated driveway is proposed to be retained with minimal intervention to support accessibility improvements to the new Footbridge and northern plaza.

Existing Southern Plaza Landscape Character

The existing St Marys Station southern plaza, which links the Train station to Station Street and the St Marys town centre, is a high quality public open space comprising brick pavements and walls, heritage artwork elements, street furniture including benches, bins, bicycle racks and shelters, and mature trees providing shade and respite. Garden beds are in varied condition, and include both well maintained planting and areas of weed growth and unmanaged grasses. Tree species comprise a mix of native and exotic trees of medium size. This open space is open in nature and receives good solar access throughout the day. This plaza will be subject to improvements under the St Marys Metro station and southern plaza works (not covered by this PUDCLP). It is anticipated that these improvements will introduce a suite of new hardscape finishes and furniture which integrate into the St Marys town centre public domain.

Existing Northern Plaza Landscape Character

The existing St Marys Station northern plaza, which links the Train station to Forrester Road, is comprised of a range of hardscape finishes and limited street furniture offerings, which include primarily concrete pavements, and bicycle racks / secure bike locker. The space is heavily shaded through a significant portion of the day by the multi-storey carpark building which bounds the plaza to the north. There are several mature native trees to the plaza, and additional trees growing along the existing western footpath link which assist in softening the surrounding built form for pedestrians.

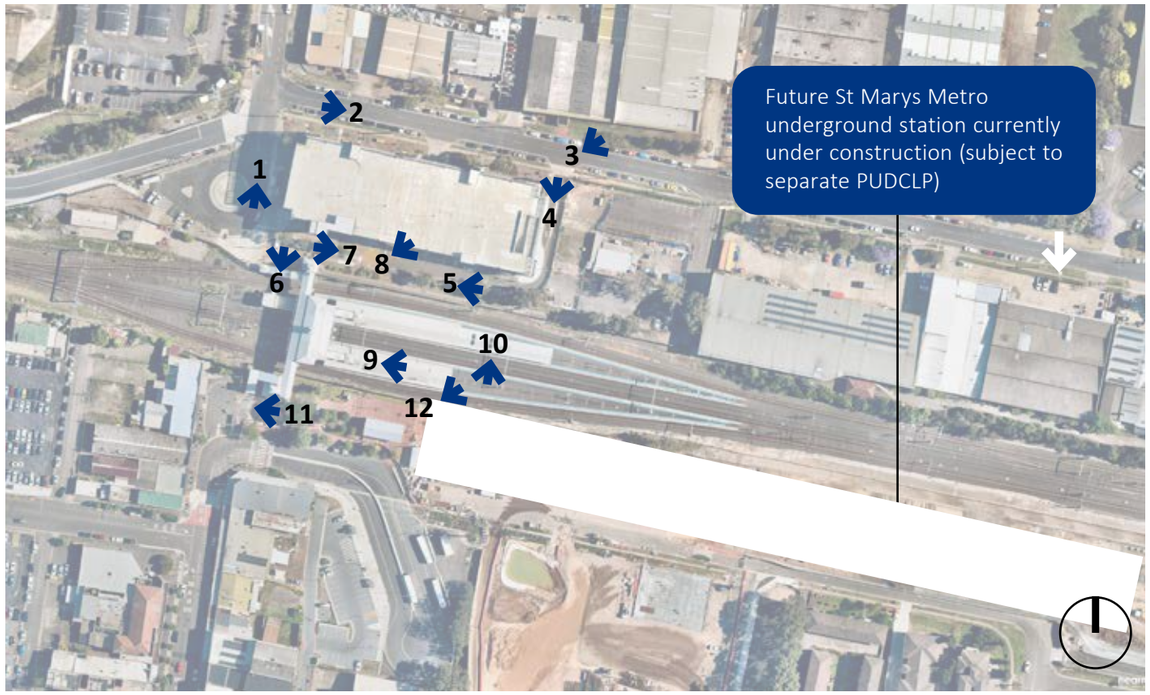


Figure 12: St Marys Station aerial image, 2023, and viewpoints

Source: Nearmap

Existing native planting within garden beds is limited and inconsistent, with only hardy native grasses showing an ability to thrive in the conditions.

Forrester Road

The southern termination of Forrester Road as it meets the railway corridor and northern plaza, is comprised of full width concrete pavement, with limited landscaping. Street furniture is limited to a single bus shelter and rubbish bin. This transitions to a typical streetscape condition of concrete footpath and maintained turfed verge within the Dunheved Business Park industrial zone. Street trees begin from the intersection of Forrester and Harris, and comprise an inconsistent mix of different species at varying spacings.

Harris Street

Similarly, the existing streetscape condition of Harris Street is a concrete footpath within a maintained turf verge, with inconsistent street tree planting. Large established native trees along the multi-storey carpark frontage have been supplemented with additional native tree planting which embrace a naturalistic approach, using varied species and spacings instead of a traditional consistent avenue planting style.

There is an opportunity for public domain improvements to provide greater clarity to the public domain through introducing a hierarchy of hardscape finishes, improved street furniture amenity, and consistent street tree planting for shade and precinct identity.

View 1: Forrester Road

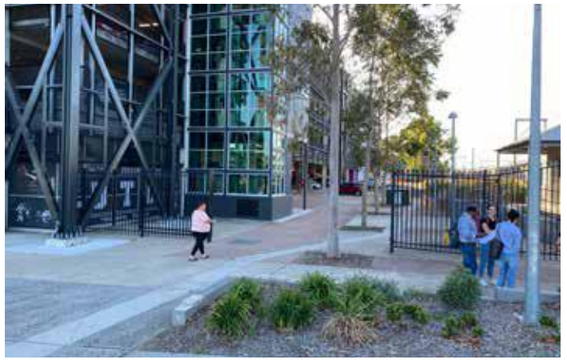

View 2: Harris Street


View 3: Multi-storey carpark, Harris Street


View 4: Carpark entrance laneway, Harris Street


View 5: Carpark laneway planting and trees


View 6: St Marys Train Station northern entrance


View 7: St Marys Train Station northern entrance plaza


View 8: St Marys Train Station footbridge and concourse


View 9: St Marys Train Station footbridge and concourse

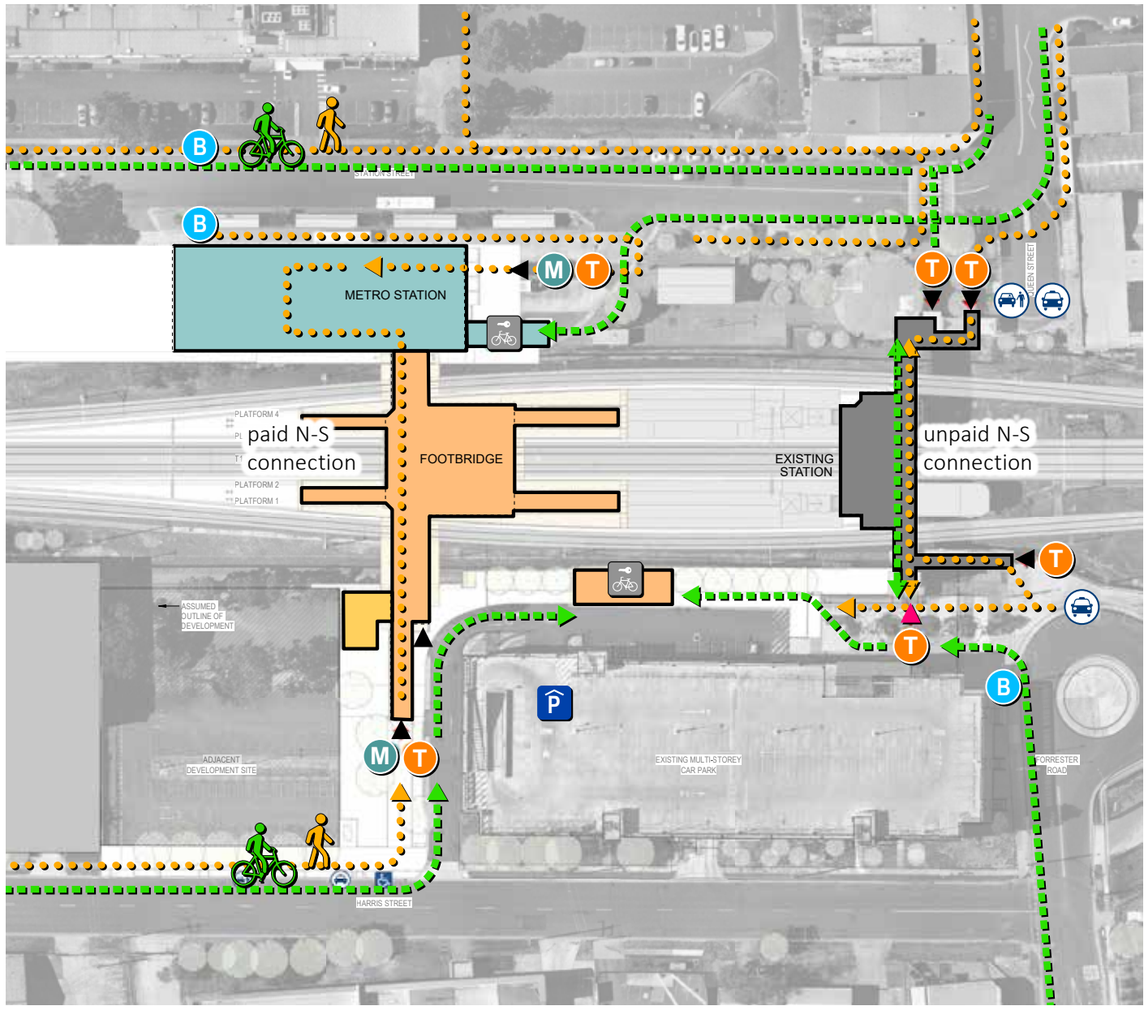

View 10: Carpark seen from St Marys Train Station platform

View 11: St Marys Train Station southern entrance


View 12: Heritage Goods Shed

Figure 13: St Marys Station footbridge Site Photos 2023

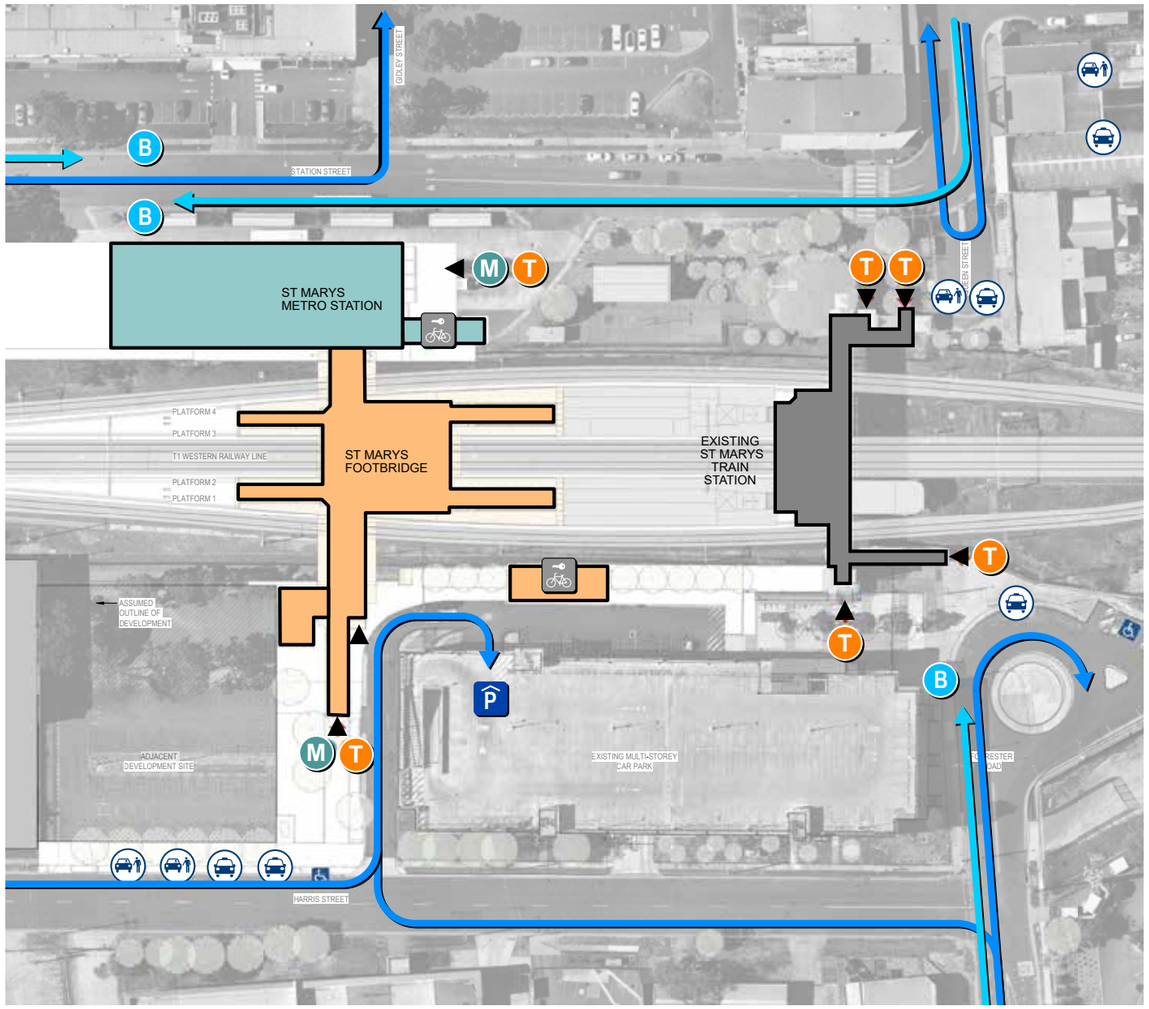
Modes of transport and impact on station precinct



Active Transport

- St Marys Footbridge built elements Footbridge
- St Marys Metro Station footbridge
- Metro entry
- Train entry
- Bus stop
- Bike Route
- Walking Route
- Taxi
- Kiss 'n' Ride
- Secure bicycle facility
- Enclosed car park

Figure 15: Active Transport
Source: Demand Modelling Diagram_Traffic, Architectus



Bus & Car Route

- St Marys Footbridge built elements Footbridge
- St Marys Metro Station footbridge
- Metro entry
- Train entry
- Bus stop
- Private vehicle/taxi route
- Bus route
- Taxi
- Kiss 'n' Ride
- Secure bicycle facility
- Enclosed car park

Figure 16: Buses & Car routes
Source: Demand Modelling Diagram_Traffic, Architectus

Entrance & Exit Spill analysis

The diagrams shown in this section are a summary of the entrance and exit split analysis provided by Arcadis. The four diagrams show the percentage of commuters at each entrance or exit in the AM and PM condition in the year 2056.

The main tendencies of use we discerned from these diagrams are:

1. The main entry will most certainly be the new Metro station Entry on the southern plaza. This is logical considering the population of St Marys mostly residing on this southern side, with the north St Marys being primarily industrial. The percentage of entry and exit is almost equal at this time of day for this southern metro entry.

2. In the AM The Northern entry is a secondary entry into the St Marys Station precinct, with a higher volume using the north as an entry and a relatively small percentage using the north as an exit. This is most likely due to Multi level Car park being used to 'park and ride'; Travellers will park and from here interchange onto other modes of transport (Train or Metro).

3.The percentage of train travellers using the new St Marys station to enter/ exit St Marys is equal between the existing station and new footbridge.

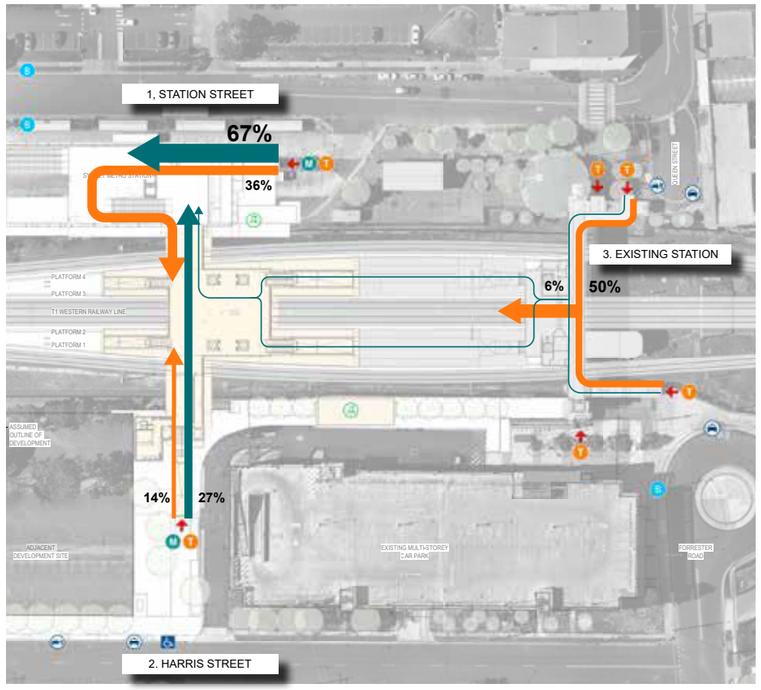


Figure 17: Entrance Split, 2056, AM, Normal Operation
Source: Demand Modelling Diagram_Entry_AM2056, Architectus

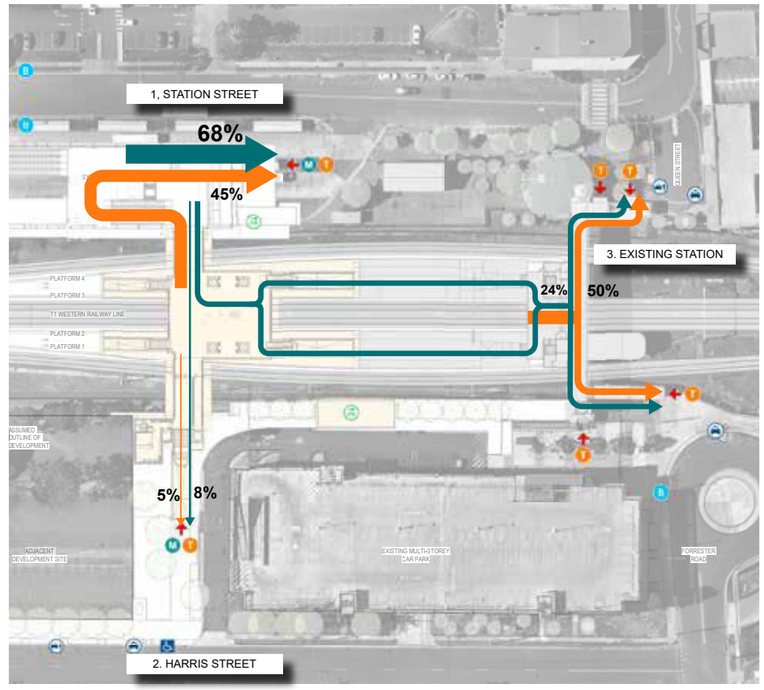


Figure 18: Exit Split, 2056, AM, Normal Operation
Source: Demand Modelling Diagram_Entry_AM2056, Architectus

ENTRANCE SPLIT	SYDNEY TRAINS (T1)	SYDNEY METRO
1. STATION STREET	36%	67%
2. HARRIS STREET	14%	27%
3. EXIST. STATION	50%	6%

EXIT SPLIT	SYDNEY TRAINS (T1)	SYDNEY METRO
1. STATION STREET	45%	68%
2. HARRIS STREET	5%	8%
3. EXIST. STATION	50%	24%

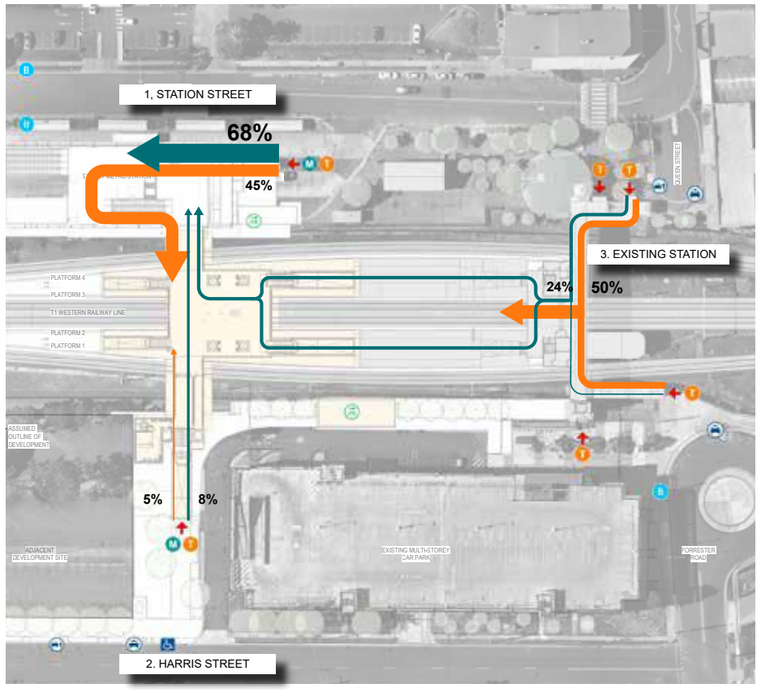


Figure 19: Entrance Split, 2056, PM, Normal Operation
Source: Demand Modelling Diagram_Entry_PM2056, Architectus

ENTRANCE SPLIT	SYDNEY TRAINS (T1)	SYDNEY METRO
1. STATION STREET	45%	68%
2. HARRIS STREET	5%	8%
3. EXIST. STATION	50%	24%

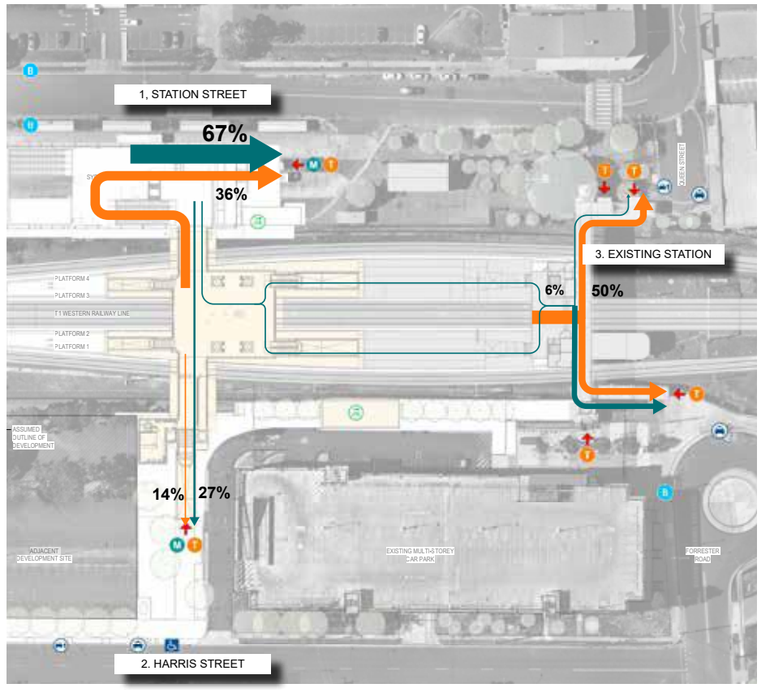


Figure 20: Exit Split, 2056, PM, Normal Operation
Source: Demand Modelling Diagram_Entry_PM2056, Architectus

EXIT SPLIT	SYDNEY TRAINS (T1)	SYDNEY METRO
1. STATION STREET	36%	67%
2. HARRIS STREET	14%	27%
3. EXIST. STATION	50%	6%

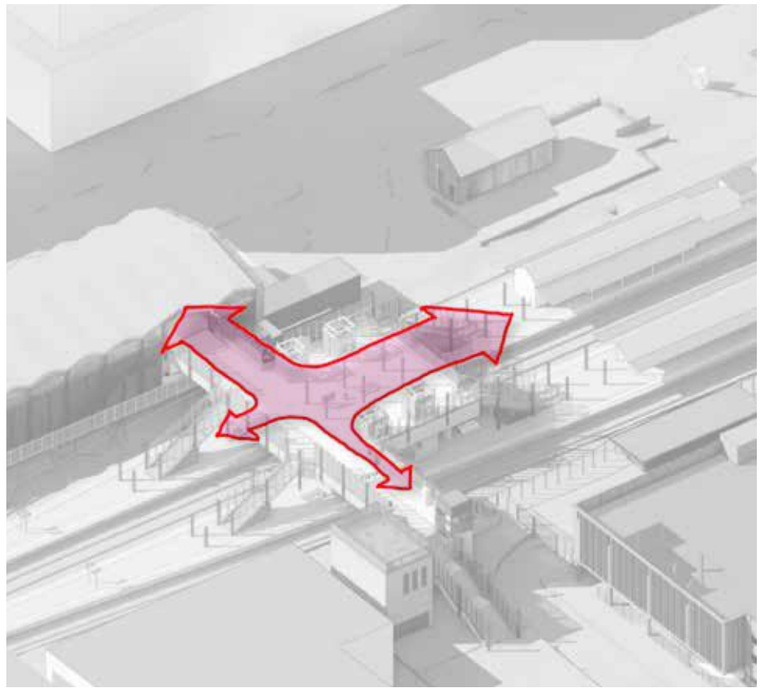


Figure 21: Customer movement summary
Source: St Marys Station footbridge_PED Weighted Concept, Architectus

Conclusion

Following from the two main tendencies of entry and exit usage, we concluded that the main flow of passengers on the footbridge will move between the train station platforms and the Metro station, with a far smaller percentage of travellers using the platform stairs and the northern entry. Our deduction is expressed in the sketch below with the two larger arrows representing this higher volume of passengers.

This conclusion led us to treat the concourse space as the main space of the footbridge. Utmost care is to be taken in its execution and expression, in order to aid the safety, efficiency, and wayfinding for the seamless flow of commuters

Station Precinct Plans

4

4 Station Precinct Plans

4.1 Station Precinct Spatial Scope

The Station Precinct

The St Marys Station footbridge will provide a new pedestrian connection over the rail line which will link the new St Marys Metro Station building to the existing St Marys Train Station platforms, and to the transport facilities and Harris Street community on northern side of the rail line.

This integrated precinct outcome will significantly benefit the community by providing a fully integrated transport interchange, linking trains, metro, bus, cycle, commuter parking, and pedestrian facilities to ensure a smooth and user-friendly customer experience. By providing a strong link to Harris Street and the northern side of the railway line, St Marys Station footbridge will benefit the residents and businesses of St Marys North and provide a catalyst for economic development.

The new northern station plaza will be nestled amongst the built form of the St Marys Station footbridge to the south, the existing multi-storey carpark to the west, and the Sydney Metro Site Office (SPO) building to the east. This will have a marked outcome on the urban character of the northern plaza.

The arrival gateway on Harris Street and north-south view axis will become highly defined and appear narrower between the built form. The micro-climate will become more urban, with additional shelter and shade offered by built form.

The designed concourse, footbridge, and service building have been developed to align with the scale of the adjacent multi-storey commuter car park, ensuring it no longer dominates the precinct. The interface between these structures has been softened through the strategic introduction of evergreen planting, creating a natural transition that integrates their colour palettes. These measures contribute to a cohesive visual experience, minimising the car park's impact when viewed from key vantage points, including the platform.

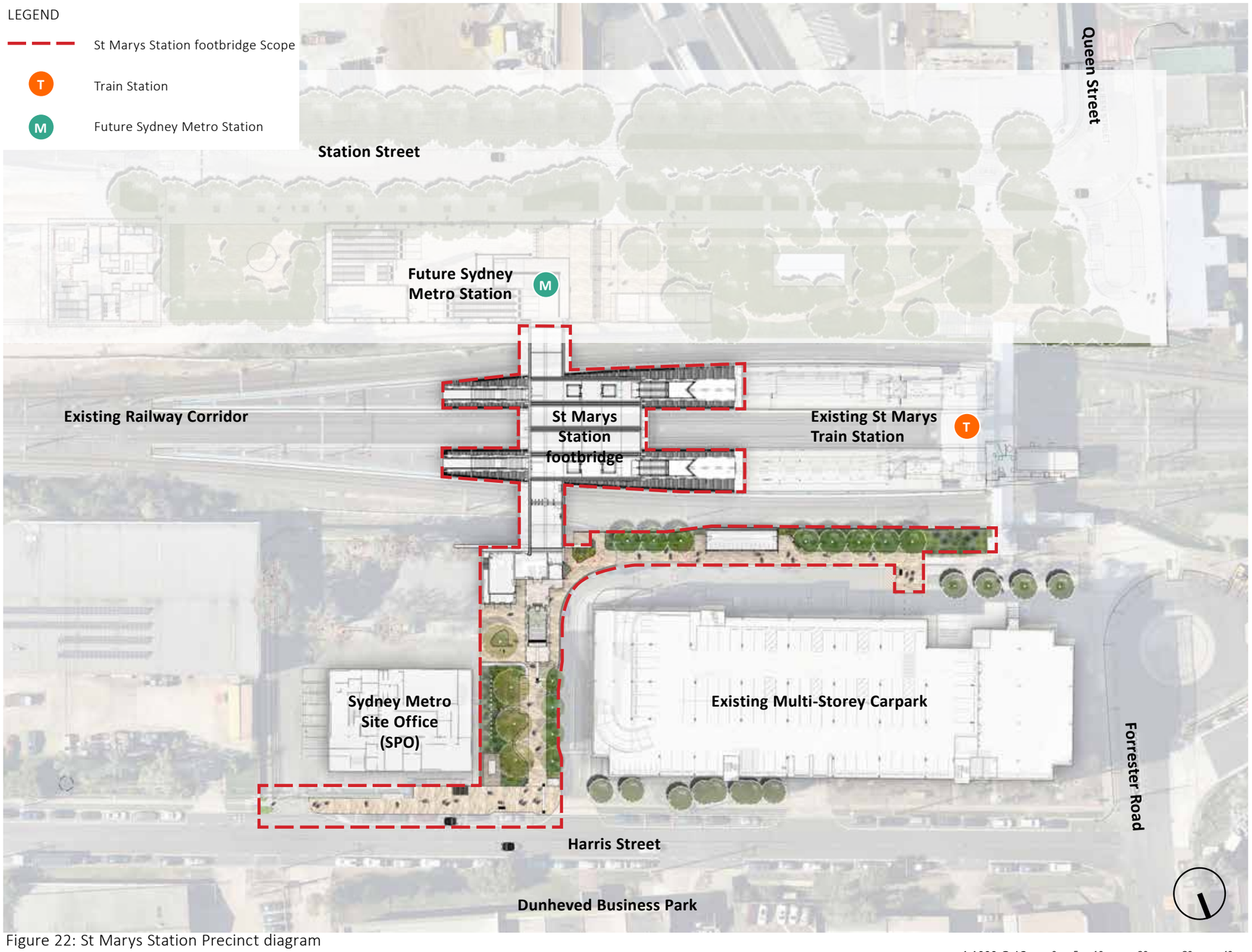


Figure 22: St Marys Station Precinct diagram

Northern entry pathway and plaza, perspective view looking north towards Harris Street.
Artist’s impression only. Subject to change.

Perspective view looking south from northern entry pathway towards the St Marys Station footbridge.
Artist’s impression only. Subject to change.

Western Pathway - Perspective View looking east (Proposed)

Western pathway perspective view looking east towards the St Marys Station footbridge.
Artist's impression only. Subject to change.

Harris Street, perspective view looking east from the existing multi-storey carpark access lane.
Artist’s impression only. Subject to change.

4 Station Precinct Plans

4.2 Station Precinct Plan

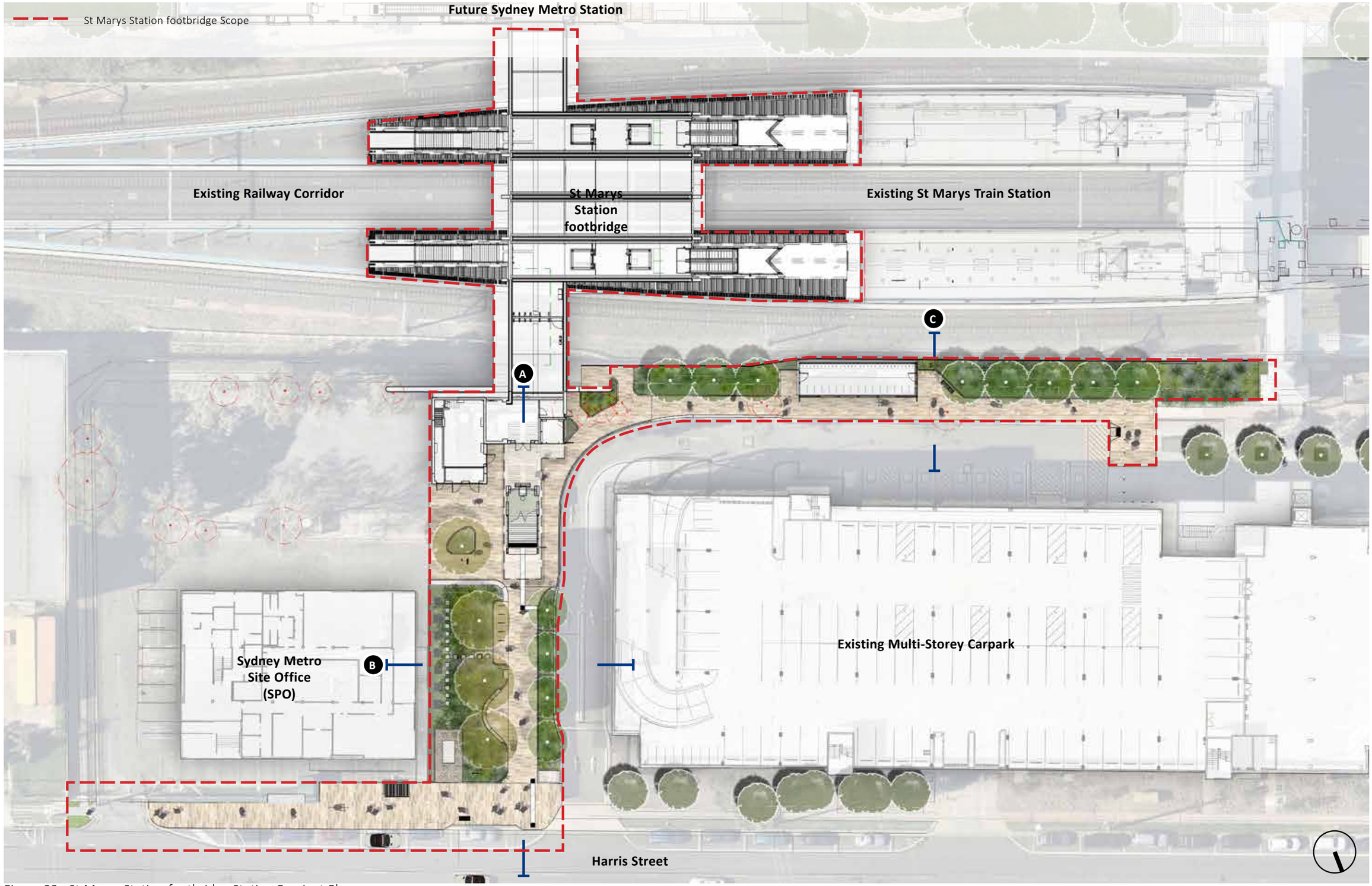


Figure 23: St Marys Station footbridge Station Precinct Plan

Figure 24: Section A, north south section from Harris Street to the new footbridge entrance and northern plaza

Figure 25: Section B, east west section looking south towards the new footbridge entrance and northern plaza

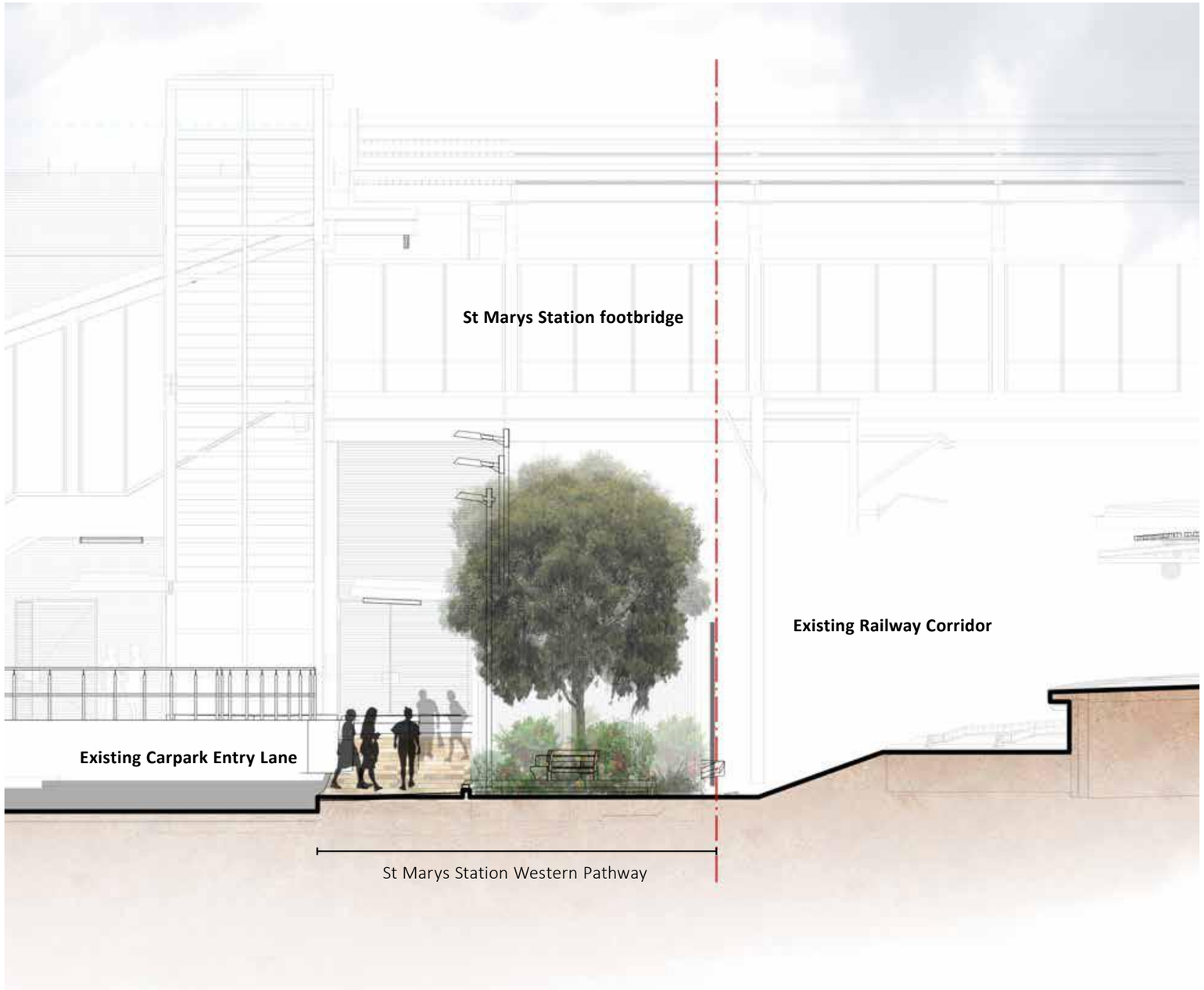


Figure 26: Section C, north south section through western pathway, looking east towards the new footbridge

4 Station Precinct Plans

4.3 Placemaking, Public Art, and Heritage Interpretation

The St Marys Station footbridge creates a northern plaza that commuters and the local community can enjoy. The plaza acts as a destination and place making opportunity for communities to the north of the station. The new plaza space, with its seating opportunities, bicycle storage, lush native planting and new and intuitive wayfinding, will serve as a new place for social interaction, which provides high quality public open space amenity and improved connectivity to the St Marys Station Precinct and St Marys Town Centre to the south.

The St Marys Station footbridge northern plaza design elements and materials are designed to be complementary to the future southern plaza, which will be delivered as part of future Sydney Metro Station Metro works (subject to separate PUDCLP). This will reinforce a clear and distinct place identity to the wider St Marys Station Precinct.

Public art is not currently in the scope of the St Marys Station footbridge project.

Artist's impression only. Subject to change

Figure 27: St Marys Station footbridge Northern Entrance visualisation

Overview of the St Marys Station footbridge Interchange Access Plan (IAP)

The Interchange Access Plan has been prepared to provide detailed interchange deliverables that are facilitated by the new footbridge. It aims to:

- Provide details of the footbridge and its functionality
- Inform the design of connections to the footbridge
- Provide a list of actions for the delivery of the footbridge and associated facilities, with reference to the Design Guidance and Standards for Active Transport. The design must have regard to the Movement and Place Framework, including the Walking Space Guide: Towards Pedestrian Comfort and Safety (Transport, 2020) and the Cycleway Design Toolbox: Designing for Cycling and Micromobility (Transport, 2020).

The focus of this Interchange Access Plan is the new footbridge, the Northern Plaza, and provisions for Kiss and Ride and taxi bays on Harris Street. The document addresses the requirement for the IAP to be developed in consultation with the Traffic and Transportation Liaison Group for the new Metro Station. The proposed footbridge and associated facilities, including the North Plaza and parking for taxi and Kiss and Ride facilities, are integral elements of the new upgraded station, and this IAP focuses on those elements.

St Marys is expected to grow significantly by 2041, with the population increasing from 3,700 (2016 Census) to over 15,000, and dwellings increasing from 1,800 to more than 5,000. Additionally, jobs in the St Marys Town Centre are expected to grow from 3,500 to 9,000. The footbridge and concourse must provide seamless connectivity for various movements and destinations in and around the station.

Key Requirements

The requirements for facilities at St Marys north of the railway line are summarised as follows:

- For pedestrians:
  - A footbridge with a concourse connecting the northern side of the station to the Metro Station
  - A plaza (North Plaza) serving as a hub for footpaths around the precinct and functioning as an entry to the footbridge
- For car passengers:
  - Taxi bays
  - Accessible Kiss and Ride bay
  - Standard Kiss and Ride bays

The conditions of approval require demonstrating that future demand will be accommodated safely. The design year for the footbridge is 2056, and pedestrian demand forecasts provided by Metro were used for detailed modelling of the station and footbridge.

Demand and Performance

By 2056, the morning peak hour is expected to see around 15,000 people moving around the station, with most using the bridge and concourse. This includes:

- 3,000 passengers catching Sydney Trains T1 services towards Sydney.
- 4,000 passengers interchanging from Metro northbound services to Sydney Trains T1 services.
- Approximately 900 people entering the station from Harris Street.

Static analysis and pedestrian simulations of the footbridge show that, under normal operations, the performance remains satisfactory, with widespread levels of service better than C. Queues are limited to small areas at escalators, which are crucial for efficient station operation.

Compliance with Guidelines

The IAP addresses all appropriate requirements, including:

- Station access hierarchy consistent with transport planning principles from the EIS.
- Safe, convenient, and efficient access to the station and connections between transport modes.
- Maintenance or improvement of pedestrian and cycling levels of service in line with Movement and Place Framework guidelines.
- Integration of transport infrastructure and services with existing and proposed developments.
- Compliance with Austroads design criteria and safety audits for traffic and cycle facilities.

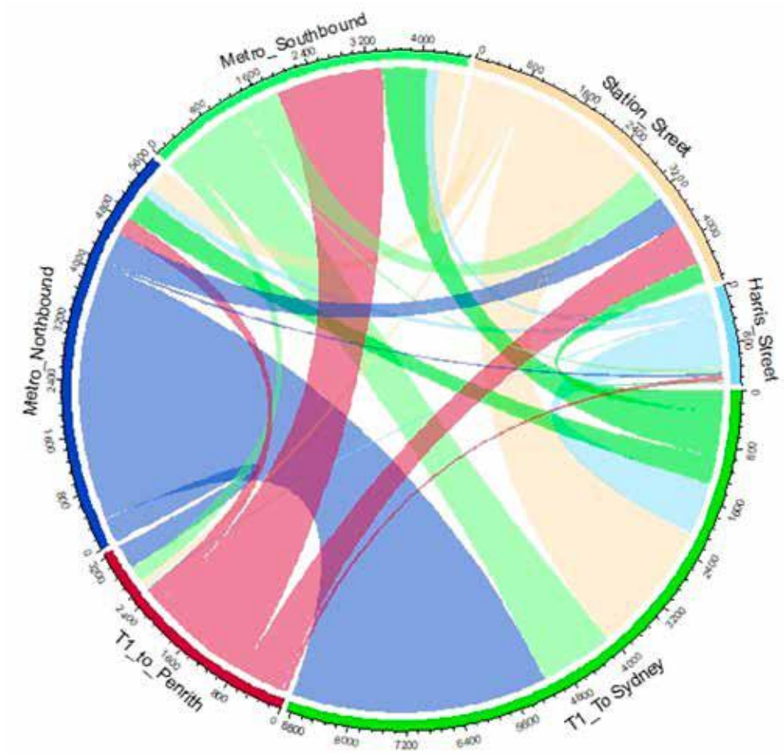


Figure 28: Projected passenger movements

DISTANCE FROM FOOTBRIDGE GATE LINE TO ACCESSIBLE (PRIORITY) PARKING ON HARRIS STREET: 80M

DISTANCE FROM FOOTBRIDGE GATE LINE TO TAXI / KISS AND RIDE PARKING ON HARRIS STREET: 90M

LEGEND

- St Marys Station footbridge Scope
- Vehicle Routes
- Bicycle Routes (including proposed dedicated on-street)
- Pedestrian Routes
- Future Retail Activated Edge
- Metro Station Entrance
- Train Station Entrance
- Bus Stop
- Short Term Parking (Taxi, Kiss&Ride)
- Accessible Parking (Kiss&Ride)
- Secure Bike Parking
- Bike Parking
- Rental Bike Parking
- Substation maintenance access

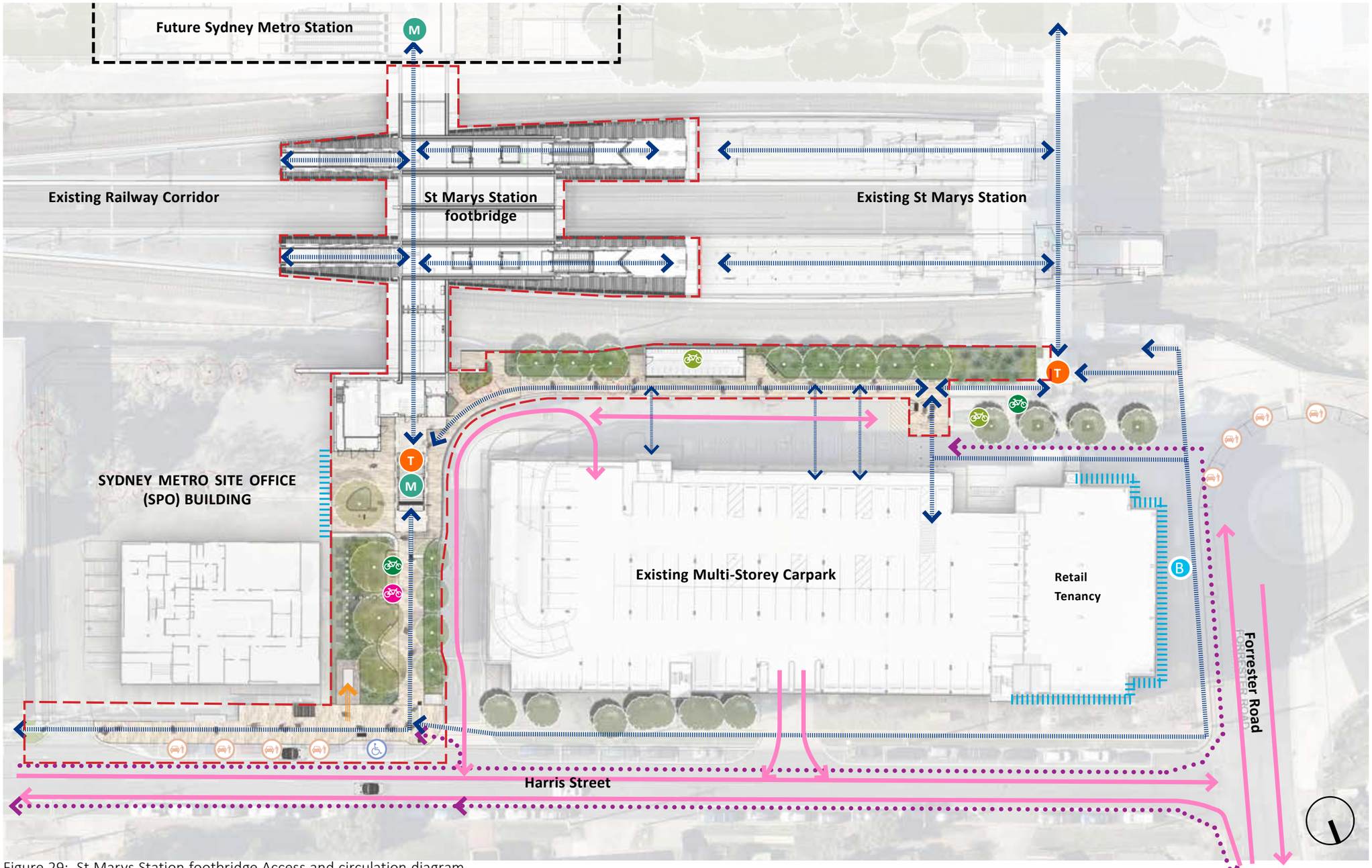
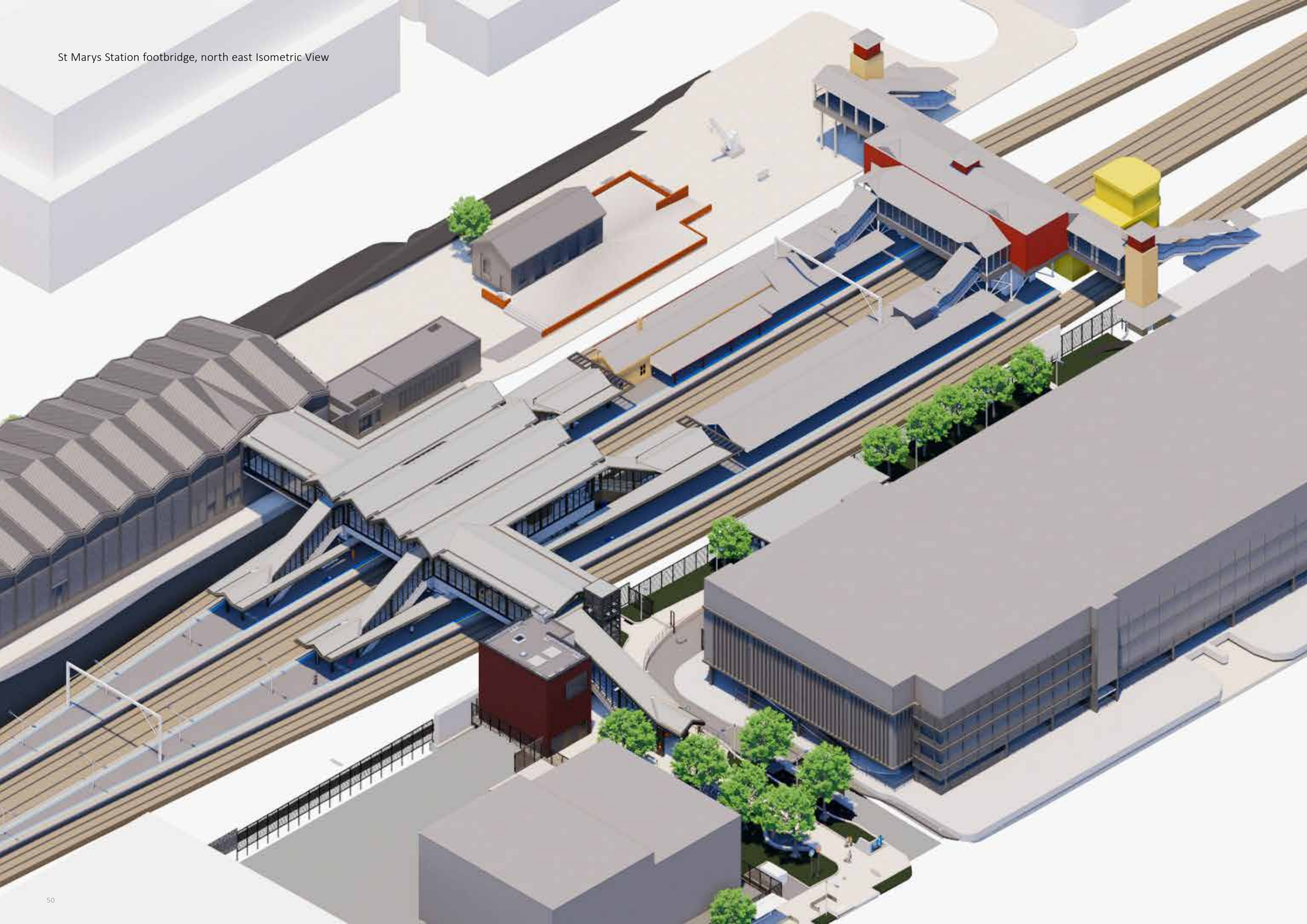


Figure 29: St Marys Station footbridge Access and circulation diagram

Design of Permanent Built Elements

5

St Marys Station footbridge, north east Isometric View



5 Design of Permanent Built Elements
5.1 Vision and Objectives

5.1.1 Introduction

A Stage 2 Design has been developed for St Marys Station footbridge to articulate Sydney Metro's requirements for providing a seamless, paid to paid interchange between the existing Sydney Trains station and the proposed Metro. This work builds on the work of previous design stages in order to arrive at a design that integrates at a spatial, functional and visual level with the Design of the Sydney Metro Western Sydney Airport project that has been produced concurrently.

There are several dependencies arising out of the interface between the design of St Marys metro station and the St Marys Station footbridge, which are designed to achieve a cohesive Sydney Metro product, notwithstanding that the St Marys Station footbridge shall be a TAHE asset which is to be operated and maintained by Sydney Trains. Details of this interface are captured in an IRS and other contract documents.

The following inputs have been applied to achieve the aforementioned cohesive design outcome:

i. Transport Integration requirements have been provided by Sydney Metro. These requirements form part of the Precinct Requirement Plans and capture quantities of bus stops, taxi bays, bicycle parking spaces, commuter car parking spaces and the like which are to be delivered by Sydney Metro Station team.

ii. Pedestrian planning, including dynamic modelling undertaken to determine vertical transportation requirements, number of gates required at gate lines and main circulation area spatial requirements. Inputs from pedestrian modelling team included testing of a number of design iterations reflecting different network operating scenarios, working in collaboration with the Sydney Metro OCP team to determine an appropriate design outcome. Optimization of Vertical Transport has been considered during the Concept Design phase, with changes in lift and escalator arrangements on several stations reflected in the schematic designs.

iii. Sustainability and Regenerative Design requirements have been considered and have informed the design thinking that is reflected in the schematic design proposals. Sustainability embraces consideration of thermal comfort for customers as well as looking at energy efficiency and carbon reduction objectives.

iv. Programming and Constructability inputs.

v. Customer centred design (CCD) has been considered, including an assessment of weather protection to be afforded to customers and has informed the degree of enclosure proposed at each station through facade and canopy design.
vi. Structural designs have been developed, informed by structural and civil engineering requirements.

vii. Other specialist design consultant inputs including:
a. Human factors, including a detailed review of the height of the glazed screens to the bridge.

b. Security, including assessment of hostile vehicle mitigation, glazing framing details, categorization of stations against Sydney Metro requirements and application of CPTED principles.

c. Civil, including swept path analysis of emergency vehicles and hydraulics.

d. Operations & Maintenance, including provisioning for replacement of large & heavy items of kit informing delivery routes and ease of access.

e. BCA & DDA advice

f. Fire & Life Safety

g. Façade engineer

h. Landscape Architecture

g. Heritage

h. MEP engineer

i. Structural

j. Sustainability

h. Signage & Wayfinding

Stakeholder Interfaces

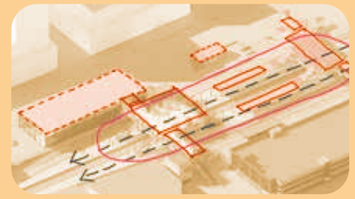
Designs for St Marys Station footbridge have been developed in conjunction with stakeholders including Sydney Trains, Sydney Metro, Transport and Penrith City Council.

5.1.2 Architectural vision and design principles

In addition to the overarching design objectives from Sydney Metro, our design team established an additional set of design principles that would serve as the guiding force behind our project. These principles shape our approach and ensure alignment with the broader vision and goals of the Sydney Metro initiative:

Principle 1: Integration with the St Marys Station 'family' (Sydney Metro Sydney Metro Station, station facilities and urban design).

- Strong form that harmonizes with the buildings across the site and provides an aesthetic unity.
- Visual links to the site heritage.
- Have appropriate human scale at interfaces / public realm.



Principle 2: Develop an intuitive, logical sequence of spaces to enhance customer experience.

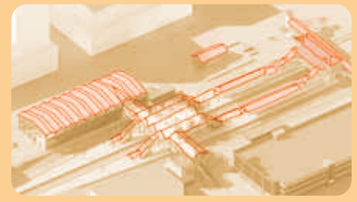
- The form of architecture is to serve the multidirectional paths of travel, by the articulation and the sequence of spaces, through the multiple scales of the urban and architectural space.

Principle 3: Create clear connections between architecture and urban design spaces and the broader public realm; a dialogue at large and smaller scale.

- Respond in a meaningful way to the surroundings and the multiple scales and forms across the site.

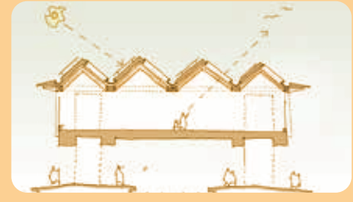
Principle 4: A holistic design approach in a singular language.

- Develop a legible design, avoiding conflicting design approaches and overly complex built form.
- Have a reserved expression; present as a background element.
- Apply modular approach where appropriate.



Principle 5: Respond to the challenges of climate change and the impact of heat-island effect.

1. minimize material usage: e.g. avoid cladding and allow to structure be expressed.
2. circularity: apply re-usable materials.
3. maximize trees on site.



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5 Design of Permanent Built Elements
5.1 Vision and Objectives

Principle 1: Integration with the St Marys Station 'family' (Sydney Metro Sydney Metro Station station, station facilities and urban design):

- Strong form that harmonizes with the buildings across the site and provides an aesthetic unity
- Visual links to the site heritage
- Have appropriate human scale at interfaces / public realm.

Our first design principle set out to find an aesthetic that would be appropriate to the site and form a unity with the existing buildings and the new Metro station.

By virtually modelling the future state of the site, including its surroundings, in 3D the design team was able to analyze the St Marys Station precinct.

In reviewing the site, the design team concluded that there is an ostensible and significant difference in scale between the station precinct and its surroundings. The station precinct has a more refining urban scale and grain, that separates it from the larger multi-storey developments to the south and the large industrial buildings to the north.

A particular station family starts to become apparent, with an architecture that is defined by gabled roofs, with angles ranging from 14 to 34 degrees slope.

The footbridge form will in a large part be defined by its roof. By applying a gabled roof form we can ensure a correct direction of the design with strong visual links to the other precinct.

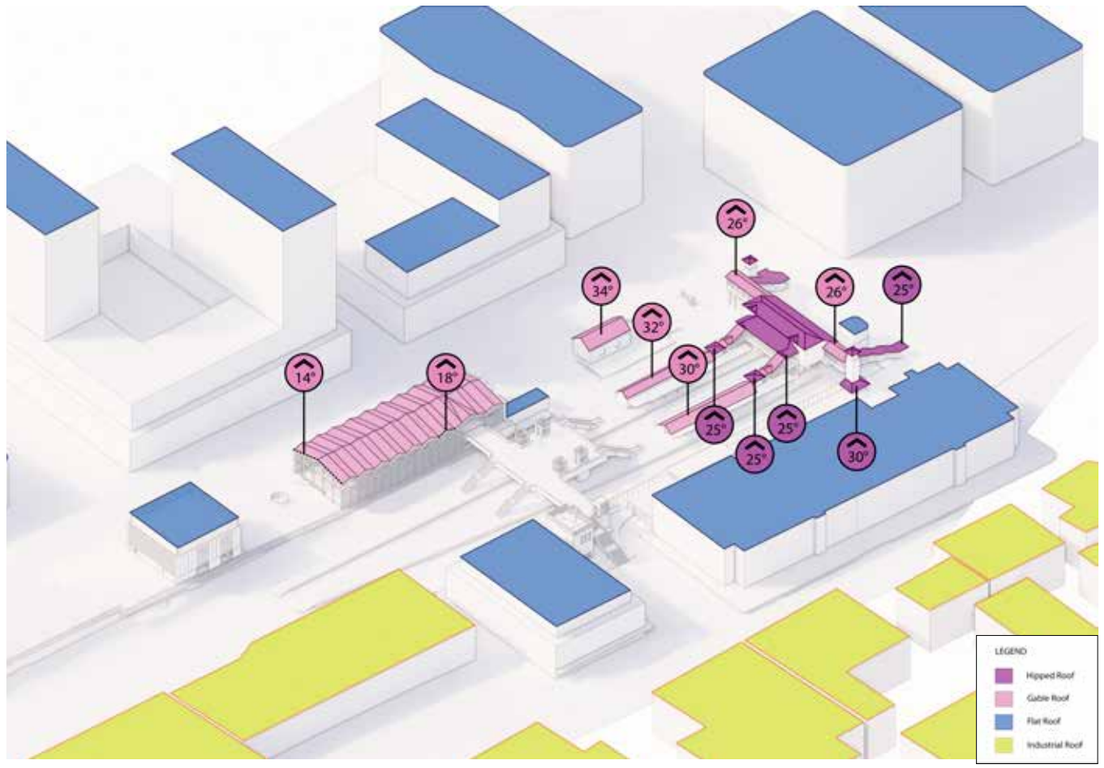


Figure 30: Axonometric Site analysis, indicating the roof types and slopes.
Source: Roof Typology_Context (with pitch), Architectus

Station Family

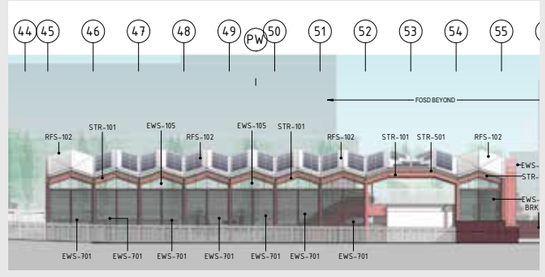

Goods shed


Existing St Marys station


Platform buildings


Future St Marys Metro Station, southern plaza


Heritage building on platform 3-4



Future St Marys Metro Station, side elevation

Figure 31: St Marys Station footbridge Site Photos.

Principle 2: Develop an intuitive, logical sequence of spaces to enhance customer experience:

- The form of architecture is to serve the multidirectional paths of travel, by the articulation and the sequence of spaces.

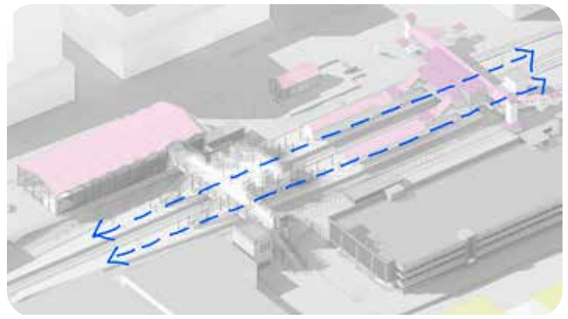


Figure 32: Track alignment gives the site a strong East-West directionality.

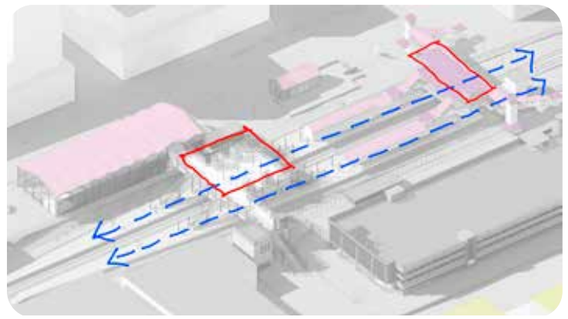


Figure 33: Concourse directly above the tracks provide the access point to the platforms below and the North-South connections.

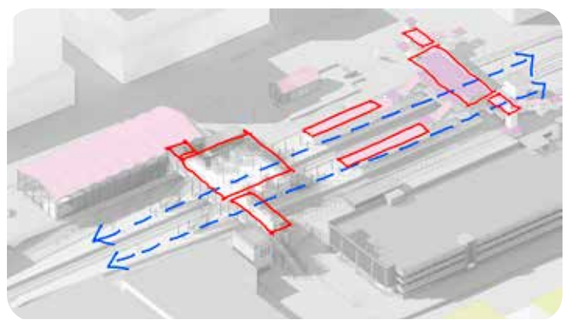


Figure 34: North-South and East-West bridging elements form the connectors across site.

Principle 3: Create clear connections between architecture and urban design spaces and the broader public realm; a dialogue at large and smaller scale:

- Respond in a meaningful way to the surroundings and the multiple scales and forms across the site.

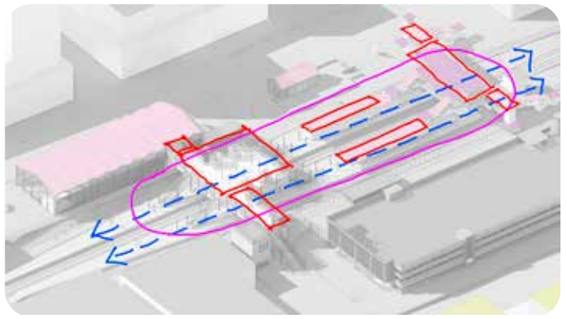


Figure 35: Elements are interconnected through their strong functional relationships: a conceptual station family.

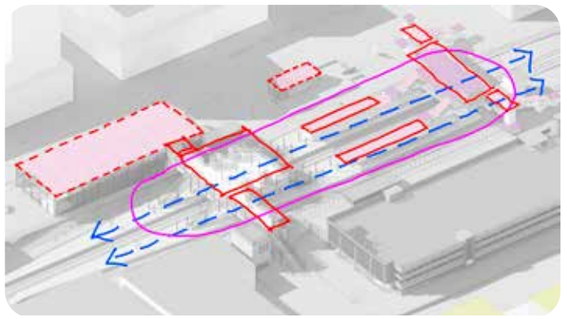


Figure 36: Station family can be extended to the connected site elements with a historical, aesthetic or functional relationship.

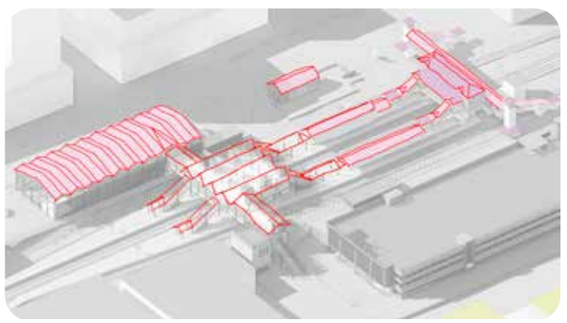


Figure 37: First pass at investigating the continuation of the station family aesthetic onto the Footbridge: a multi tier gabled roof.

5 Design of Permanent Built Elements
5.1 Vision and Objectives

Principle 4: A holistic design approach in a singular language:

- Develop a legible design, avoiding conflicting design approaches and overly complex built form:
- Have a reserved expression; present as a background element.
- Apply modular approach where appropriate.

After an extensive and multi-disciplinary review of the options the design team landed on the 4 bay gabled roof with an east-west alignment.

- The 4 tier roof provided the best outcome:
- The form and scale best aligned with the smaller grained building on site.
- The gables roof on the east and west extremities aligned best with the escalator and stair canopy alignments.
- Structurally the position of the columns did not hinder the flow of commuters.

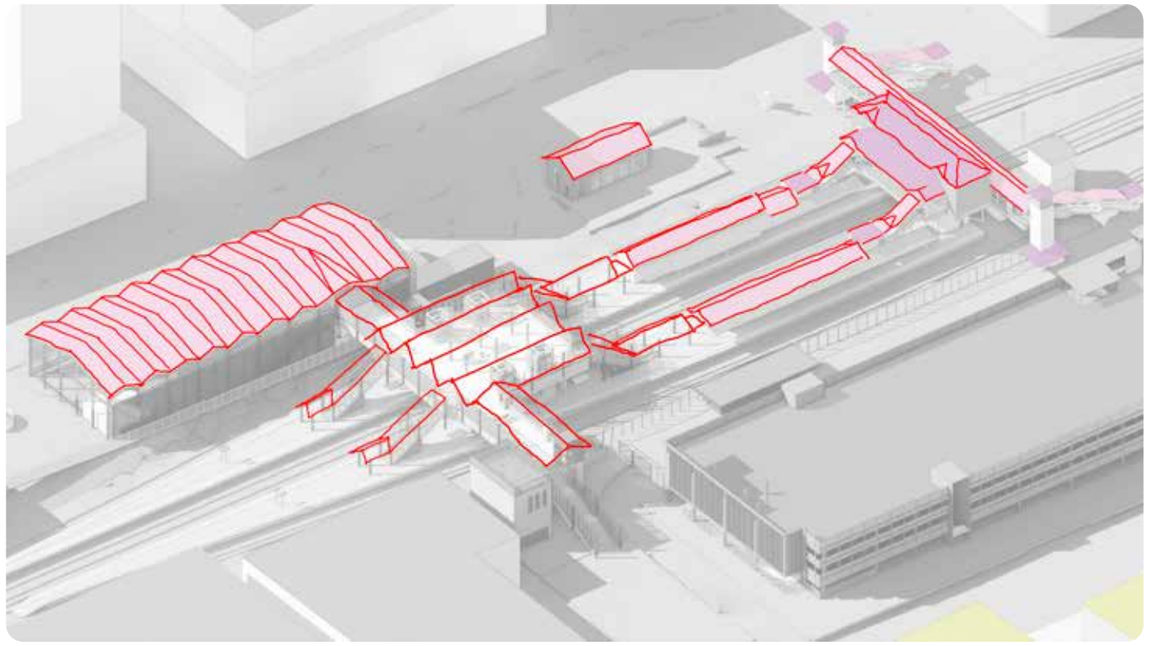


Figure 38: Conceptual isometric sketch

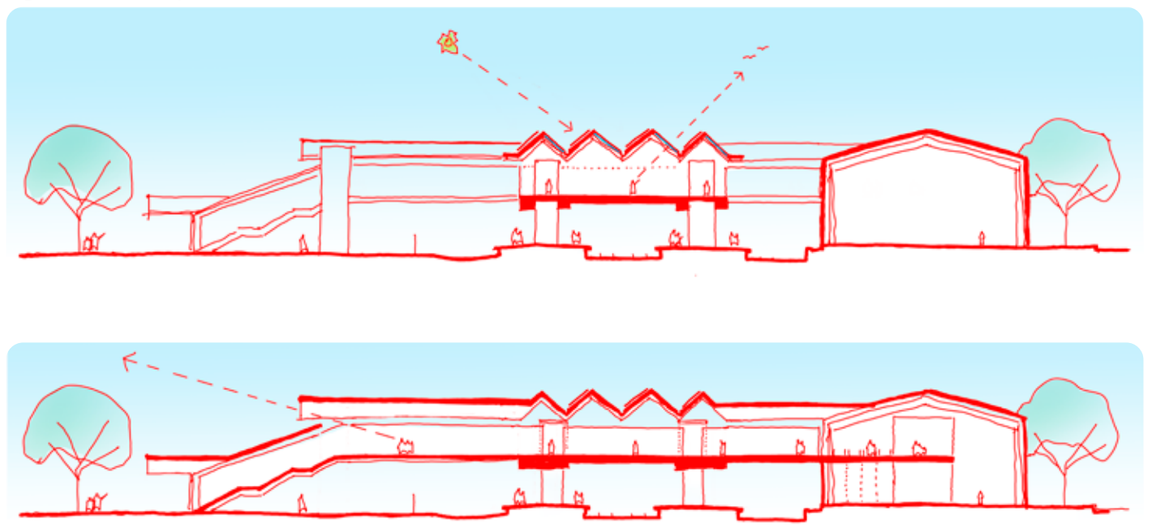


Figure 39: Conceptual section sketch

Optioneering, in search of scale and directionality.

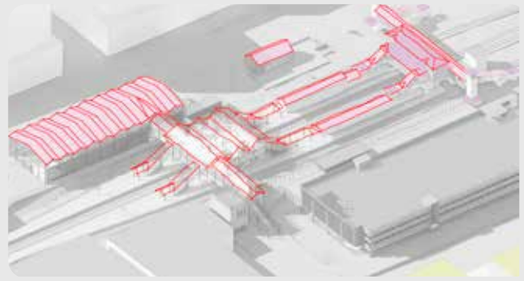


Figure 40: Roof ridge alignment in North-South axis

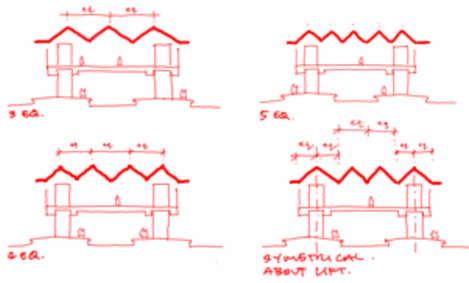


Figure 41: Roof section study

Figure 42: 3 bay study

Figure 43: 4 bay study

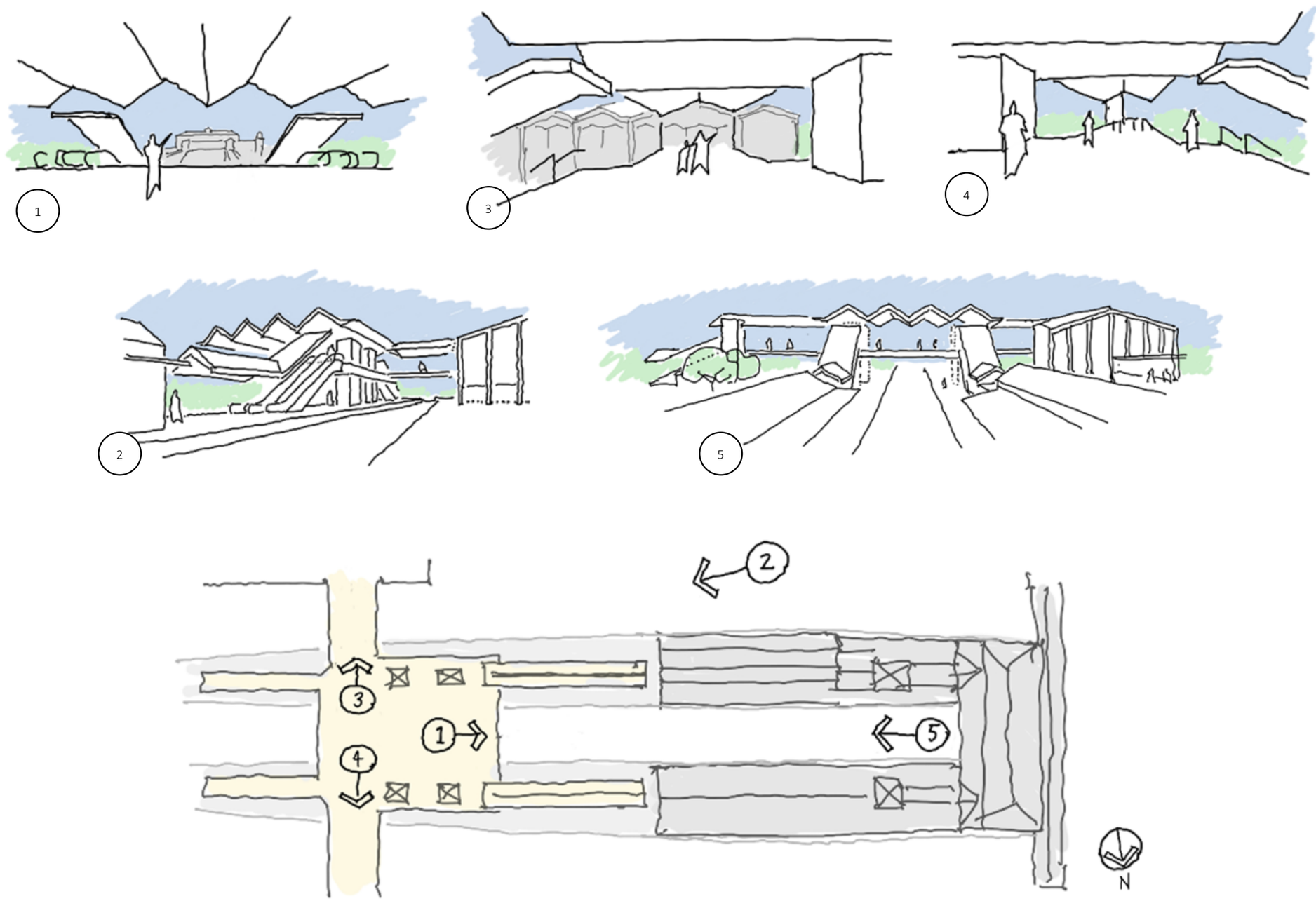


Figure 44: Perspective Sketches
Source: Architectus

5 Design of Permanent Built Elements
5.1 Vision and Objectives

Principle 5: Respond to the challenges of climate change and the impact of heat-island effect:

- Minimise material usage: e.g. avoid cladding and allow to structure be expressed.
- Circularity: apply re-usable materials.
- Maximise trees on site.

St Marys is bisected by the rail corridor, with mostly residential area to the south and to the north, Dunheved Business Park Precinct, a large industrial area.

The northern entry to St Marys station precinct is accessed from Harris street. Harris street runs parallel to the rail corridor, between the two main roads Glossop Street and Forrester Road.
The street is essentially devoid of public green, with most of the greenery growing on the industrial sites along the street.

The northern plaza will add publicly accessible green space to Harris Street and it's future communities. With a 40% tree canopy coverage, this new green infrastructure will be provided with shading and prevention of heat island effects.

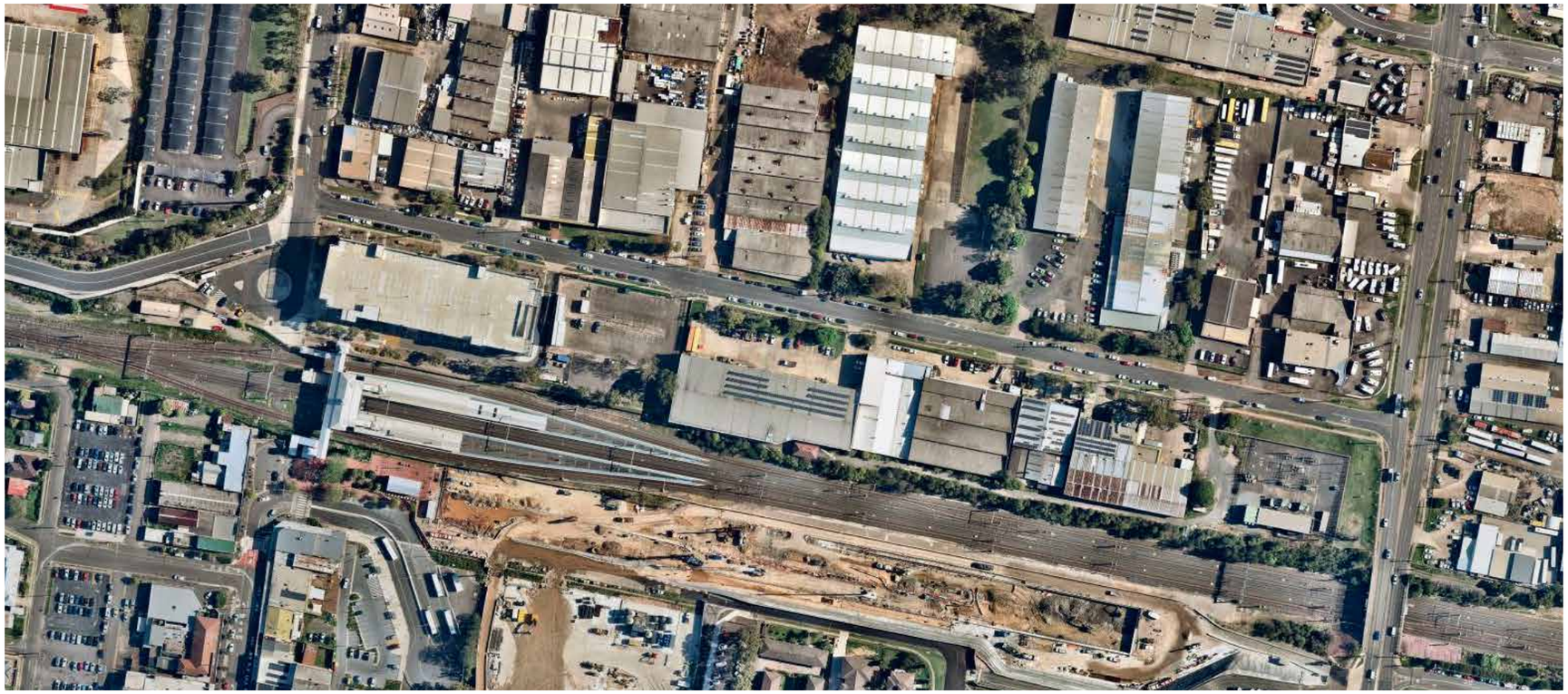


Figure 45: Aerial photograph, Harris Street, St Marys. Source: Nearmap

5 Design of Permanent Built Elements
5.1 Vision and Objectives

Reduce reuse recycle

The image on the right presents an early conceptual sketch of the section. The sketch outlines several design concepts that were put to the test in the early stages of design:

Skylights
Skylight will provide for additional daylight, views to the skies whilst performing as a tool in reducing glare.

Timber/Hybrid Structure
While it turned out not to be feasible structurally, the design team investigated the use of a (cross laminated) timber structure for the roof. Unfortunately the spans required to keep the concourse largely columns free, required a more robust approach.

General Materiality
Although the sketch implies an unfeasible timber structure for the gabled roofs, it set the tone for what is one of the main design objectives: using the structure, and often even the services, to define the architecture, thereby minimizing cladding and reducing unnecessary material / CO2.

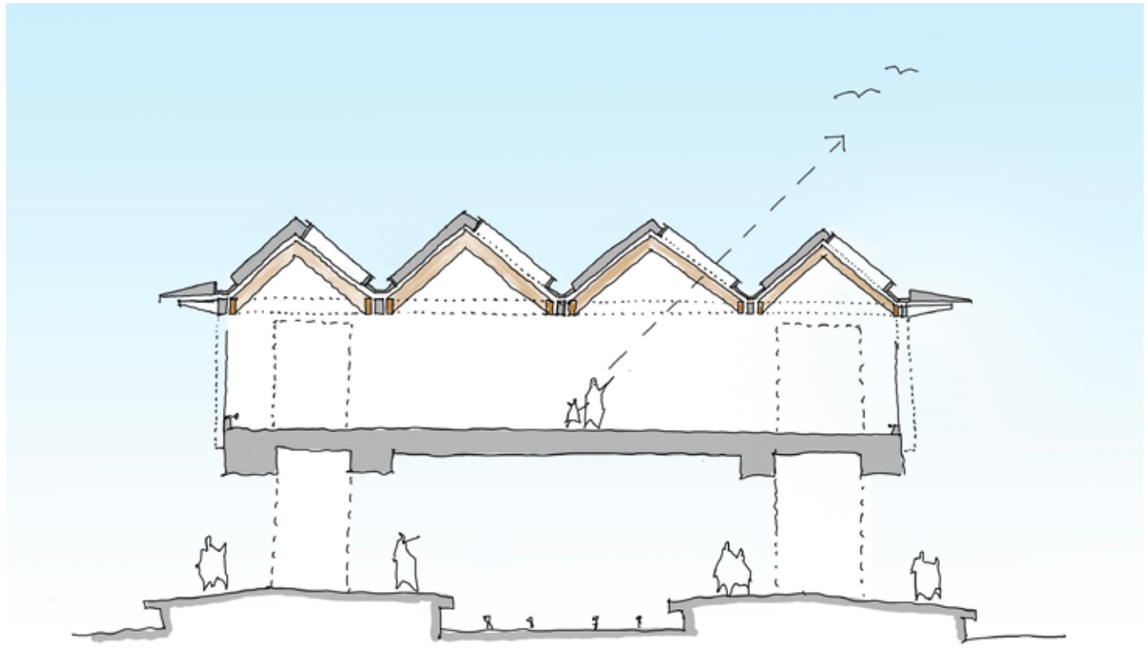


Figure 46: Early concept sketch of the concourse

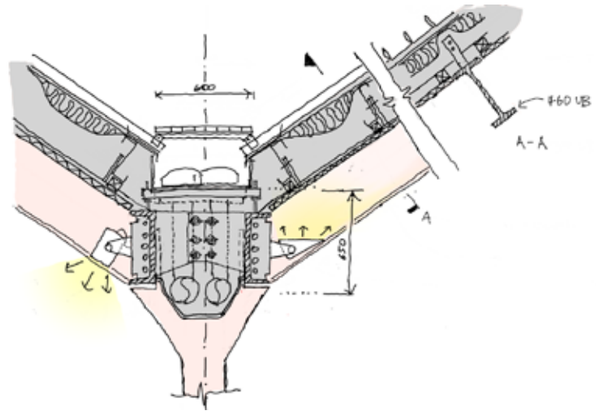


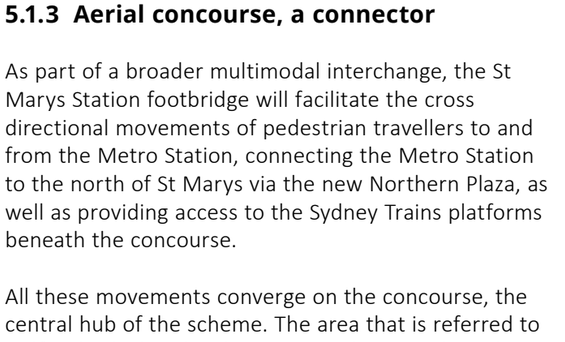
Figure 47: Early concept sketch of the column heads supporting the roof structure. The detail aims to reduce the amount of cladding, leaving the structure exposed to ‘become’ the architecture.

5.1.3 Aerial concourse, a connector

As part of a broader multimodal interchange, the St Marys Station footbridge will facilitate the cross directional movements of pedestrian travellers to and from the Metro Station, connecting the Metro Station to the north of St Marys via the new Northern Plaza, as well as providing access to the Sydney Trains platforms beneath the concourse.

All these movements converge on the concourse, the central hub of the scheme. The area that is referred to as 'footbridge' in this document is the critical north-south axis bridge between the Metro station and the Northern Plaza. This footbridge zone is bisected by the concourse.

It is at this juncture, where the Passenger Information Displays (PIDS) are strategically located. This placement ensures they are positioned precisely at the crossroads of passenger movement, optimizing their effectiveness.



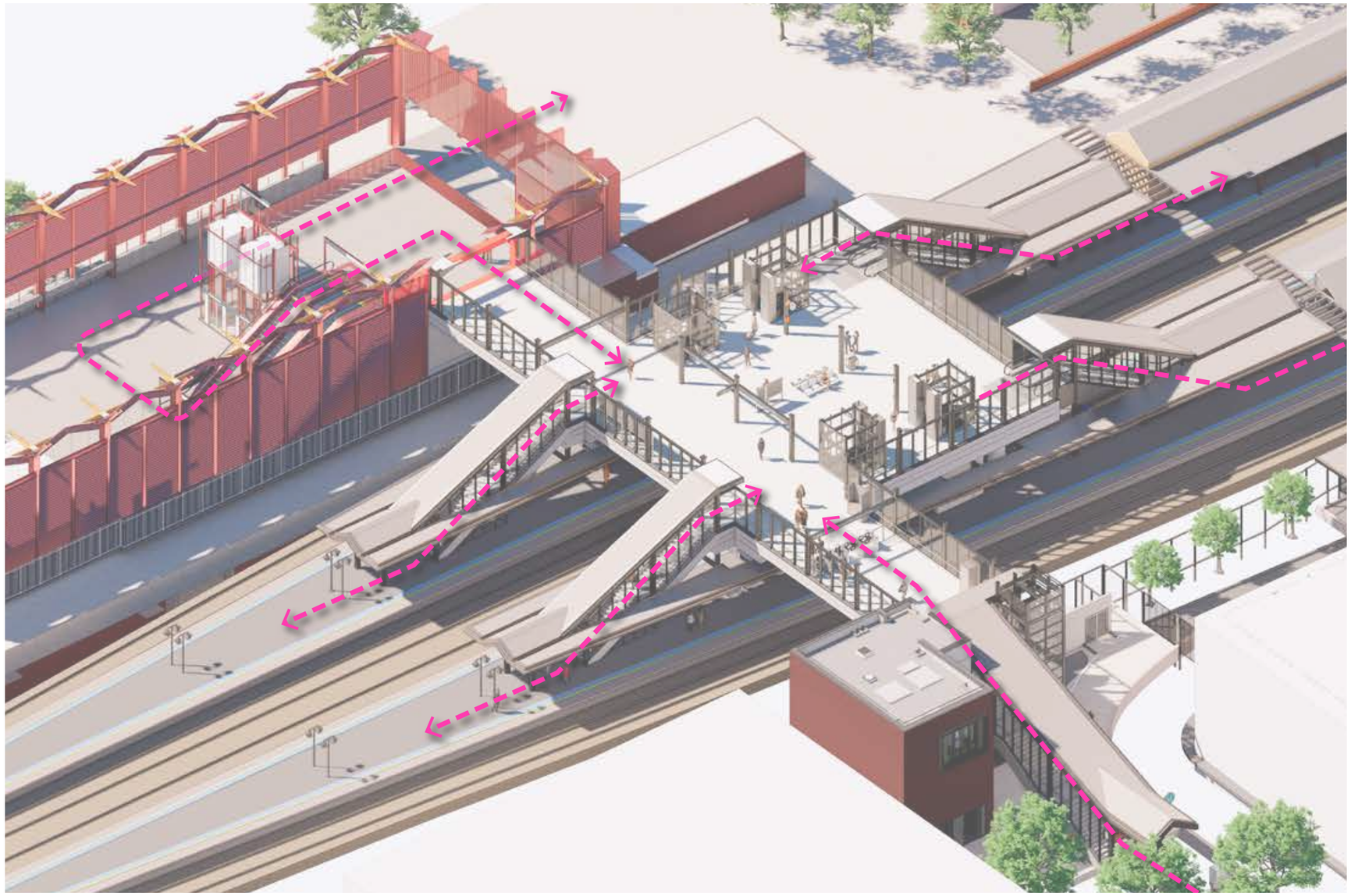


Figure 48: Exploded axonometric view showing customer movements

Source: PED Flow Diagram, Architectus

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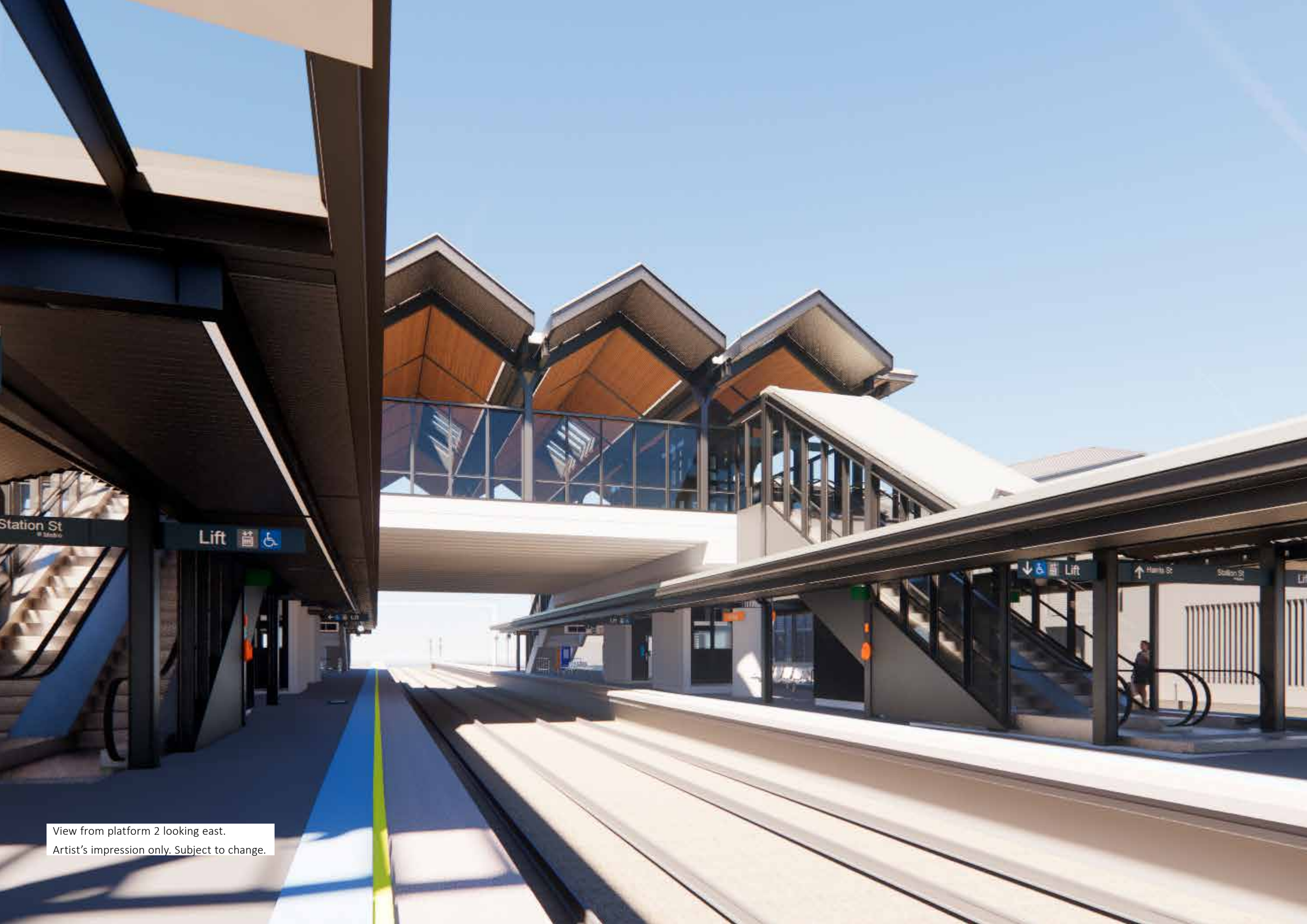


View from platform 2 looking east.
Artist’s impression only. Subject to change.

Design Summary

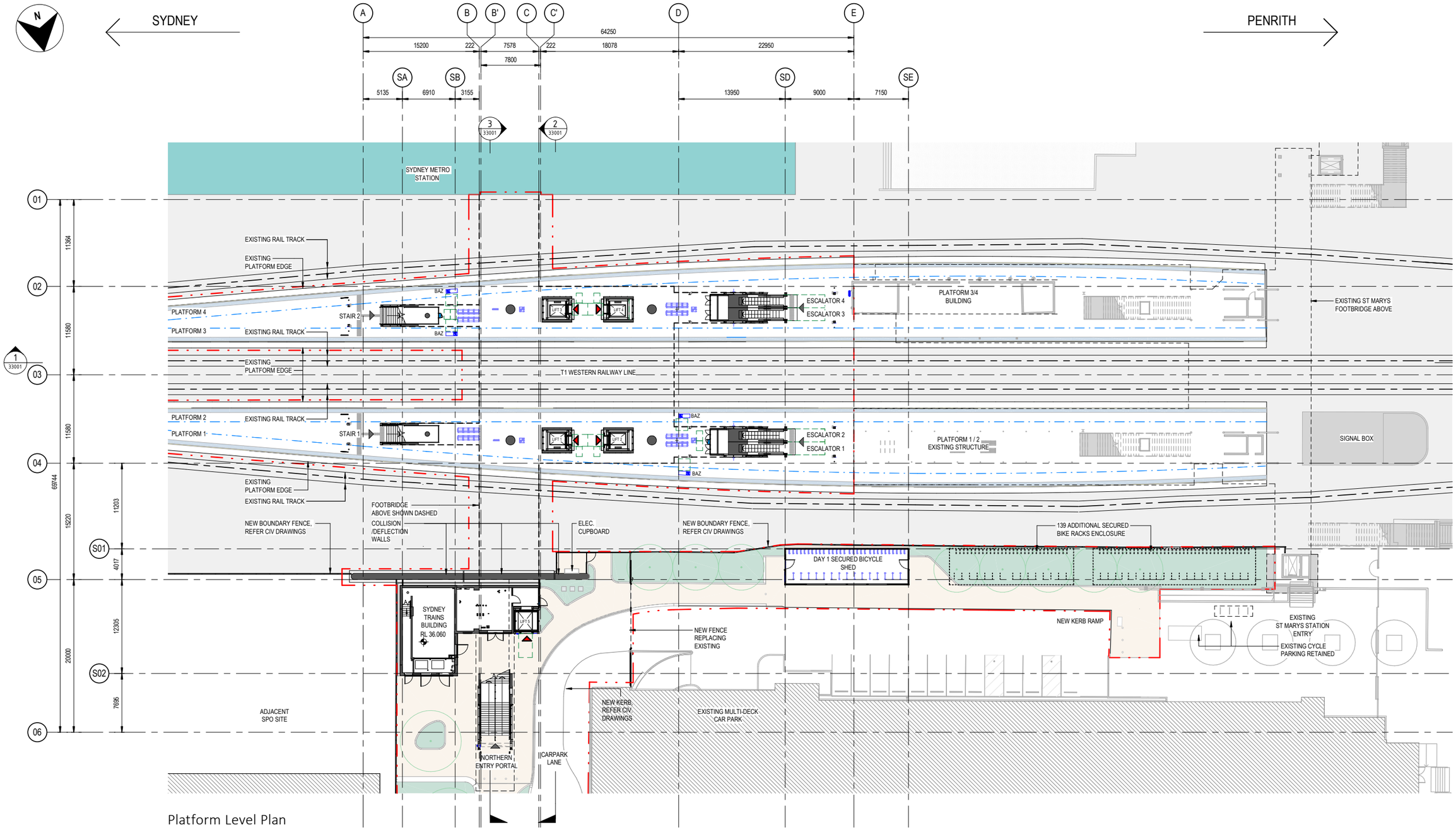
This chapter will describe the look, feel and function of the St Marys Station footbridge architecture in the built environment, and additional functional aspects such as maintenance.

Footbridge

The footbridge will be coherent as a standalone structure, one visual language has been applied consistently across all key elements that will be described in detail in the following sections:

1. The Northern Entry Portal
2. The Sydney Trains Services Building
3. The footbridge
4. The concourse
5. The stairs and canopy platforms
6. The heritage interface
7. The Sydney Metro Station interface
8. The bicycle storage

Figure 49: Site Plan axonometric view
Source: Architectus



Platform Level Plan

Source: 150511-STM-AR-M3D-00101-21011 - GA PLATFORM LEVEL PLAN, Architectus

LEGEND

- PAID CONCOURSE
- UNPAID CONCOURSE
- ADJACENT DEVELOPMENT SITE
- EXISTING MULTI-DECK CAR PARK
- EXISTING FACILITIES
- SYDNEY METRO STATION
- LIFT ENTRY
- SERVICES ENTRY / ACCESS
- CENTRE LINE TRACK
- FSM SCOPE BOUNDARY
- PLATFORM CLEARANCE ZONE
- RL / FFL
- LANDSCAPE: VEGETATION
- LANDSCAPE: PAVING 1
- LANDSCAPE: PAVING 2
- LANDSCAPE: PARKING
- LANDSCAPE: MULCH
- LANDSCAPE: TREE / PLANTING

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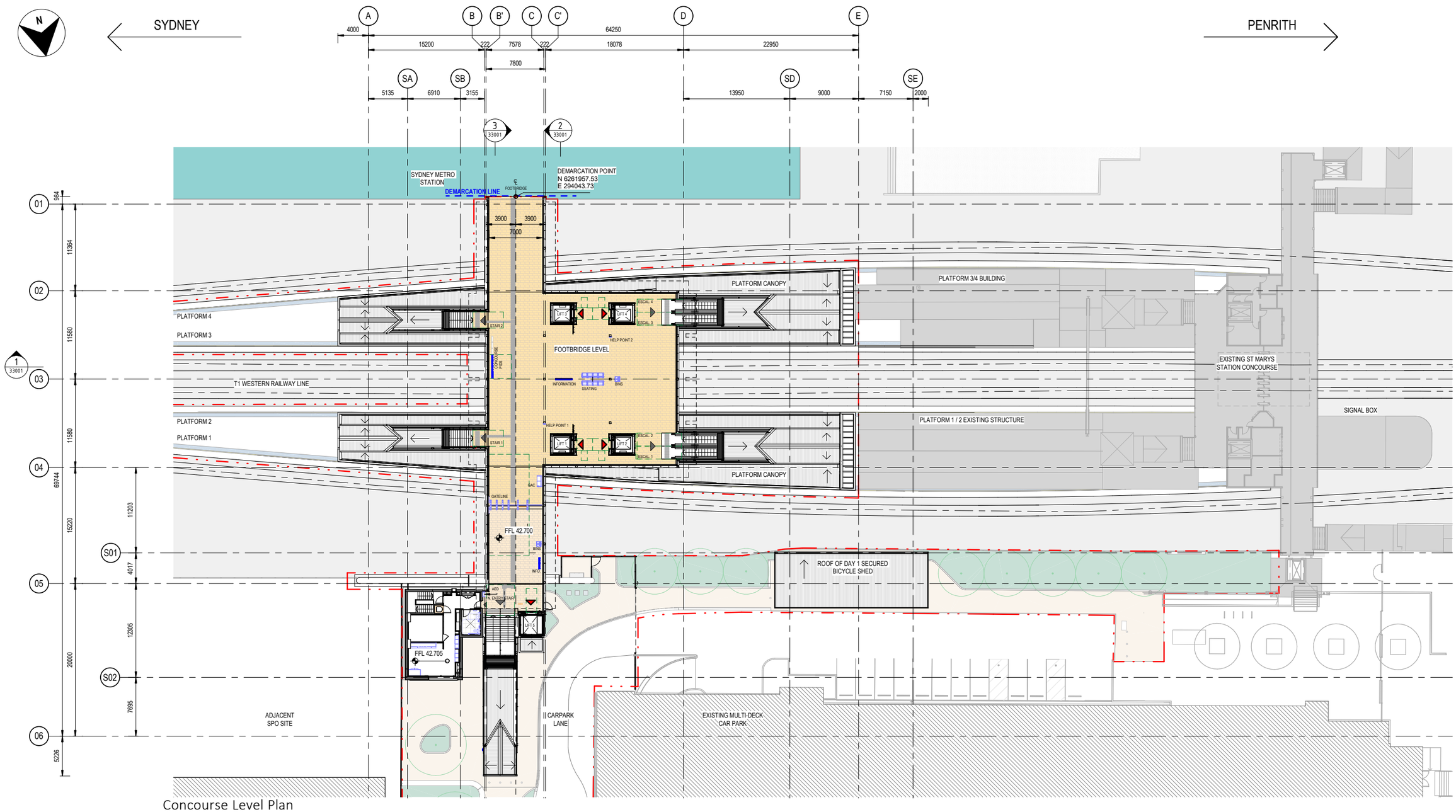
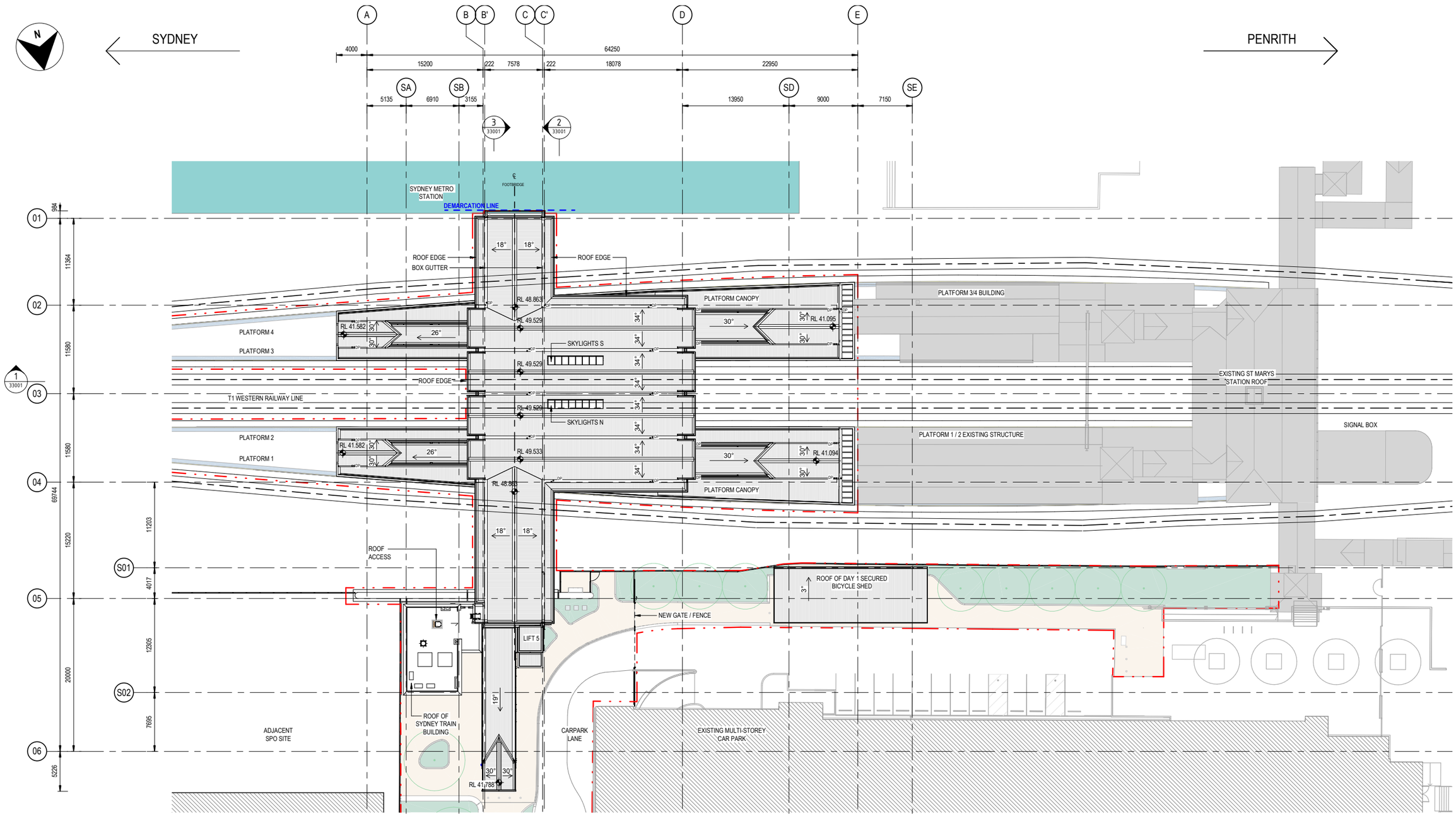


Concourse Level Plan

Source: 150511-STM-AR-M3D-00101-21031 - GA FOOTBRIDGE LEVEL PLAN, Architectus

LEGEND

- PAID CONCOURSE
- UNPAID CONCOURSE
- ADJACENT DEVELOPMENT SITE
- EXISTING MULTI-DECK CAR PARK
- EXISTING FACILITIES
- SYDNEY METRO STATION
- LIFT ENTRY
- SERVICES ENTRY / ACCESS
- CENTRE LINE TRACK
- FSM SCOPE BOUNDARY
- PLATFORM CLEARANCE ZONE
- RL / FFL
- LANDSCAPE: VEGETATION
- LANDSCAPE: PAVING 1
- LANDSCAPE: PAVING 2
- LANDSCAPE: PARKING
- LANDSCAPE: MULCH
- LANDSCAPE: TREE / PLANTIN

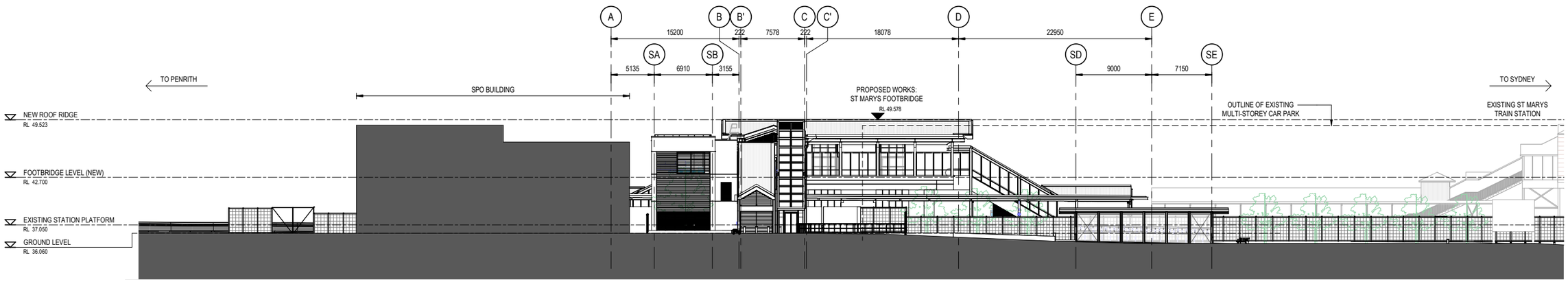


Roof Level Plan

Source: 150511-STM-AR-M3D-00101-21091 - GA ROOF LEVEL PLAN, Architectus

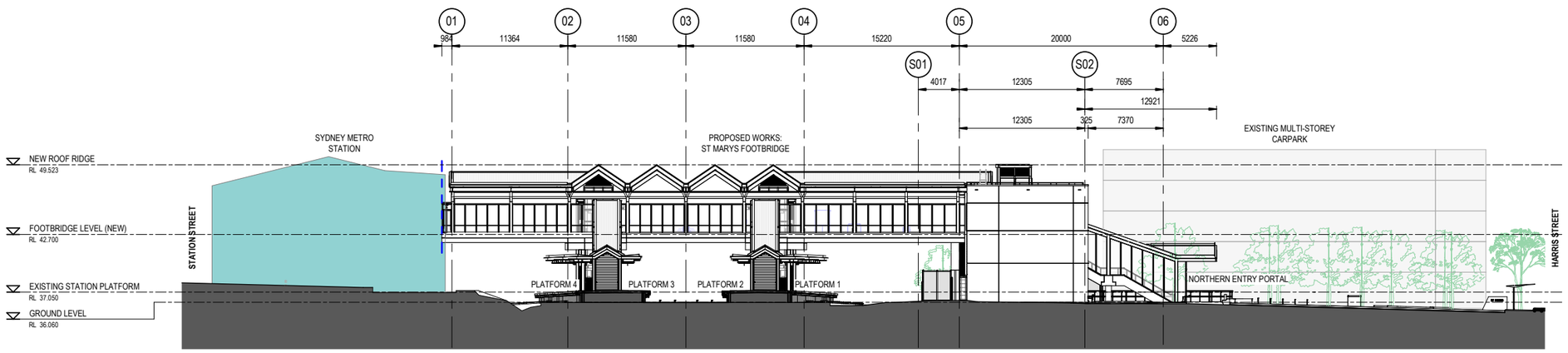
LEGEND

- PAID CONCOURSE
- UNPAID CONCOURSE
- ADJACENT DEVELOPMENT SITE
- EXISTING MULTI-DECK CAR PARK
- EXISTING FACILITIES
- SYDNEY METRO STATION
- LIFT ENTRY
- SERVICES ENTRY / ACCESS
- CENTRE LINE TRACK
- FSM SCOPE BOUNDARY
- PLATFORM CLEARANCE ZONE
- RL / FFL
- LANDSCAPE: VEGETATION
- LANDSCAPE: PAVING 1
- LANDSCAPE: PAVING 2
- LANDSCAPE: PARKING
- LANDSCAPE: MULCH
- LANDSCAPE: TREE / PLANTIN



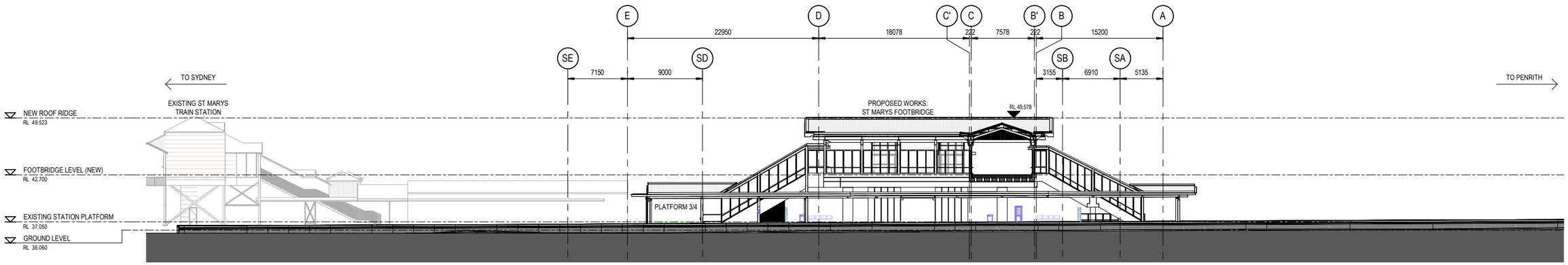
North elevation

Source: 150511-STM-AR-M3D-00101-30002 - OVERALL ELEVATIONS - SHEET 2 OF 2, Architectus



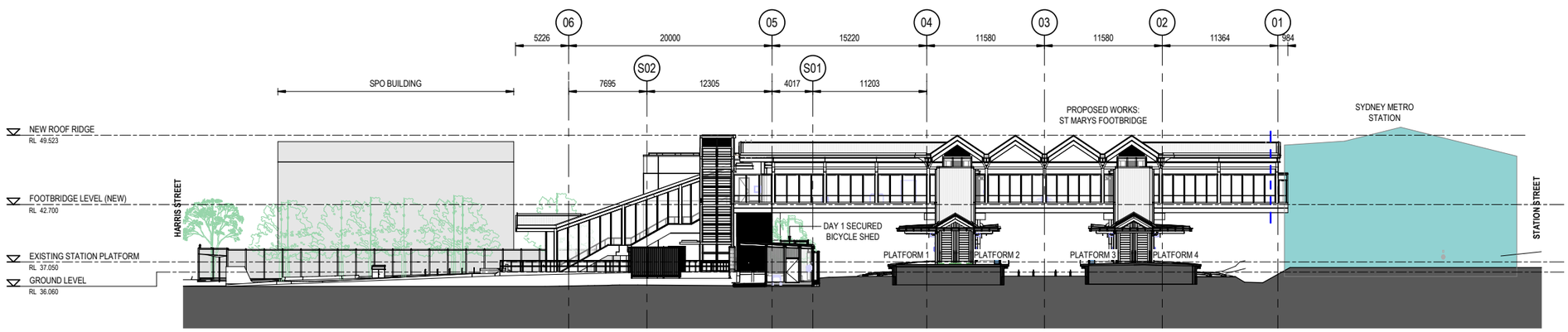
East elevation

Source: 150511-STM-AR-M3D-00101-30001 - OVERALL ELEVATIONS - SHEET 1 OF 2, Architectus



South elevation

Source: 150511-STM-AR-M3D-00101-30002 - OVERALL ELEVATIONS - SHEET 2 OF 2, Architectus



West elevation

Source: 150511-STM-AR-M3D-00101-30001 - OVERALL ELEVATIONS - SHEET 1 OF 2, Architectus

Northern entry portal, with Sydney Trains Building on the left and Northern lift on the right.
Artist’s impression only. Subject to change.

5 Design of Permanent Built Elements
5.3 Northern Entry Portal

Northern Entry Portal

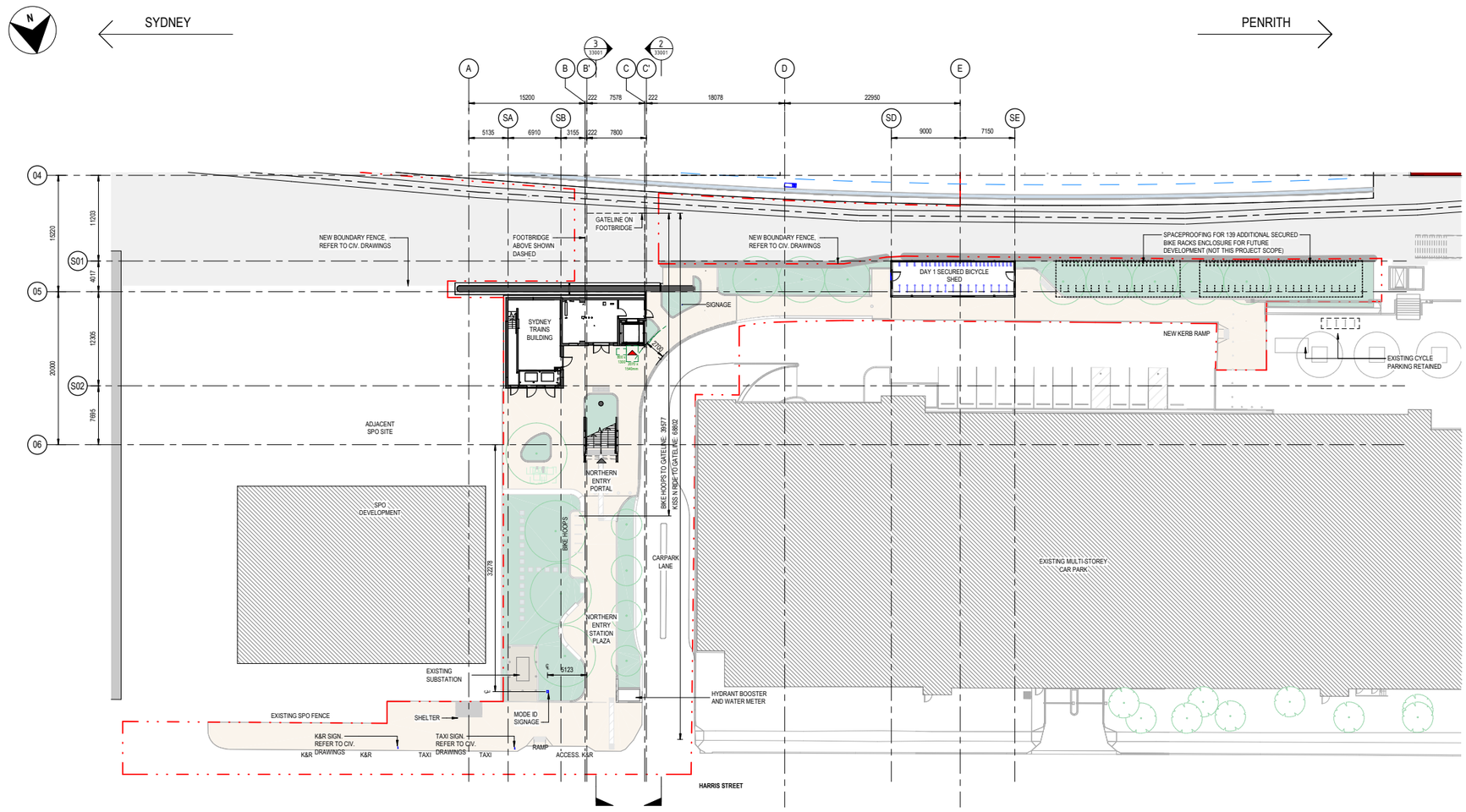
The Northern Entry Portal is the main entrance to the St Marys Station footbridge. A grand 3.6m wide stair cascades down from the footbridge to plaza level. The balustrades have full height glass to provide an inviting exterior, protect the commuter and aid in orientation. The roof of the stair opens as a large inviting gable condition, forming a striking presence at Northern Plaza level. The gable flattens as it moves upward, becoming more downplayed at higher level.

Next to the stairs is the northern lift, designated as Lift 5. This lift is designed to offer travellers an accessible vertical transportation option to and from the concourse. While waiting for the lift, travellers can find shelter under the awning positioned above the lift doors.

At street level, seating has been placed in the undercroft area of the stairs, which provides visitors with a shaded, sheltered place to rest or wait for the lift.

Passage through the undercroft area has been maintained to provide direct access between the adjacent site development and the Western Pathway along the multi-storey car park.

This part of the plaza is fronted by the Sydney Trains Building's ground floor. Although this floor is mostly occupied by service rooms for electrical or communication equipment, the greatest care has been taken into making certain this facade looks homogenous and devoid of clutter.



Northern Entry portal Area with ground level Sydney Trains Building
Source: 150511-STM-AR-M3D-00101 - Sheet - 21111 - GA NORTHERN PLAZA, Architectus

Footbridge level looking south towards the gateline and Metro Station beyond.
Artist’s impression only. Subject to change.

Footbridge

The footbridge is the main connecting space between the Northern Plaza, the concourse and the Sydney Metro Station St Marys Metro Station. At the juncture where the footbridge intersects the concourse, the Passenger Information Displays (PIDS) are strategically located. This placement ensures they are positioned precisely at the crossroads of passenger movement, optimizing their effectiveness.

Both stairs to the platform are adjacent to the PID zone. Travellers can make their way down to platform under stair canopies similar to that of the northern plaza. The footbridge will have a sustainable, durable, terrazzo tile floor, similar to the Terrazzo in the Sydney Metro Station development.

A glazed balustrade, extending up to a height of 3 meters, serves the dual purpose of ensuring fall protection for travellers and offering commuters panoramic views to help orient themselves. Above the balustrade, an air gap facilitates high-level cross-flow ventilation throughout the footbridge.

The footbridge ceiling will be covered with aluminium battens featuring a timber-like finish. The battens provide the ceiling not only with an aesthetic finish, but also a functional one as its backing performs as an acoustic damper. The ceiling will obscure the many services running through the void ceiling space. The battens replicate the look of the timber battens used in the Metro building, unifying the projects.

The battens will be framed by the exposed main roof structure. The facade columns will taper into a V-shaped columnhead, enabling unobstructed passage for the roof downpipes at ceiling level. To neatly cap off the downpipes, aluminium hoods will be installed to obscure them from view.

Figure 50: Sectional perspective of footbridge
Source: Architectus

* Glare impact report pending

Concourse looking west along the central space.
Artist's impression only. Subject to change.

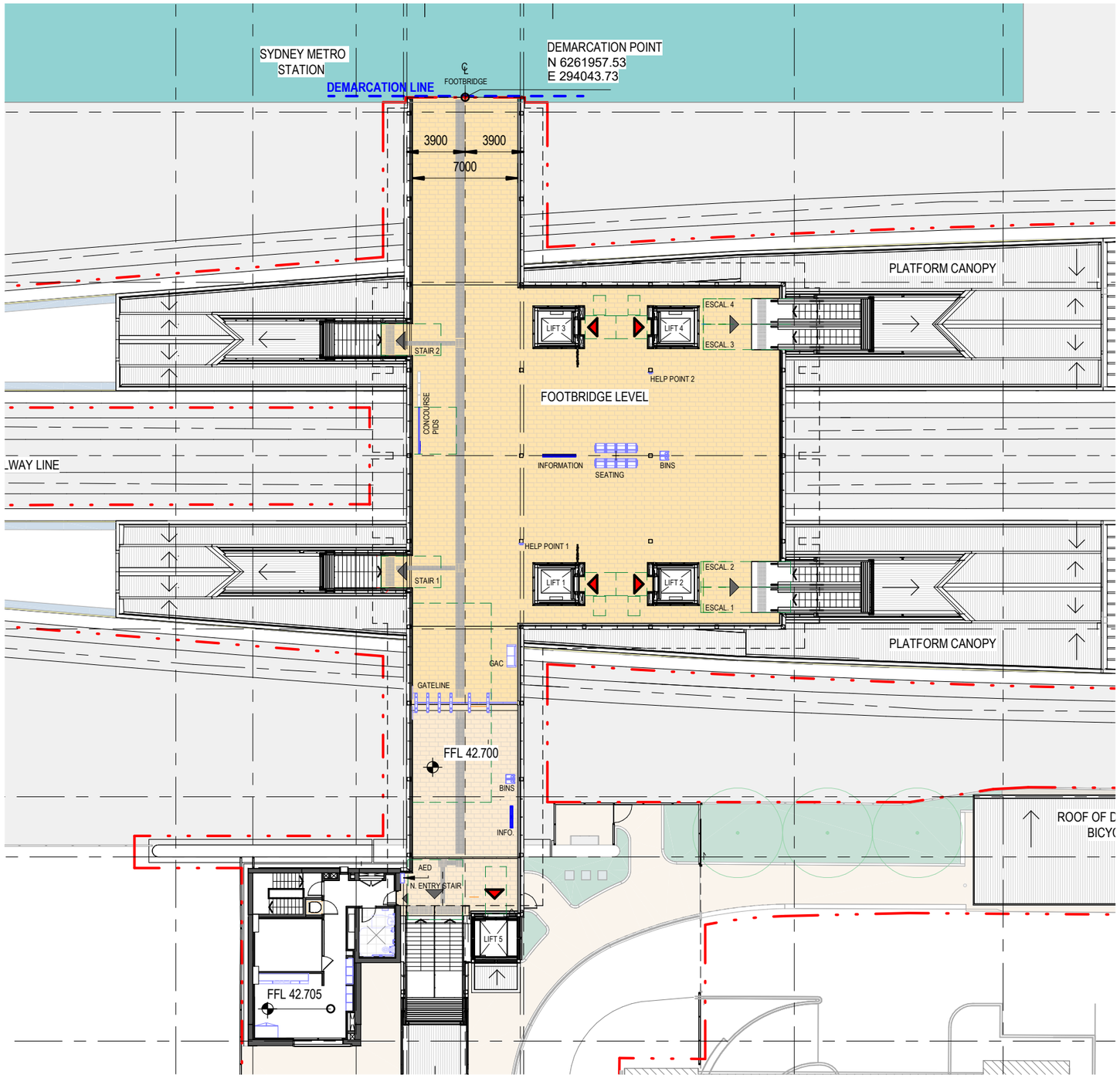
Concourse

This central space is the hub of the scheme, where all directional traffic converges and finds their way. The concourse is the focal point for navigating to and from the platforms, facilitated by two stairs adjacent to the PIDS, four escalators, or four 17-person lifts (two per platform).

This concourse is enhanced by the two skylights above. The skylight is positioned in the heart of the concourse, bringing in natural light to where it is most effective in preventing glare. A ceramic linear frit will mitigate the visible light transmittance and overheating that comes with it.

The materials scheme here is identical to the footbridge, but to articulate the change in space and hierarchy the directionality of the ceiling and floor has been rotated ninety degrees.

The roof is supported and framed by the structure. Here too, the columns taper into a V-shaped column head, enabling unobstructed passage for the roof downpipes at ceiling level. To neatly cap off the downpipes, aluminium hoods will be installed to obscure them from view.

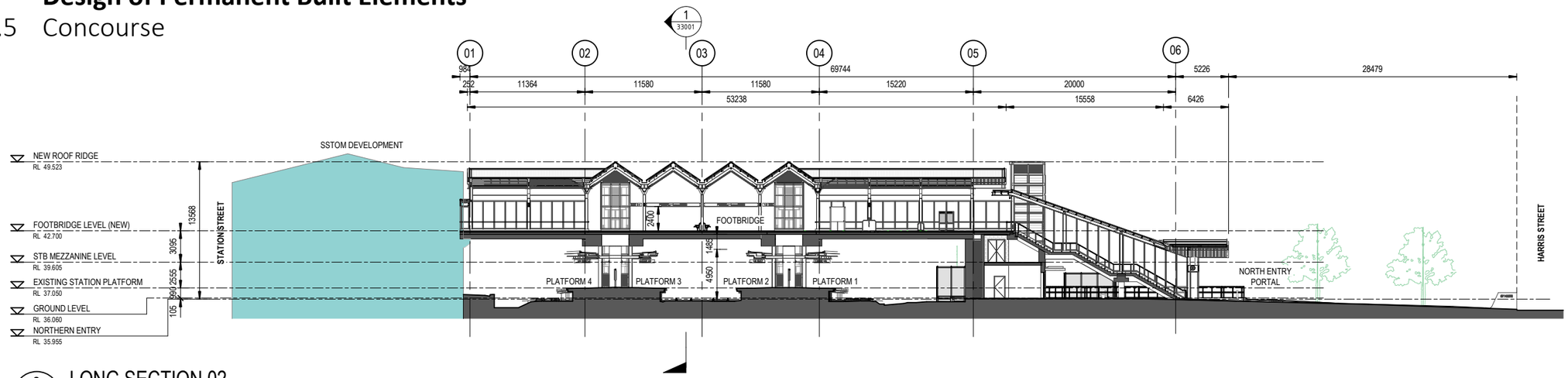


Footbridge Detail Plan

Source: 150511-STM-AR-M3D-00101-21031 - GA FOOTBRIDGE LEVEL PLAN, Architectus

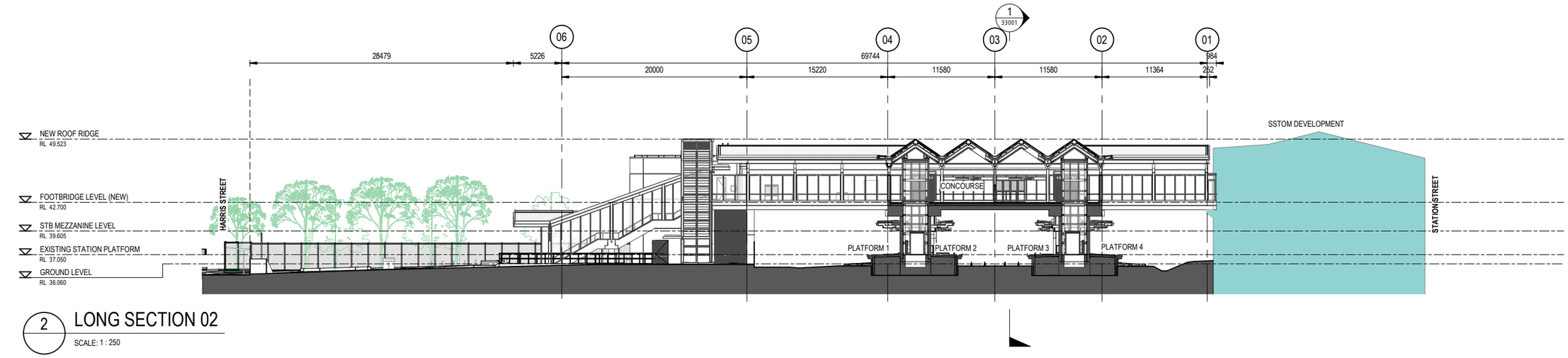
5 Design of Permanent Built Elements

5.5 Concourse



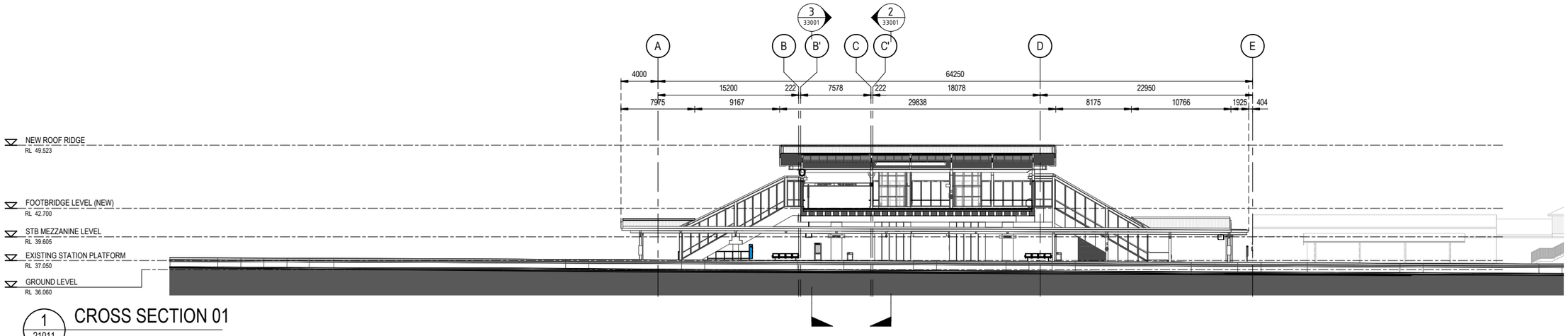
3 / 21011 LONG SECTION 02

SCALE: 1 : 250



2 / 21011 LONG SECTION 02

SCALE: 1 : 250



1 / 21011 CROSS SECTION 01

SCALE: 1 : 250

Source: 150511-STM-AR-M3D-00101 - Sheet - 33001 - OVERALL SECTIONS, Architectus

Figure 51: Perspective of concourse

Source: Architectus

Perspective view looking at stair on platform 1/2.
Artist's impression only. Subject to change.

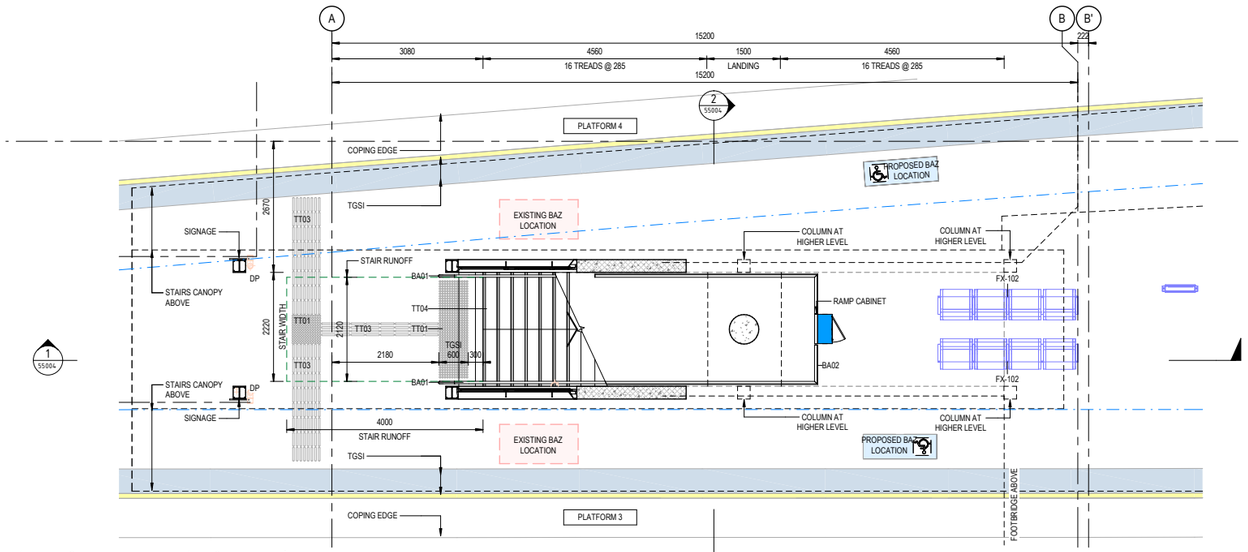
5 Design of Permanent Built Elements
5.6 The Stairs and Platform Canopies

The stairs and platform canopies

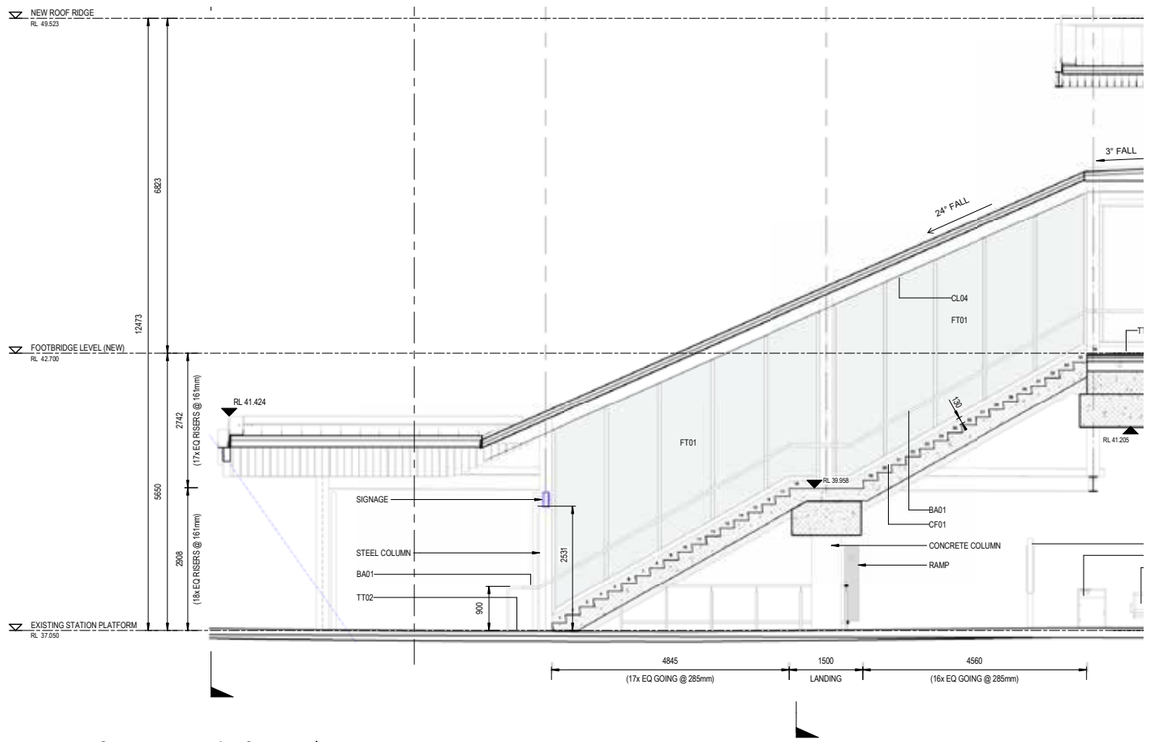
Two concrete staircases connect the concourse to the platforms. These staircases are equipped with 3-meter-high glass balustrades, ensuring safety while preserving clear views of the path ahead. Like the roof above the Northern Entry Portal, these staircases feature gabled roofs at platform level that diminish as one ascends towards the concourse level. The flat roof above the stairs is reminiscent of the existing St Marys stairs to the platforms.

Back on the platform, the canopy at the stair landing comprises three components: the central gabled roof, which covers the stairs and landing, and two cranked wings that extend over the platform. These wings are integral to the main platform structure and run continuously between the stairs and escalators. They house various platform services, including lighting, cameras, speakers, and PIDS. These cranked wings are detailed to reduce the visual bulk of the structure and express the horizontally of the platforms.

The soffit of the canopy is finished with aluminium panels as a modern interpretation of the Tongue-and-Groove timber panelling, similar to what can be found in the heritage buildings across the precinct.

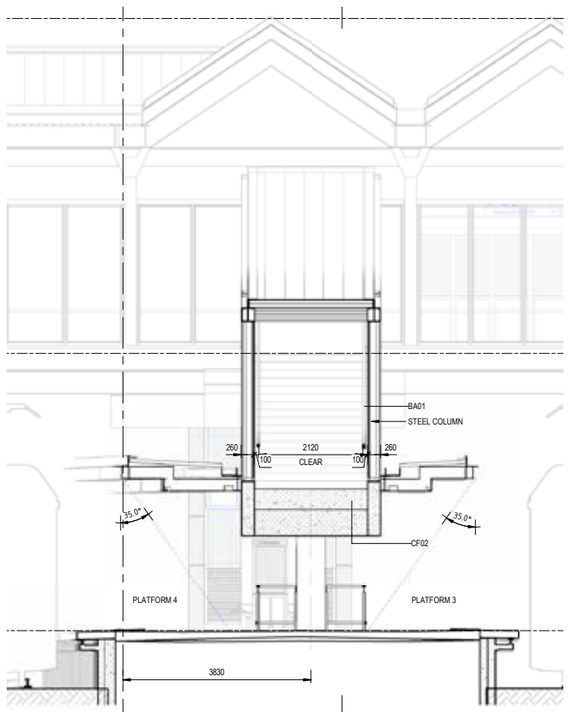


Plan of stair 2 to platform 3/4



Section of stair 2 to platform 3/4

Source: Architectus



Section of stair 2 to platform 3/4

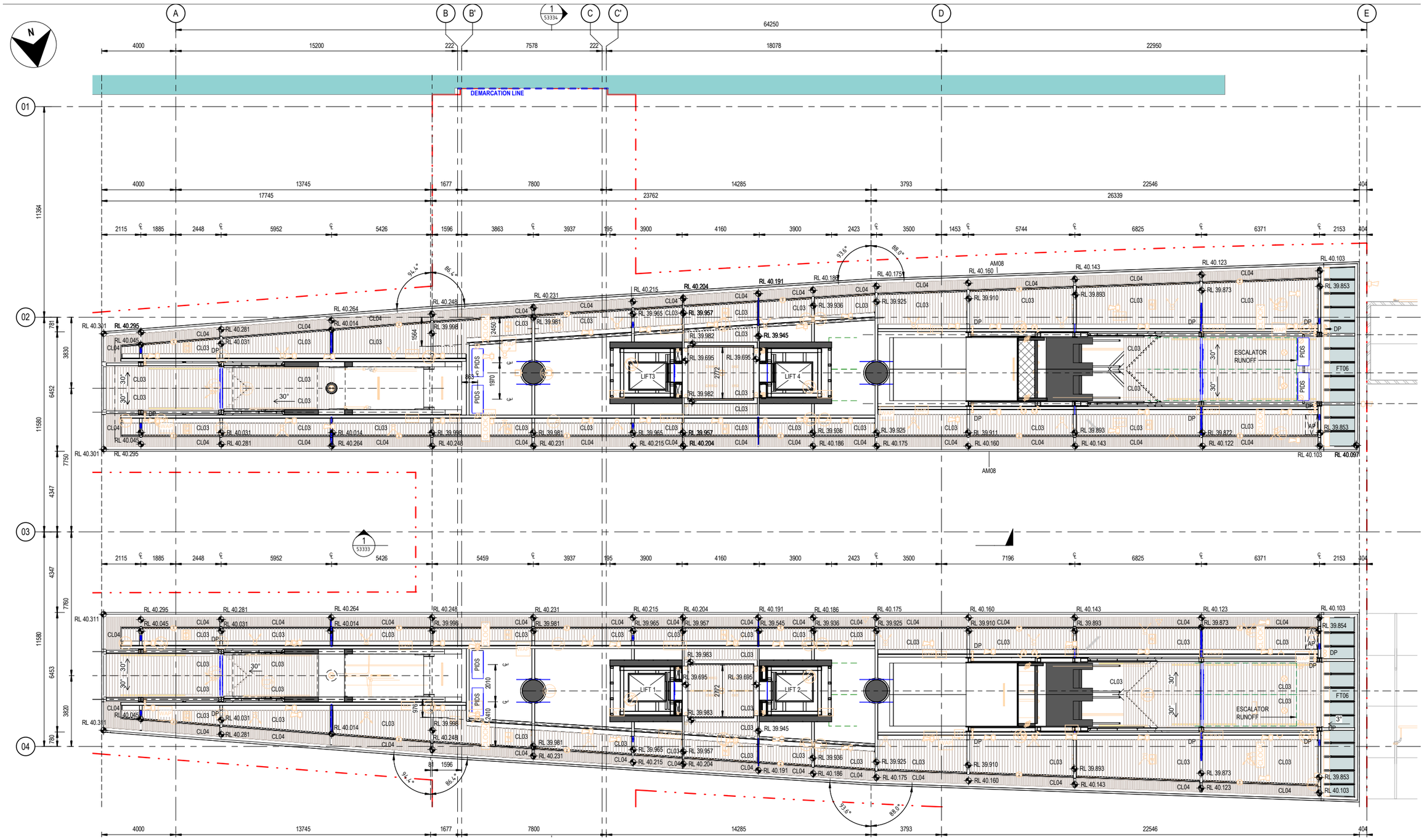
Figure 52: Section of stair 2 to platform 3/4
Source: Architectus

Figure 53: Section of stair 2 to platform 3/4
Source: Architectus

View from platform 3 looking west.
Artist’s impression only. Subject to change.

5 Design of Permanent Built Elements

5.6 The Stairs and Platform Canopies



Reflected Ceiling Plan of the platform canopy

Source: 150511-STM-AR-M3D-00101-24011 - REFLECTED CEILING PLAN - PLATFORM LEVEL PLAN SHEET 1 OF 2, Architectus

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View from platform 2 looking at platform 3/4 at escalator landing and the Heritage Interface.
Artist’s impression only. Subject to change.

5 Design of Permanent Built Elements
5.7 Heritage Interface

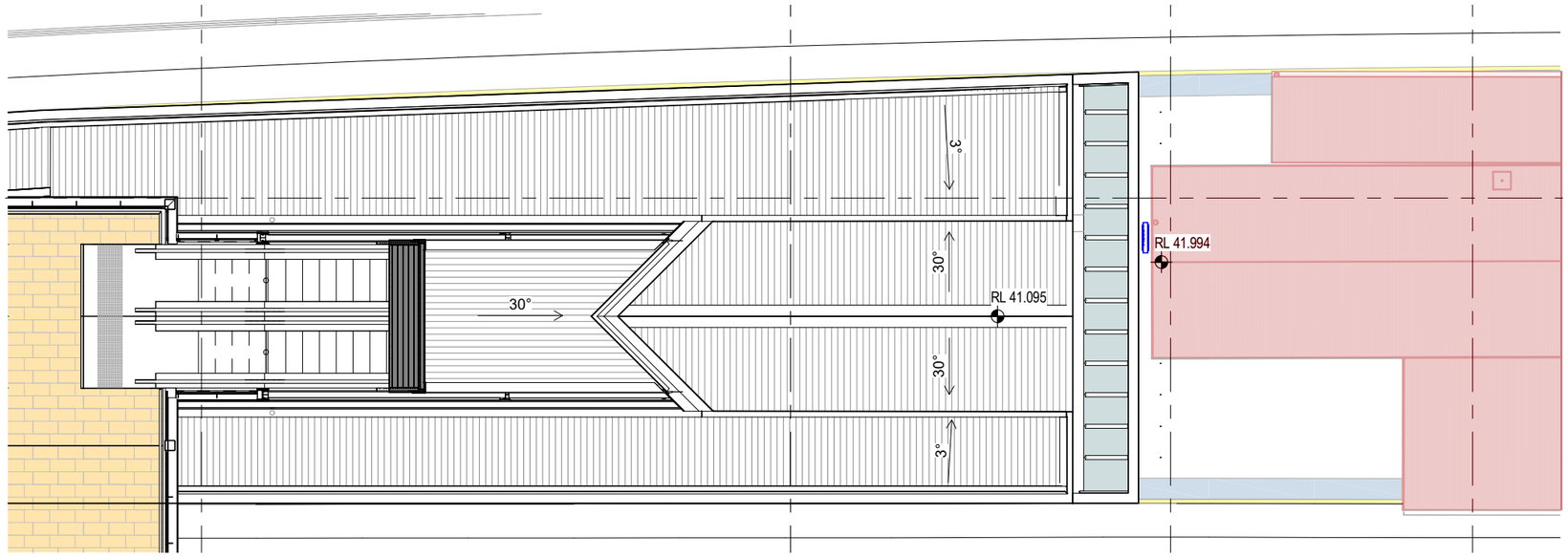
The Heritage Interface

The platform canopy is an extension of the existing roof types and profiles that inform the expression of the St Marys Station footbridge canopy.

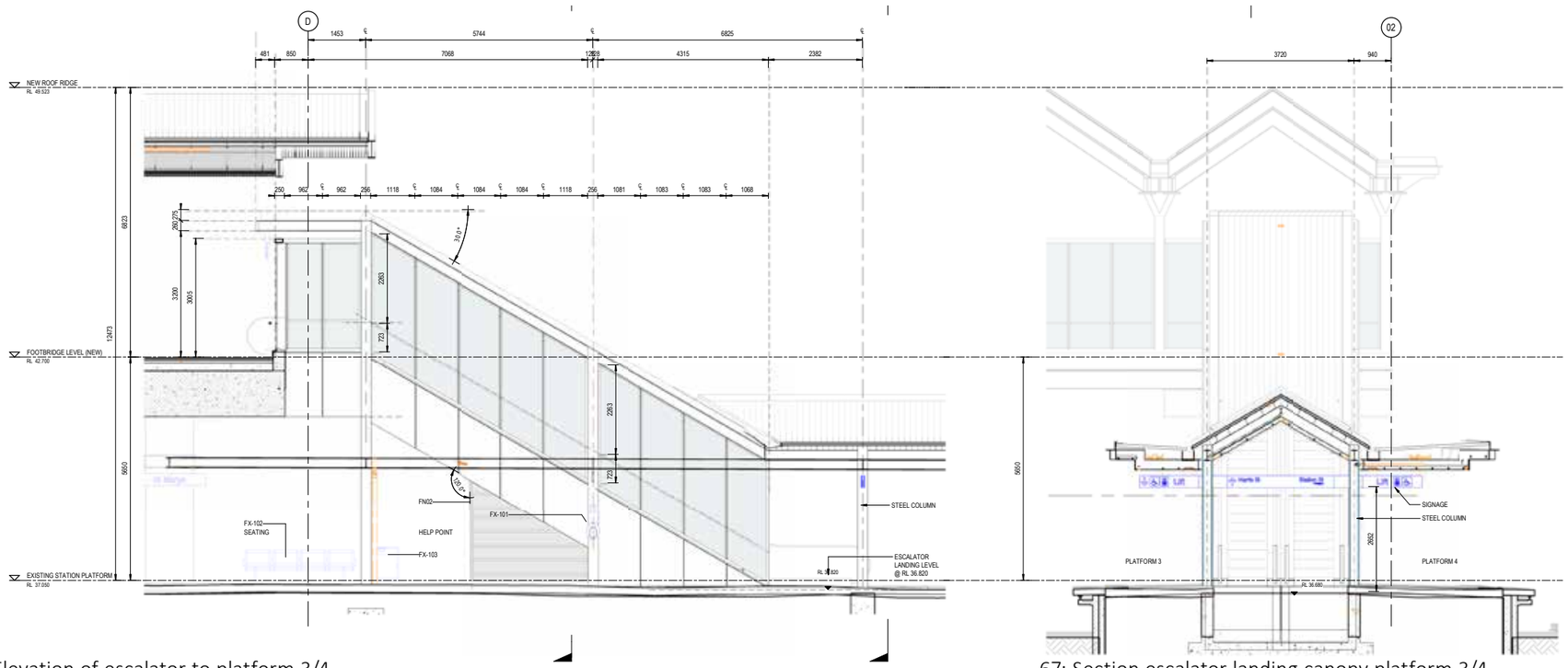
At the stairs and escalator landings, the design introduces a gabled roof profile over the central section of the platform canopy. This not only achieves a harmonious coexistence with both old and new elements but also simplifies the architectural complexity within the precinct.

Where the platform canopy meets the heritage building, the Heritage Interface, The Heritage Building on Platform 3 / 4 forms quite a challenging design exercise with many different viewpoints on what is the correct outcome. The design at PDR aims to satisfy all points of view.

In practical terms, the interface in question is the 2.3 meter glazed canopy that separates the heritage building from the St Marys Station footbridge. This glazed area is integral to the design; in conjunction with the open ended gable it allows visual access to the heritage listed gabled façade, and its decorative air vents. In accordance with the project heritage consultant's advice, the glazed awning has been designed to be subservient to the heritage building, through its transparency, minimum height and slim buildup.



Roof of escalator to platfrom 3/4



Elevation of escalator to platform 3/4

67: Section escalator landing canopy platform 3/4

Source: 150511-STM-AR-M3D-00101-55403 - VERTICAL TRANSPORT - PLATFORM ESCALATOR ELEVATIONS, Architectus

View from the Footbridge looking at the Sydney Metro Station Interface.
Artist’s impression only. Subject to change.

The Sydney Metro Station Interface

Arguably the most critical interface of the project, the Sydney Metro Station interface is where the St Marys Station footbridge and the Metro building (Sydney Metro Station building) meet to provide commuters with seamless passage between the two buildings to reach their desired modes of transport.

Through collaboration of the design teams overseeing the St Marys Station footbridge and Sydney Metro Station projects, every effort was made to ensure that both projects' architectures harmonise and offer the customer a unified, user-friendly experience.

However, due to their distinct timelines and evolving design trajectories, the geometries at the interface did not perfectly align. This is most notable where the roofs of the two structures meet. The ridge line at the gabled roof of the STOMM building is offset from the St Marys Station footbridge gabled ridge line.

The design mitigates the visual impact of this misalignment by implementing a lower height passage. Using a carefully designed dropdown bulkhead, the design controls the aperture and obscures the non-aligned roof geometries.

Beyond the bulkhead, inside the passage, the interface is a nearly completely glazed element that creates a subtle break between the structures.

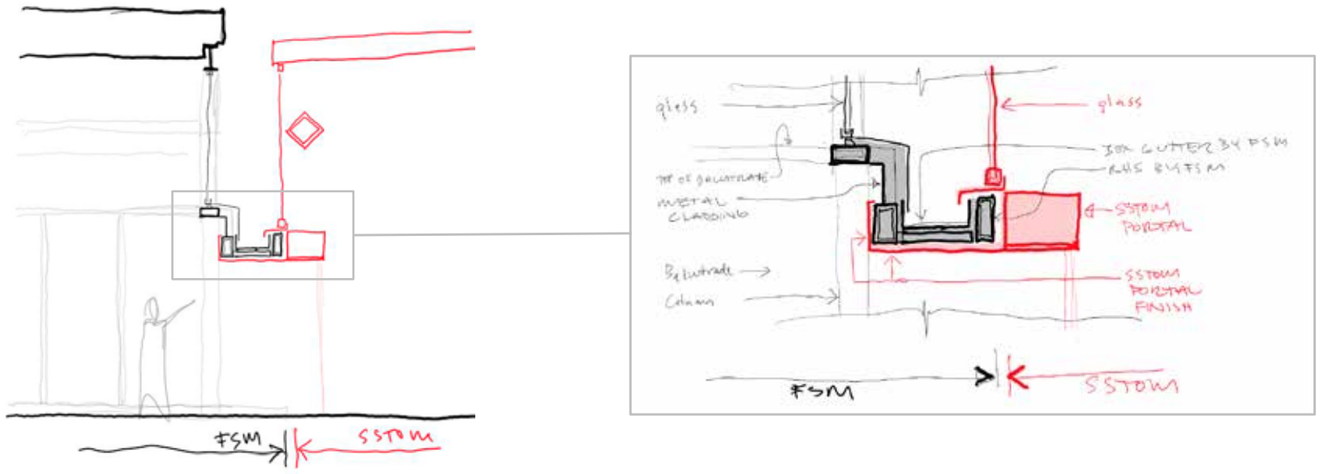


Figure 54: Concept sketches of the Sydney Metro Station Interface
Source: Architectus

Figure 55: View from platform

Northern Plaza with Northern Entry Portal.
Artist’s impression only. Subject to change.

Sydney Trains Services Building

The Sydney Trains building harbours the services, storage, and staff office for the St Marys Station footbridge and station. The main service rooms are at ground level: comms, the comms air conditioner units, the electrical room that houses the transformer and a fire control centre.

The mezzanine level is mostly storage. It is accessed from the lift, which will be keyed to this level to ensure security. This level will provide room for two general storage room, garbage bin storage and cleaning facilities, and a cleaning machine room.

The upper level will be accessed from the footbridge. This level will provide the Sydney trains staff with an accessible toilet, a meeting room and an office area with kitchenette and first aid. Large generous windows will flood this level with light and views to the North and South.

Through a door on the office level a ladder can be accessed that provides maintenance staff passage to the roof, where additional equipment is placed.

Facade

The Sydney Trains Building's main facade is made of precast concrete panels with a brick finish, set into the concrete. By setting the brick into the concrete enormous amount of material is saved, while achieving the same visual result.

The brick used will be similar, if not the same, as the brick used on the Sydney Metro Station buildings bike shed adjacent to their main entry. This will allow the two similarly finished buildings to bookend the site and unify the two projects, while the use of brick will tie in with the existing heritage buildings on site.

The section of the services building that connects to the footbridge features a concrete exterior. This intentional use of similar materials enables a fusion between the two structures, allowing the footbridge and the services building to blend seamlessly together. Moreover, the contrast in materiality not only facilitates this merging effect but also contributes to minimizing the visual impact of the Sydney Trains Building, reducing its perceived scale.

The external concrete walls will be articulated with rebates, that are also applied to hide the joints between the concrete panels and the formwork.

The Sydney Trains Office

Inside the Sydney Trains office enjoys modest, sustainable finishes. The interior palette is light coloured to enhance a sense of calm, away from the bustling noisy station. The walls are light-coloured plasterboard, and the main floor is finished with a light grey vinyl. The meeting room has a heavy-duty carpet floor that enhances the acoustic quality. Both ceilings to the office and the meeting room have a perforated acoustic plasterboard ceiling. The toilet has a tile finish throughout with white for the walls and a concrete look for the floor.

Figure 56: 3D section of the Sydney Train Building
Source: Architectus

Perspective of bicycle storage showing the western facade looking east.
Artist's impression only. Subject to change.

The bicycle storage

The day one secured bicycle storage facility will provide bicycle parking for 60 bicycles (an additional 10 bicycle parking spaces are provided via bike hoops located along the northern entry pathway). Cyclists can access this facility from two opposing entrances situated at the eastern and western facades. Inside, there are 30 floor-mounted bicycle hoops and 30 vertically placed racks on the southern wall.

The entry doors are strategically positioned away from the pavement, nestled within niches that are defined by landscaped features, framed by raised concrete edges.

This storage facility follows the architectural theme of the St Marys Station footbridge, characterized by a functional structural grid supporting a cantilevering roof structure, ensuring protection from the weather for users. In the open spaces between the structural elements, secure mesh features enhance safety and security while still allowing for views and ventilation within the storage area.

Along the bottom of the envelope, a concrete hob is placed that aids to obscure the slight differences in level and finishes between the inside and outside. It also gives a subtle but refined nod to the landscape scheme, that applies a similar upstand to frame the landscape.

Figure 57: Perspective of bicycle storage
Source: Architectus

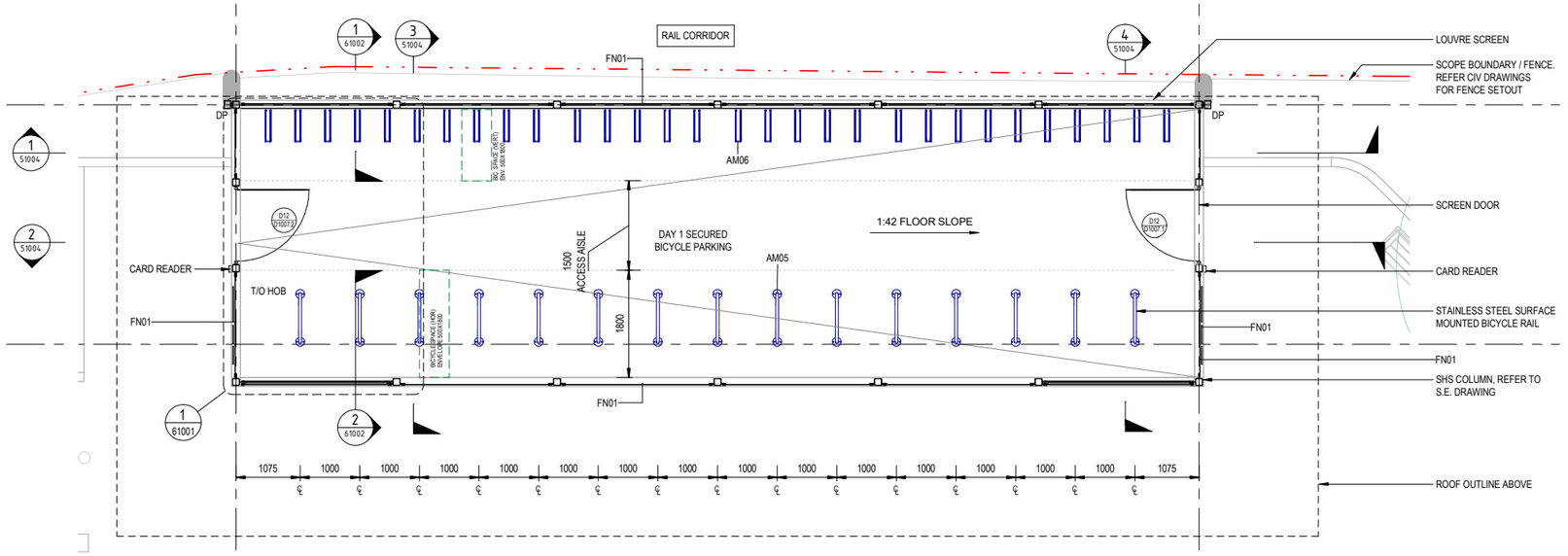
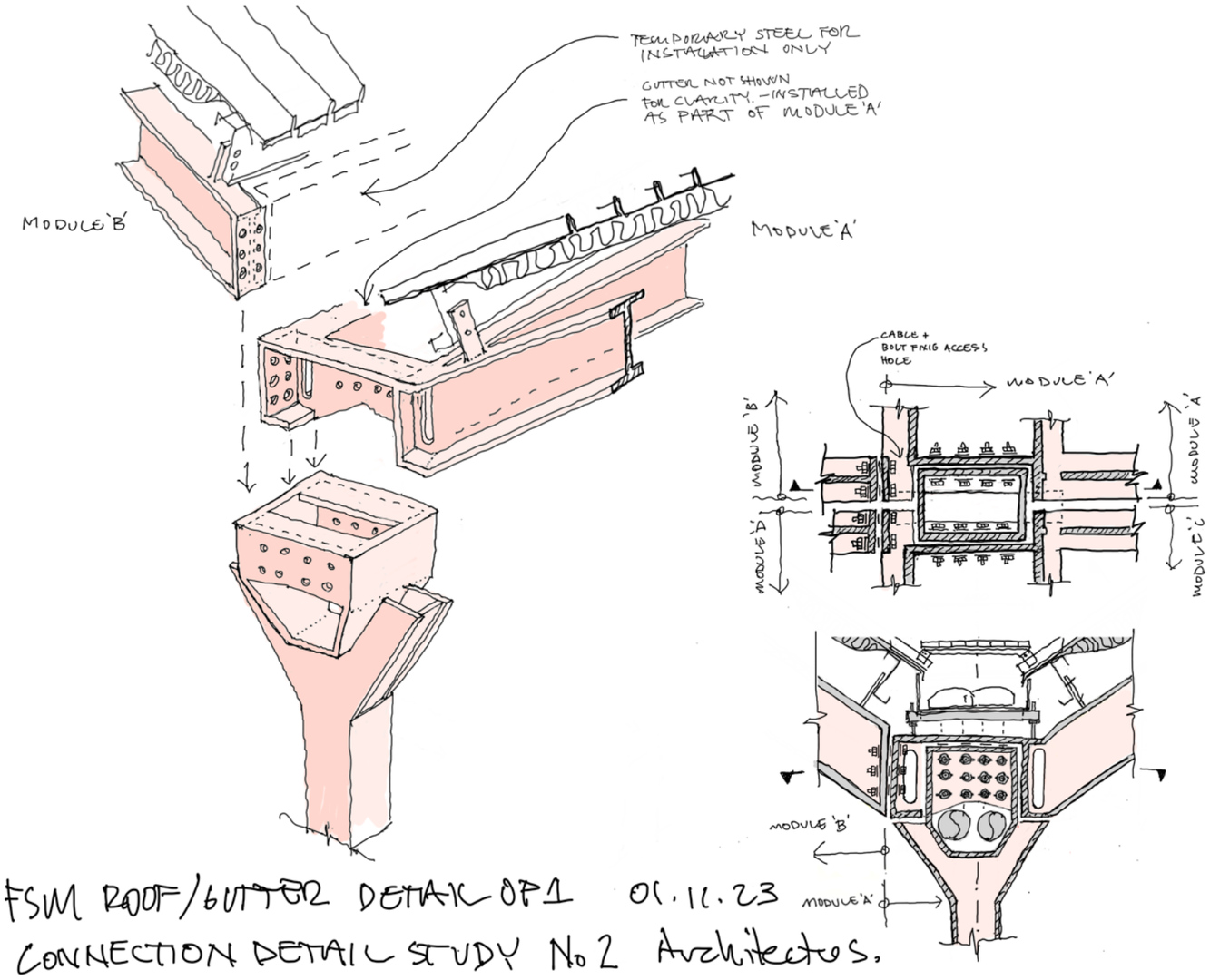


Figure 58: Floor plan bicycle storage
Source: Architectus



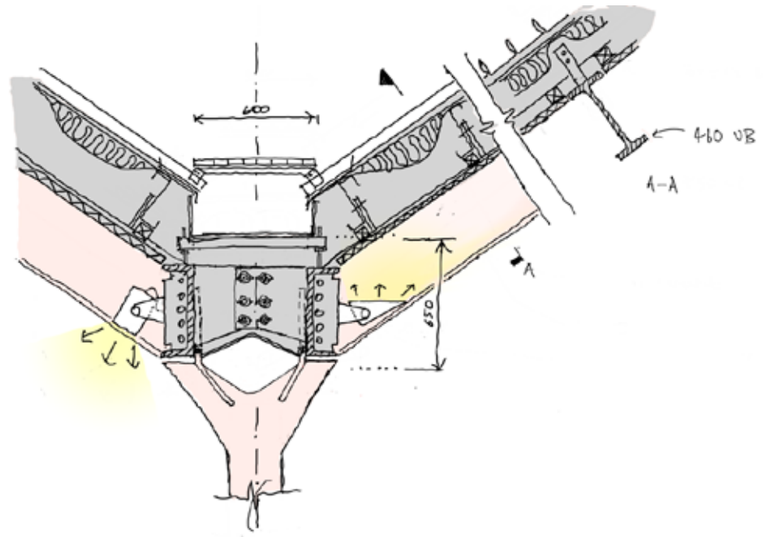
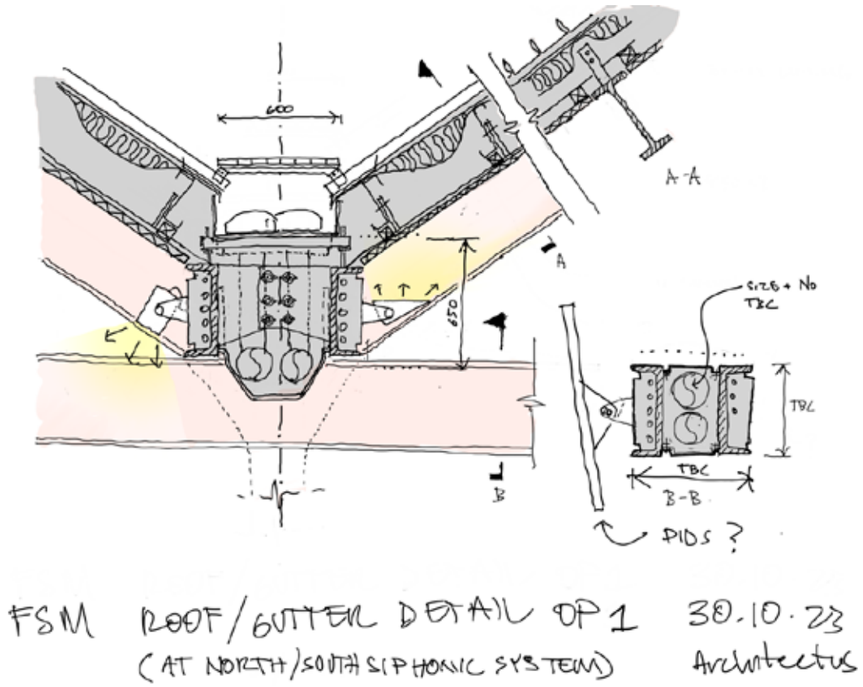


Figure 59: Concept Sketches
Source: Architectus



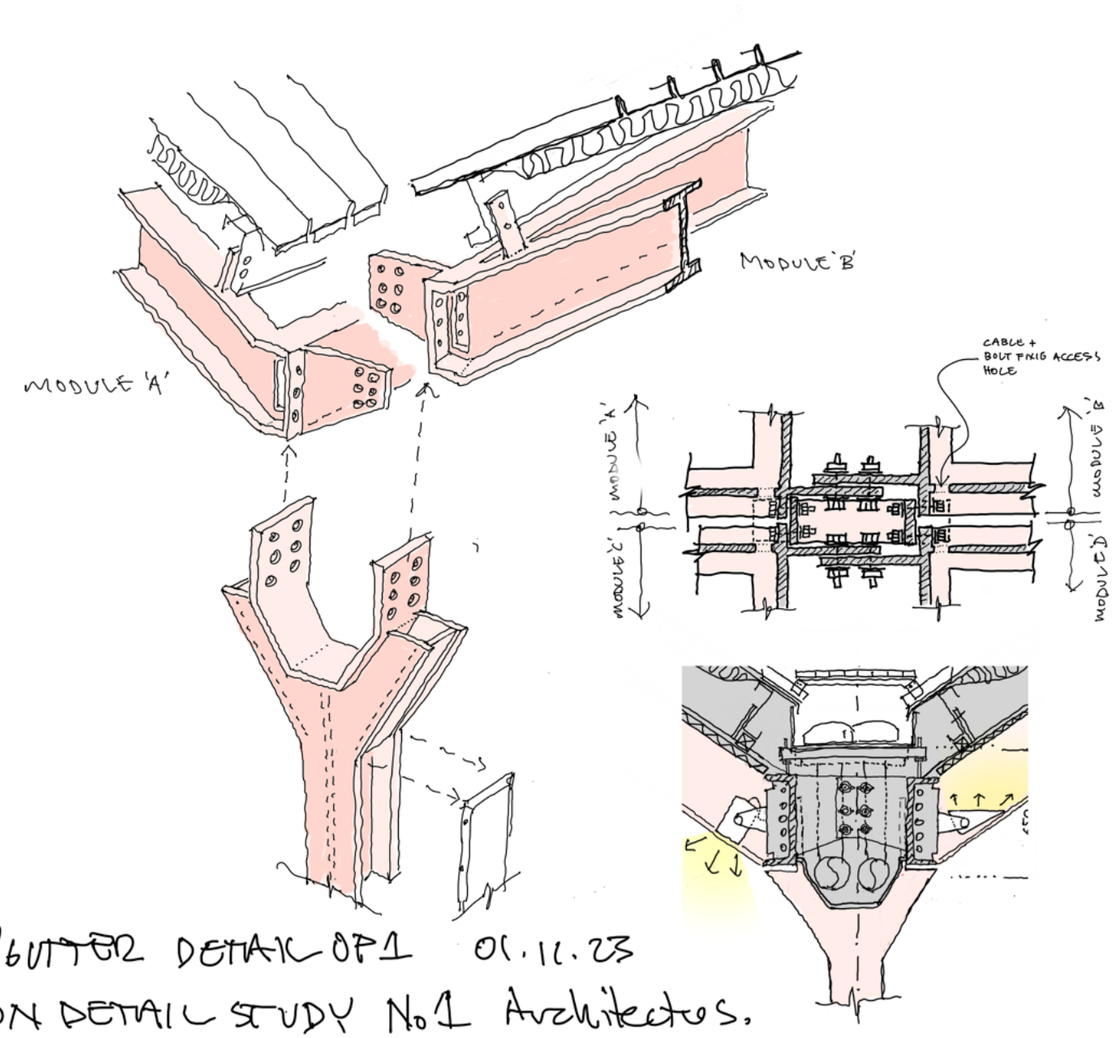
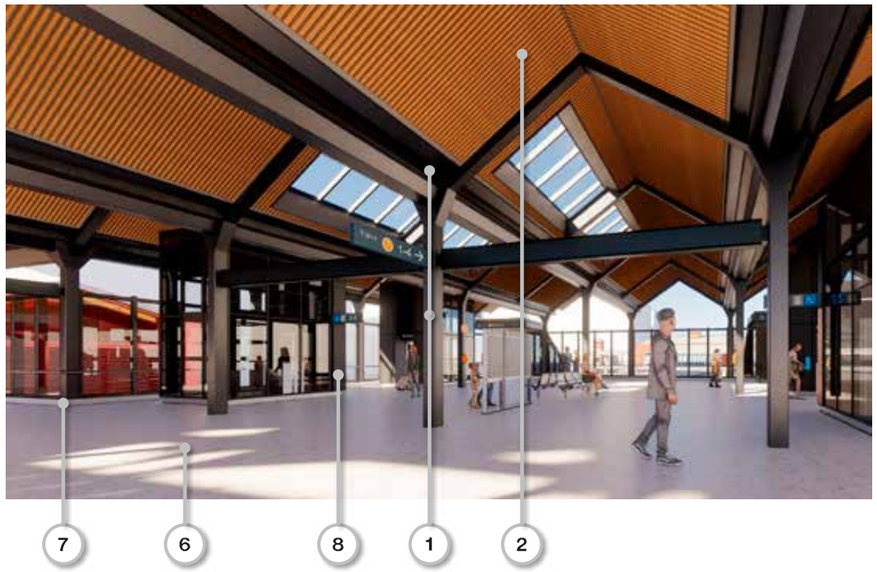


Figure 60: Concept Sketches
Source: Architectus

5 Design of Permanent Built Elements

5.12 Materiality



1. DULUX PAINT FINISH
   BLACK CAVIAR
   - STRUCTURAL STEEL: SEMI-GLOSS
   - CLADDING: MATT
2. SCULPTFORM
   ALUMINIUM BATTENS
   COFFS BLACKBUTT

3. HUNTER DOUGLAS
   EXTERIOR LINEAR CLOSED - 75C 150C
   COLORBOND: DUNE
4. DULUX PAINT FINISH
   MIO ST ENOCH GREY
5. LYSAGHT, LONGLINE 305
   FINISH: COSMIC
6. TERRAZZO TILE
7. STAINLESS STEEL
   BEAD BLASTED
8. RIMEX
   T22 QUARTZ BLACK

Figure 61: Architectural finishes
Source: Architectus

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Landscaping

6

6 Landscaping
6.1 Landscape Plan

6.1.1 Green Infrastructure Targets

Green infrastructure is fundamental to creating a high quality of life and is important in creating a region that is climate resilient and adaptable to future needs. The NSW Government Architect's draft policy 'Greener Places' is based on a green infrastructure framework which has key components:

- Bushland and Waterways – delivering green infrastructure for habitat and ecological health
- The Urban Tree Canopy – delivering green
- Infrastructure for climate change adaptation and resilience
- Parks and Open Space – delivering green infrastructure for people. Green infrastructure adopts a more integrated approach to the design of landscape and infrastructure in order to create ecologically healthier, greener and more viable urban landscapes.

Source: Greater Sydney Commission, Western City District Plan

In Western Sydney green infrastructure will be implemented at the city scale, as a network of green spaces, natural and semi natural systems that are strategically planned, designed and managed to support a good quality of life in an urban environment. Aligned with the SMWSA Design Guidelines, the Sydney Metro Design Quality Statement, Premier's Priorities and the wider government vision for the Western Parkland City, the Green Infrastructure objectives related to Sydney Metro Western Sydney Airport (SMWSA) are:

- Ecological restoration
- Reduced urban heat island
- Reduced stormwater impact
- Connection to nature and community.

Converting Grey to Green

Often, the default material choice for surfaces in urban spaces is hard paving. A standard approach would be to assume the ground plain is hard. Then, once people movement and gathering spaces have been mapped, the remaining space is able to be 'greened'. The opposite approach has been taken for all urban spaces on the SMWSA project. The assumption being they are green, and then people movement is 'carved' from the green. This approach will aims to achieve the project green infrastructure targets, and ensure maximum permeability cooling and biodiversity within the urban spaces of the project.

Tree Canopy Cover

Shading provided by mature tree canopies is an essential part of reducing urban heat island effect. The St Marys Station footbridge is committed to achieving the following tree canopy cover targets:

- Target **40%** tree canopy cover in the Station Plazas, excluding areas covered by buildings

34% Achieved

Tree canopy cover is to be measured by the ground surface area (excluding buildings) that is shaded by tree canopy, as measured by the horizontal extent of a mature size in year 20 of operation.

Tree Soil Volume

To facilitate the growth of healthy mature tree canopies, the St Marys Station footbridge project provides significant uncompacted soil volume to each tree, which meets and exceeds best practice guidelines. Trees in pavements are provided with structural soil systems under the pavement to guarantee uncompacted soil volumes.

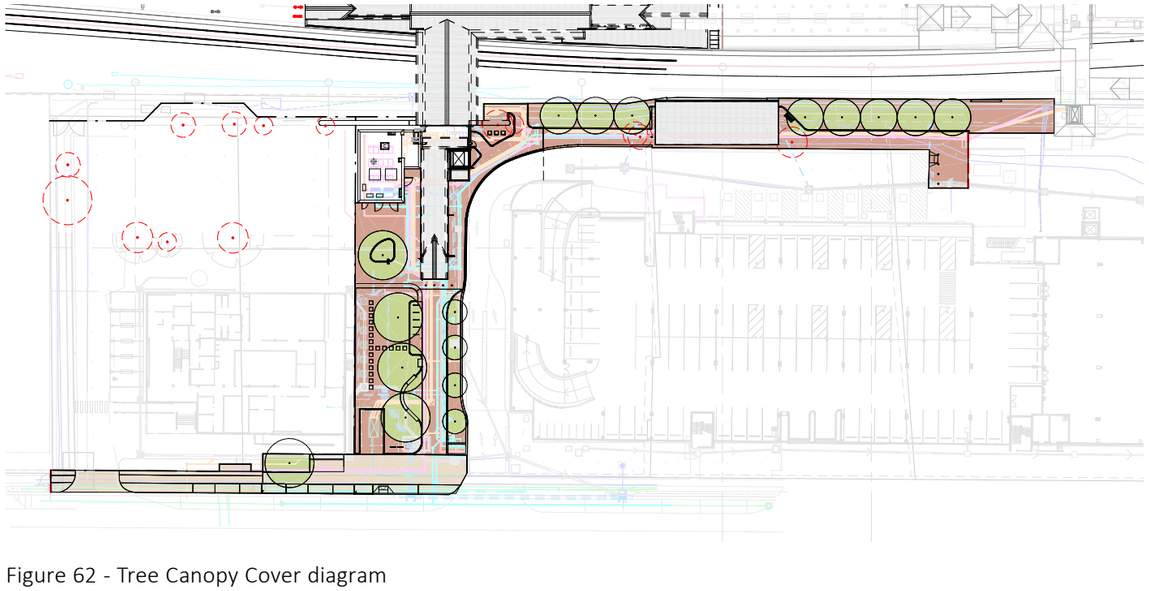


Figure 62 - Tree Canopy Cover diagram

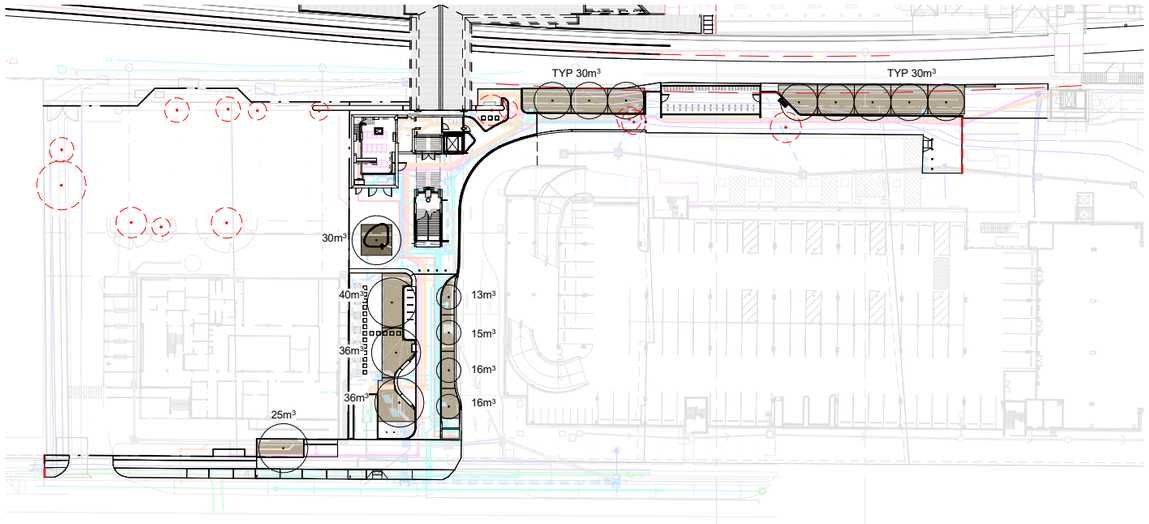


Figure 63 - Tree Soil Volume diagram

6.1.2 Northern Plaza

The northern station plaza will integrate into the greater station precinct and provide an inviting, cool, green space which positively affirms the transformative nature of the transport network. The plaza maintains and continues the alignment of the new St Marys Station footbridge through to Harris Street, which will provide clarity and ease of wayfinding to pedestrian movement to both the existing train station and the new Metro station. The addition of the footbridge and northern plaza, establishes a vital north-south link which connects the proposed new St Marys Metro Station entrance south of the rail line, to the existing St Marys Train Station, and through to the St Marys North community.

A generous 4.0m wide pathway has been designed to allow adequate space for pedestrian and cyclist movements to and from Harris Street and the footbridge stairs. This pathway is aligned to the footbridge stairs to provide clear and direct line of sight. Bicycle parking hoops are provided adjacent the pathway to ensure cyclists may dismount and park their bikes prior to entering the plaza, minimising any conflict with pedestrians near the footbridge stair.

The pathway is shaded by a combination of native evergreen trees and exotic deciduous trees, and a garden bed provides separation to the carpark entry lane, which will provide a pleasant pedestrian experience. Within the larger garden bed flanking the pathway, there is an underground detention tank which will treat stormwater before it enters Harris Street.

Maintenance vehicle access to the footbridge and buildings is provided via removable bollards at the junction of the plaza to the pathway connection to Harris Street.

To the east of the northern plaza is an adjacent Sydney metro site office (SPO) building. This is likely to become a potential development site in future. The nature of the interface with this development site is subject to future coordination and design, however the plaza has been designed in such a way as to maximise potential integration with the future development site.

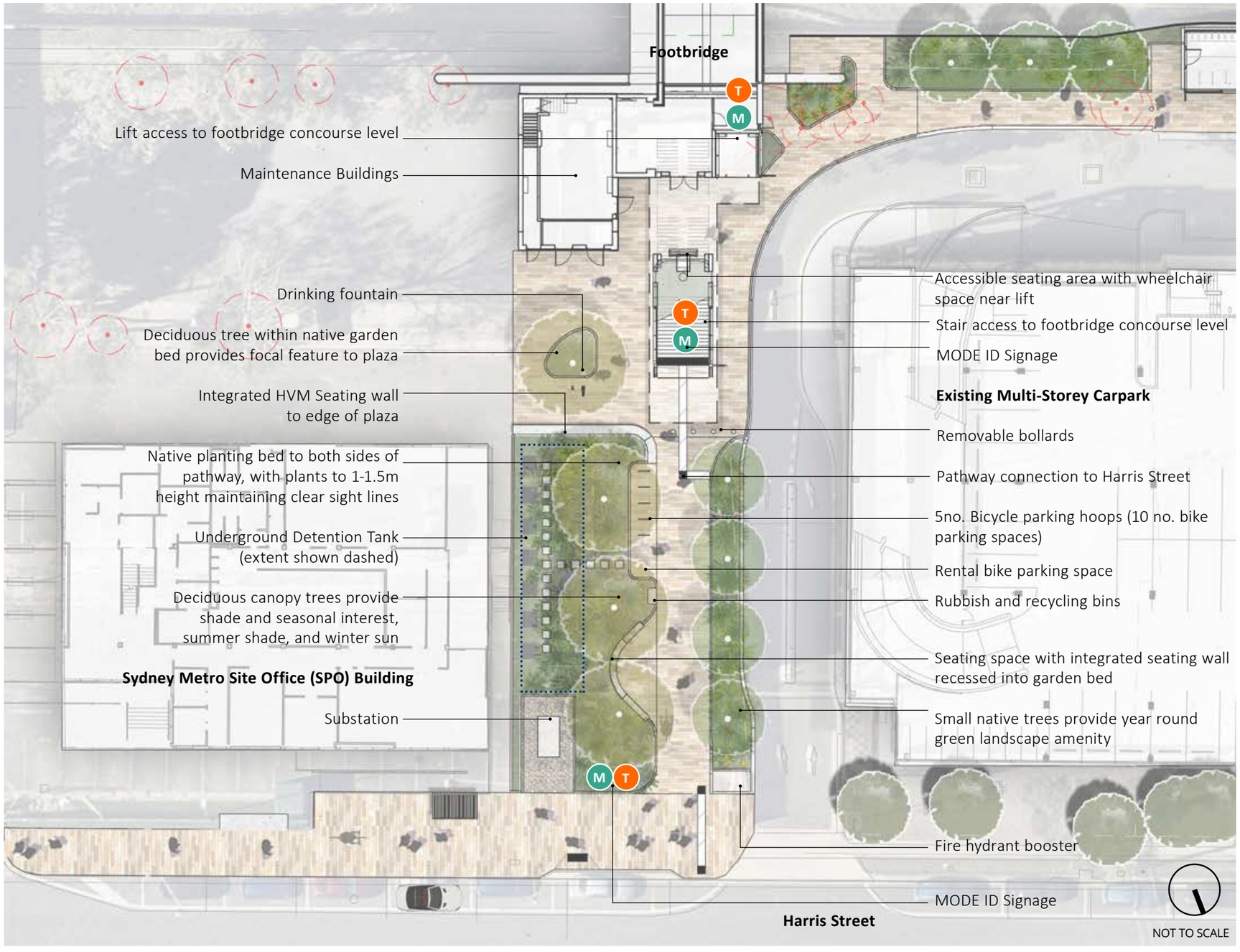


Figure 64 - Northern Plaza landscape plan

6 Landscaping

6.1 Landscape Plan

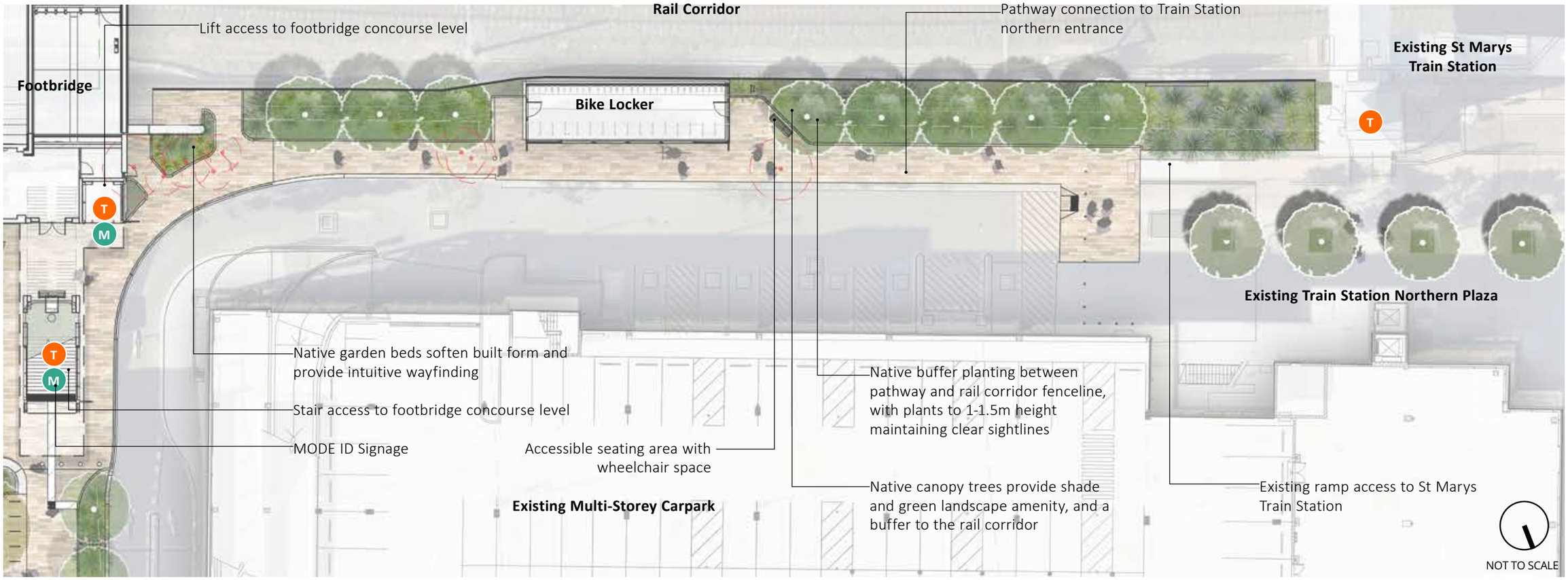


Figure 65 - Western pathway landscape plan

6.1.3 Western Pathway

The western pathway provides direct pedestrian access to the footbridge and northern plaza, from the existing Sydney Train Station northern entrance, multi-level park and ride, and Forrester Road to the west. The existing footpath will be widened to 3.0m, to meet the increased pedestrian and cyclist demand from the western arrival. Along the pathway will be a secure enclosed bicycle parking facility. New trees and landscaping will provide respite and shade to commuters. An accessible seating area, including wheelchair space, will be provided near the midway point of the western pathway.

Figure 66 - Harris Street landscape plan

6.1.4 Harris Street Public Domain

Harris Street upgrades include a new verge with a wider footpath (4.5m) to cater to increased pedestrian and cyclist movement, and new transport interchange facilities in the form of taxi and kiss&ride short term parking bays. These will be supported by one pedestrian shelter. Existing underground utilities and overhead power lines will be retained.

At the eastern end of the Harris Street works, a driveway will be maintained into an easement, allowing vehicle maintenance access to the existing Sydney Trains rail corridor gate.

6 Landscaping
6.2 Use of Native Species

6.2.1 Planting Species Selection

The planting strategy for St Marys Station footbridge and northern plaza is reflective of the wider station precinct landscape design principles which champions a 'rewilding' approach and connection to Country.

Planting species have been selected by a qualified landscape architect and horticulturalist and have been selected where possible from the local Cumberland Plain woodland vegetation communities. These species are highly suited to the local soil and micro-climatic conditions, ensuring minimal irrigation and maintenance requirements once established. In order to maintain a high overall diversity of species, additional plants which are native to the Sydney bioregion and suit the St Marys Station urban microclimate will also be used to complement the locally endemic species.

Species selection has incorporated climate adaptation suggestions, through use of local provenance and drought tolerant indigenous vegetation to provide soil stabilisation, with additional considerations of wind resilience and debris impact.

The understorey planting will not be planted in formal or massed arrangements - rather, a re-wilding strategy is followed with maximum natural variation creating a highly layered and biodiverse outcome, which is both aesthetically pleasing with maximum textural and colour interest, and supports natural systems and fauna. The maximum height of any understorey species at maturity will be 1.5m, to ensure that clear and safe sightlines are maintained at all times across the public realm. Garden bed margins adjacent footpaths will comprise only low growing species.

All shrubs, grasses, and groundcovers will have a minimum 140mm container size when planted, and will have a density of minimum 6 plants per m2.

Key Outcomes

- Maximise permeable surfaces within plaza spaces
- Utilise naturalistic planting arrangements
- High species diversity (minimum 5 different species in every square metre of garden bed)
- Select hardy drought-tolerant native species with minimal irrigation needs
- Drought tolerant and low maintenance
- Maximise diversity of species for both ecological value and visual interest
- Ensure pedestrian and cyclist sightlines across the public domain are maintained
- Use primarily native or indigenous species, derived where possible from locally significant Cumberland Plain Woodland communities

Figure 67 - Planting with Purpose
(Source: SMWSAEDS-SMD-STM-LA-RPT-006001 - St Marys Station footbridge BRIDGE STAGE 1 DESIGN REPORT -LANDSCAPE)

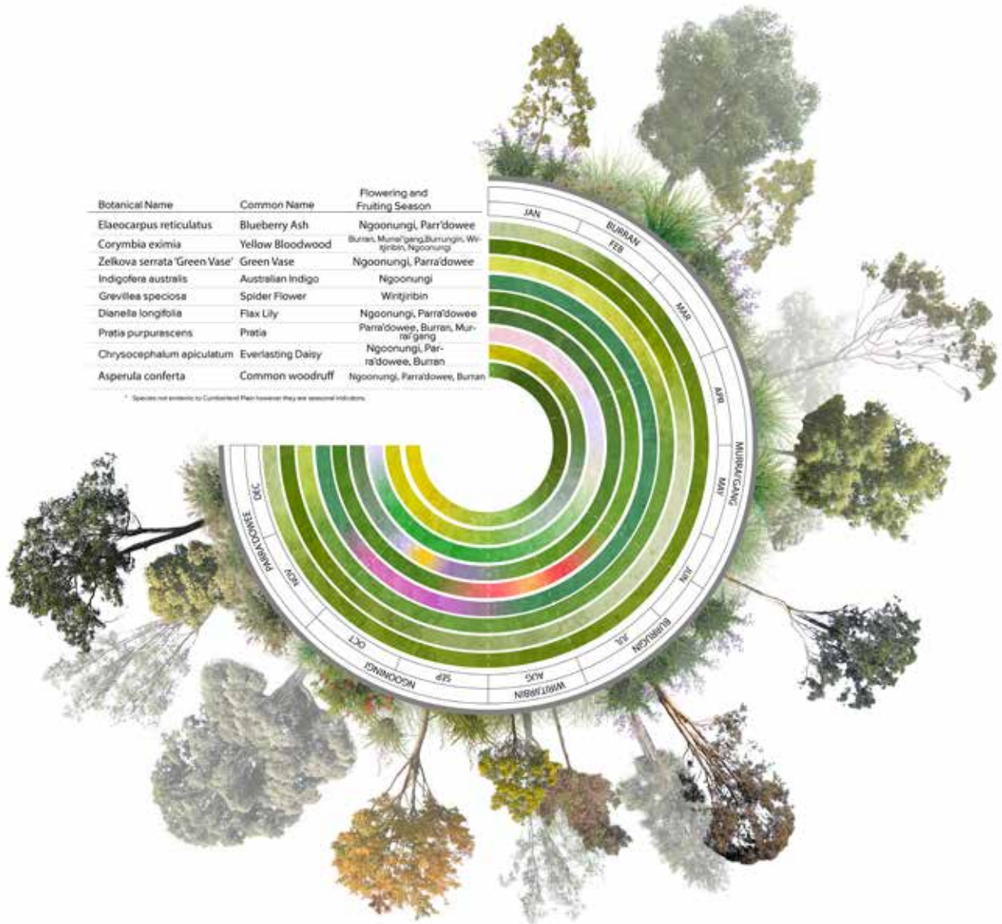


Figure 68 - Plant Flowering Calendar

6.2.2 Trees

Tree plantings are designed with safety and security in mind, and will be planted in soil volumes suitable for maintaining healthy growth. Trees will be under pruned to maintain clear sightlines beneath their canopies. The medium and large natives to the plaza and streetscape will provide good canopy size and shade throughout the year to provide comfort to pedestrians in the hot western Sydney climate. Limited use of exotic deciduous trees will be used within the plaza to provide a balance of winter sun and summer shade.

Tree plantings to the plaza will be minimum 600L container size when planted.

Key Outcomes

- Maximise canopy cover to reduce heat island effect
- Use at least 50% native or indigenous species
- Ensure pedestrian and cyclist sightlines across the public domain are maintained

LEGEND

- Existing Tree to be retained
- Existing Tree to be removed
- Zelkova serrata / Green Vase
- Elaeocarpus reticulatus / Blueberry Ash
- Tristaniopsis laurina / Water Gum

Total number of existing trees to be removed: 17
Total number of proposed trees: 16

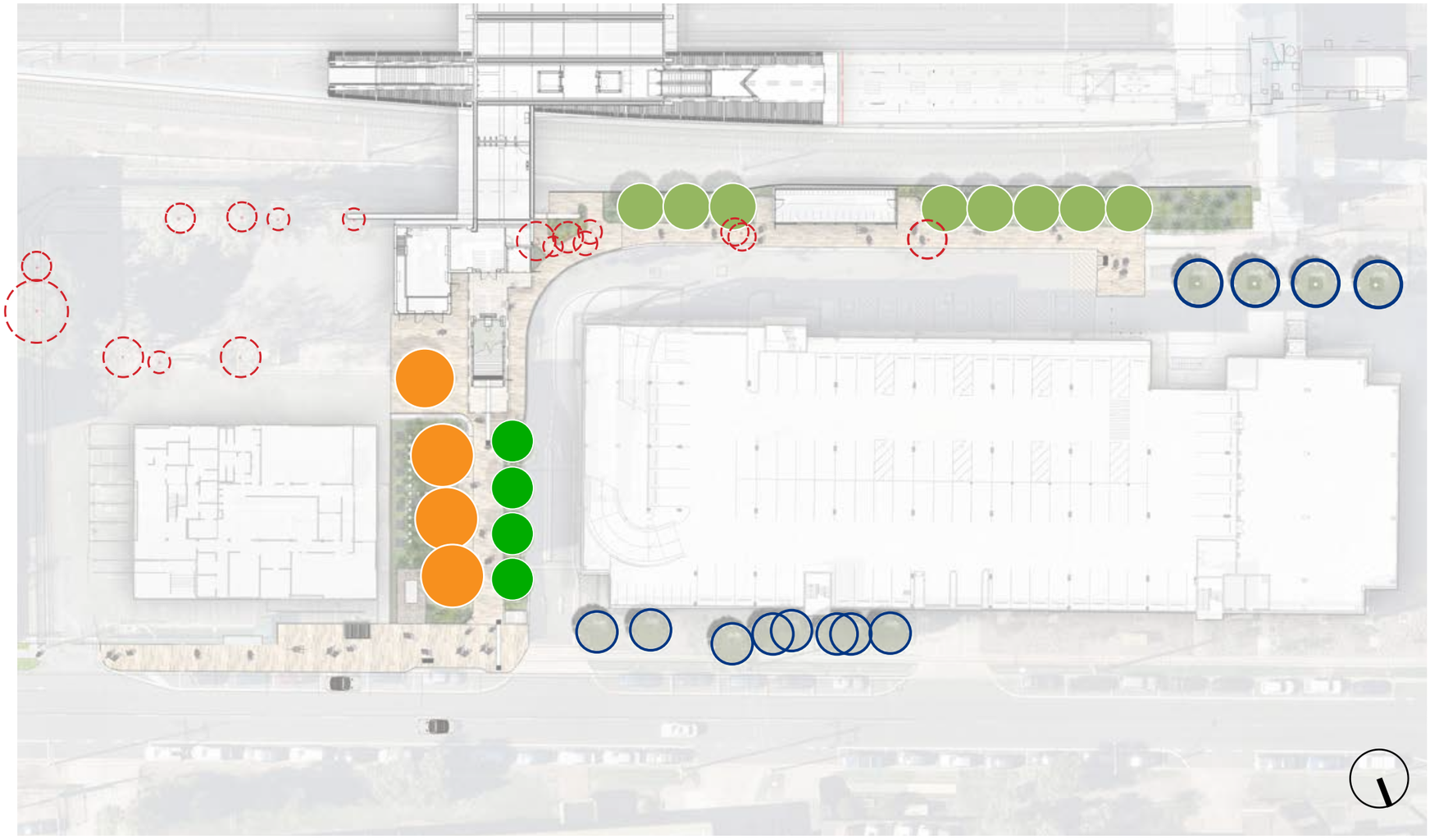


Figure 69 - Diagram of existing and proposed trees

6 Landscaping
6.2 Use of Native Species

The planting palette below is representative of the overall planting character but is not exhaustive of the species proposed to be used.

Trees


Zelkova 'Green Vase'


Elaeocarpus reticulatus


Tristaniopsis laurina

Shrubs


Acacia 'Limelight'


Daviesia ulicifolia


Melaleuca thymifolia


Indigofera australis


Pultenaea microphylla


Grevillea 'crimson villea'

Grasses


Anigozanthos 'bush ranger'


Dianella longifolia


Lomandra filiformis


Lomandra multiflora


Dichelachne micrantha


Lomandra 'lime tuff'

Groundcovers


Ajuga australis


Chrysocephalum apiculatum


Pratia purpurascens


Dichondra repens


Viola hederacea

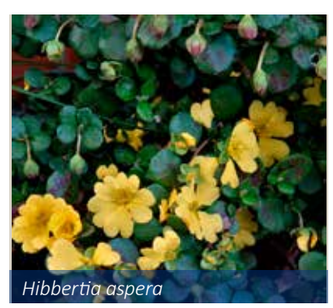

Hibbertia aspera

Figure 67 - Plant species images

6 Landscaping
6.2 Use of Native Species

6.2.3 Typical Planting Details

Landscape details and specifications have been developed which detail the strategy and procedures to be undertaken with regards to the successful establishment and on-going maintenance of new vegetation.

The planting strategy has incorporated climate risk adaptation measures through considerations of vegetation selection and placement to minimise wind effects through the northern plaza as well as mitigate impact of debris.

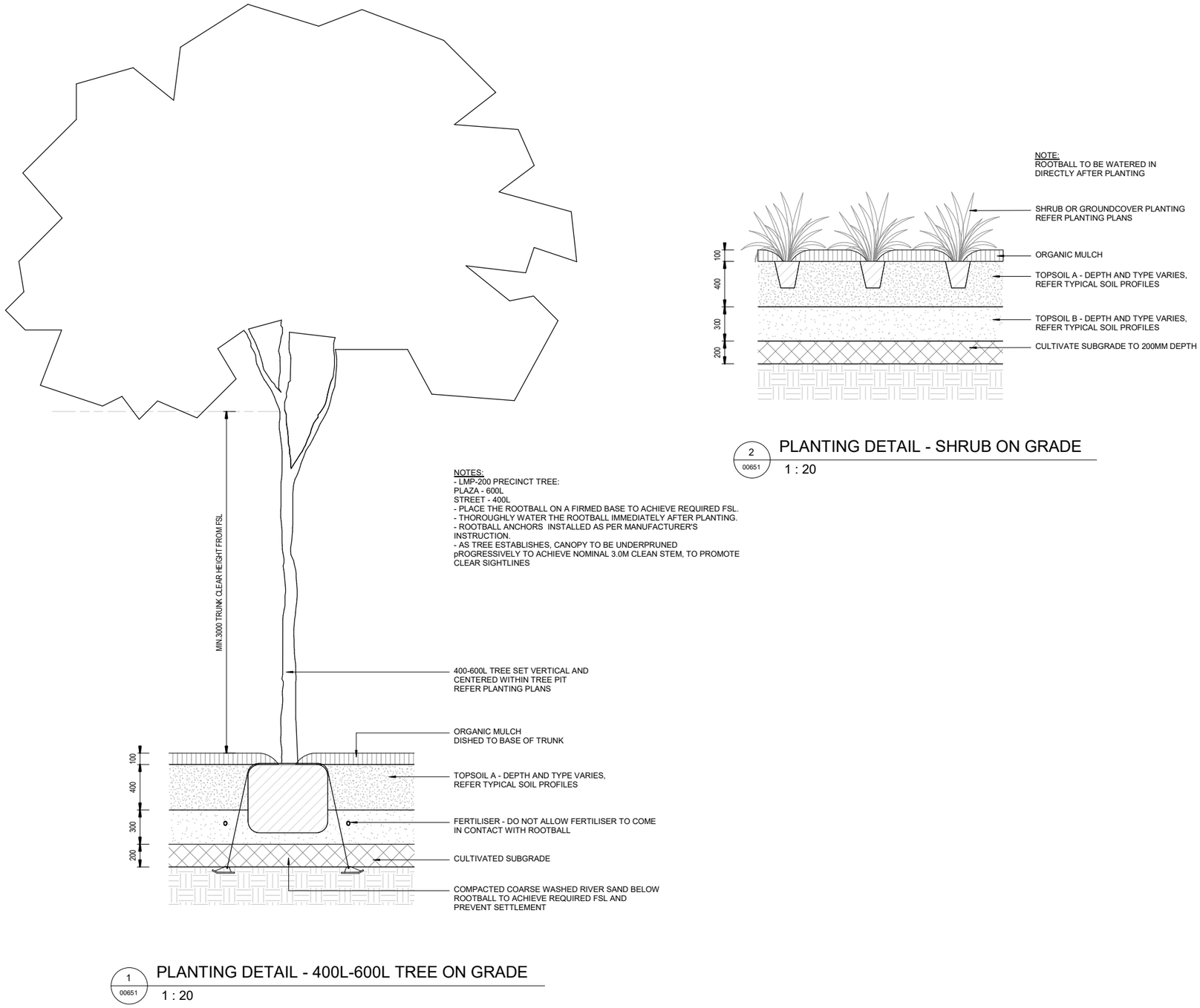


Figure 70 - Planting installation details

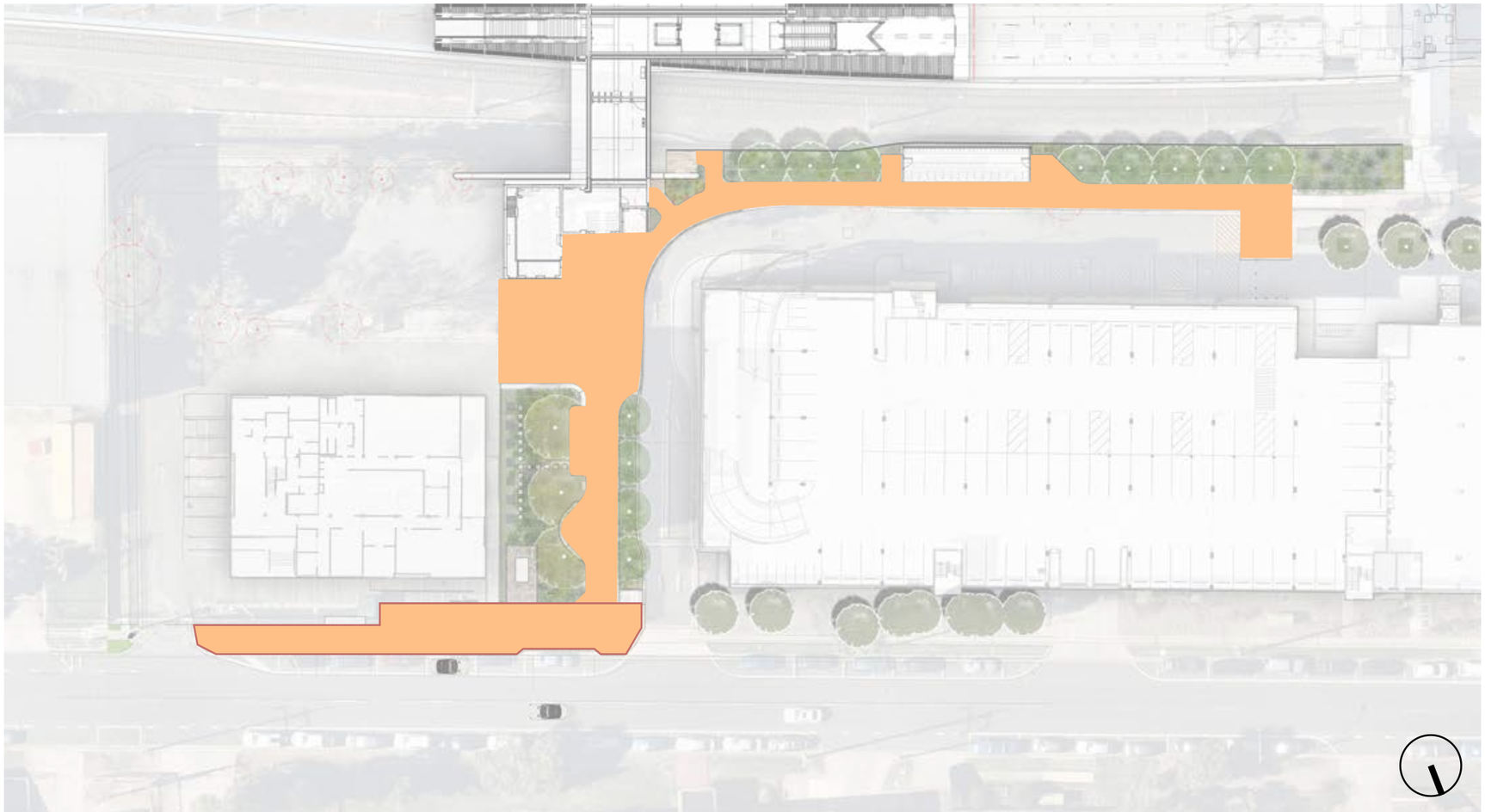
6.3.1 Pavement Surfaces

Pavements to both the northern plaza and Harris Street public domain have been designed as part of a wider palette of paved surfaces to the greater St Marys Station precinct.

All pavements have been selected to align with wider precinct design outcomes, to ensure a consistent and unified palette and character across the wider St Marys Station. Pavements have been selected to create a distinct character to the new station precinct which complements the existing condition and heritage elements of St Marys town centre and community.

Generally, hard surfaces have been minimised within the northern plaza to meet green infrastructure targets, which promote permeability, urban cooling, and greater biodiversity through increased soft landscape coverage.

The plaza and connecting footpaths will be paved with a unit paver which establishes the civic nature of the space and caters to the high volume of pedestrian traffic. Harris Street will also be refurnished with the same unit paver to achieve a cohesive and consistent urban character to the northern station entrance.



LEGEND

Plaza paving
Material: paver unit

Streetscape paving
Material: paver unit

Figure 71 - Diagram of pavement surface types

6.3.2 Furniture Selection

Furniture to both the northern plaza and Harris Street public domain have been designed as part of a wider palette of bespoke furniture to the greater St Marys Station precinct, including the southern station plaza (Sydney Metro Station).

All furniture items have been selected to align with wider precinct design outcomes, to ensure a consistent and unified palette and character across the wider St Marys Station. Furniture has been designed to be durable, low maintenance, and create a distinct character to the new station precinct which complements the existing condition and heritage elements of St Marys town centre and community.

Benches, a drinking fountain and bottle refill, and rubbish and recycling bins provide amenity to the northern plaza, whilst bike hoops located along the northern entrance pathway provide parking for cyclists. One shelter will be provided to Harris Street adjacent the taxi and short term parking bays.

Furniture and material selection have taken climate adaptation measures into consideration, using light coloured finishes where possible, and limiting materials (steel) exposure to sunlight, in order to reduce surface temperatures within the station.

LEGEND

- Seating Walls
- Bench Seating
- Drinking Fountain + Bottle Refill Station
- General Rubbish + Recycling Bin
- Intermodal Shelter (Taxi/Kiss and Ride)
- Bicycle Hoop

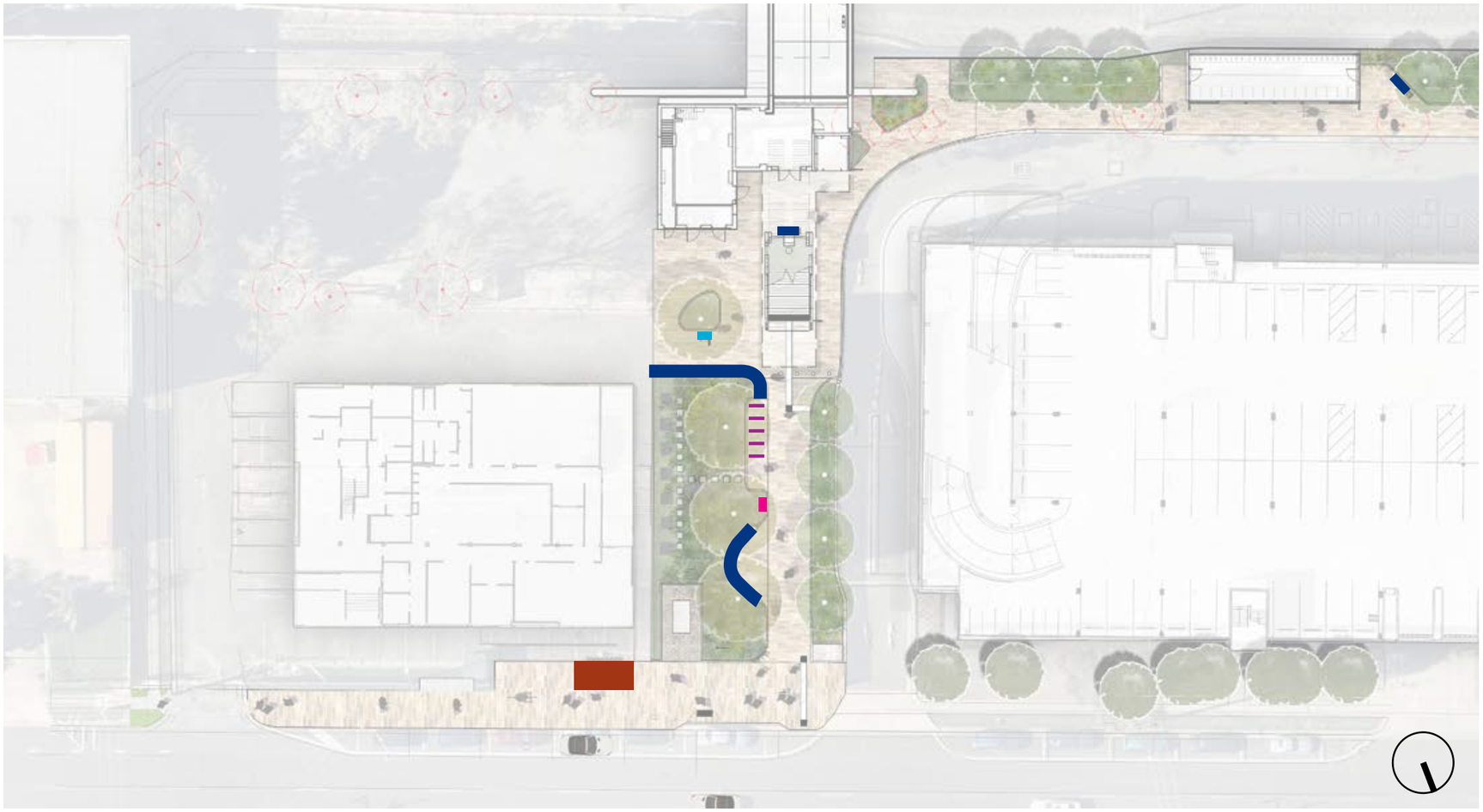


Figure 72 - Diagram of furniture types and locations

6.3.3 Hostile Vehicle Mitigation (HVM)

Hostile vehicle mitigation is an important safety design consideration for Metro Station precincts, where HVM is required to manage security risks and control vehicle access to pedestrian areas.

The HVM design aims to provide a level of protection to the northern station plaza and footbridge entrance in accordance with the recommendations of the project security consultant. The secure perimeter has been designed to stop vehicles of up to 7.5 tons travelling up to 55km per hour.

The HVM design has been considered against the need to minimise the visual impact of HVM devices, and maintaining free and uninhibited access for pedestrians and cyclists.

Where possible, natural vehicle access control measures have been used, such as level change and the planting of trees, or integrating HVM into other landscape design components.

LEGEND

- Secure Edge Typology 1 Low Concrete Wall
- Secure Edge Typology 2 Concrete Seating Wall
- Secure Edge Typology 2 Bollard - removable
- Extent of defendable space

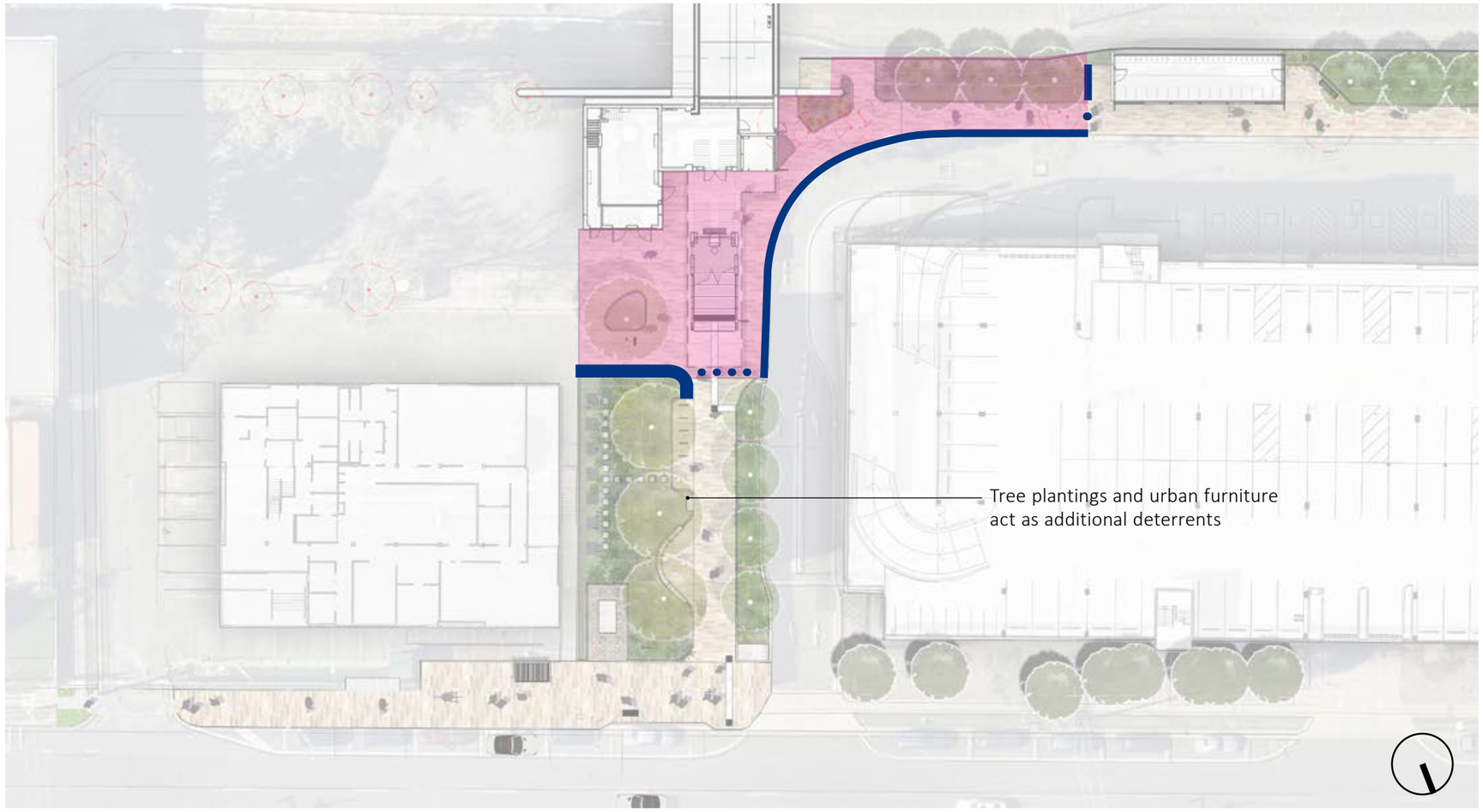


Figure 73 - Diagram of HVM strategies

6.3.4 Precinct Lighting

The lighting locations, design and impacts achieve minimum light level requirements and are consistent with all Stakeholder Requirements and Standards.

The lighting design complies with Pedestrian Area Lighting AS1158.3, and Lighting for roads and public spaces Part 3.1: Pedestrian area (Category P) lighting AS 1158.3.1; and 4282:2019 Control of the obtrusive effects of outdoor lighting.

Additionally, the lighting is designed to meet the illumination levels and comfort conditions recommended in AS/NZS 1680 series and the Greenstar Lighting Comfort category. It is designed to be suitable for the environment in which it is installed considering Occupational Health and Safety requirements.

All internal luminaires selected are LED type with a maximum 4000K colour temperature. All luminaires specified are flicker-free and have a minimum CRI of 80 to minimise glare, visual discomfort and light spill, and illumination levels are adequate for CCTV and other security systems operations.

NASF Guidelines are not applicable to St Marys Station footbridge. Existing Harris St is lit by Utility – Endeavour Energy's Road lighting network. After consultation sessions with Penrith City Council, no additional lighting is proposed for Harris St, as a lighting assessment was undertaken to confirm the existing light fixtures are sufficient for AS 1158 compliance including the pedestrian footpath, the kiss and ride parking and the accessible parking.

Given the proposed lighting is outside the 6km buffer radius from the centre of the runway as stipulated in the National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports, and outside the 13km buffer radius from the aerodrome as stipulated in the National Airports Safeguarding Framework Guideline C: Managing the Risk of Wildlife Strikes in the Vicinity of Airports, the guidelines set out above do not apply to the project.

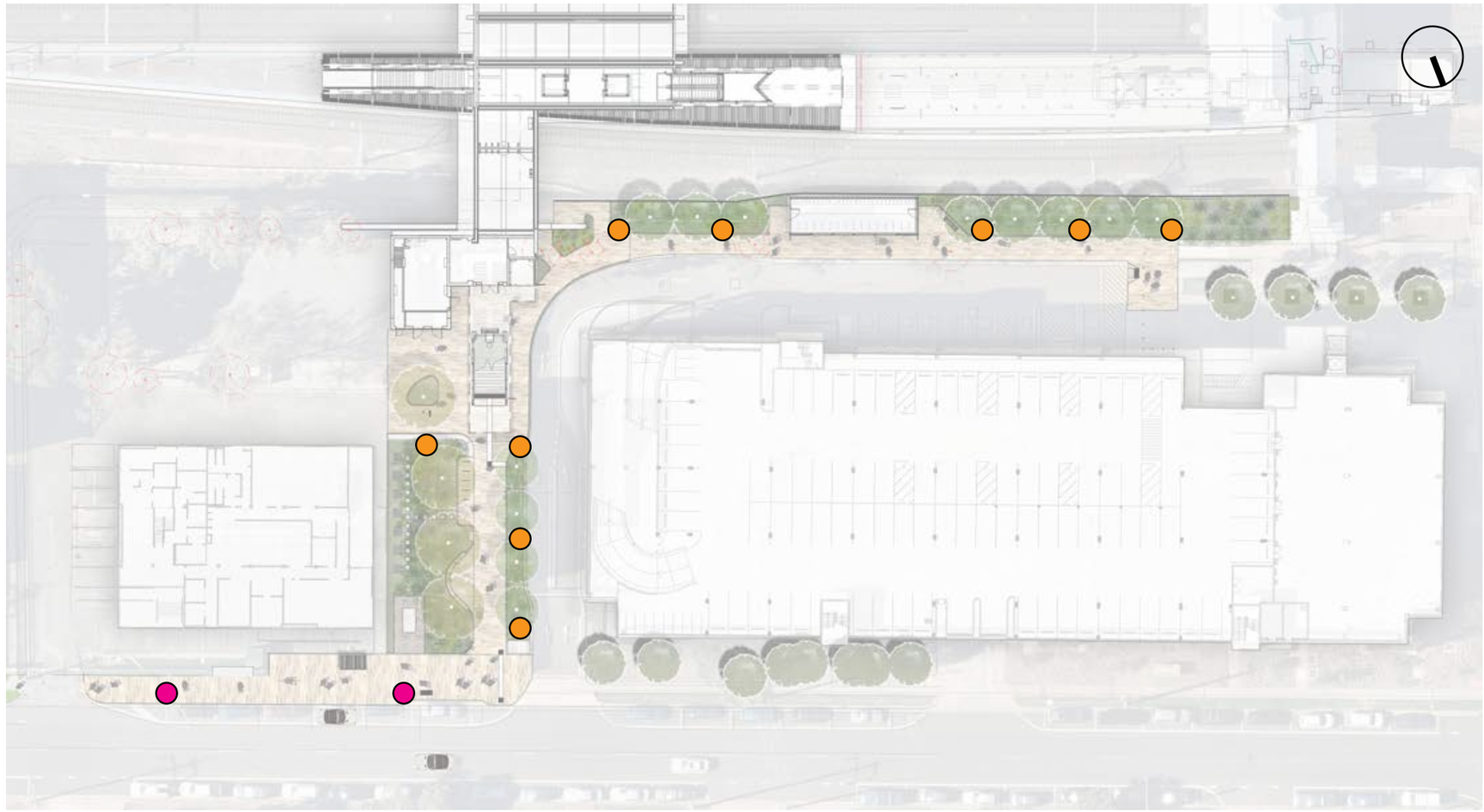


Figure 74 - Diagram of lighting types and locations

Pole Top Lighting Type 1
Existing street light poles retained on Harris Street

Pole Top Lighting Type 2
New light+cctv poles to northern entrance and plaza, WE-EF VFL540 LED

6.3.5 Wayfinding and Signage Design

The external signage and wayfinding for the St Marys Station footbridge and northern plaza adopts a precinct wide approach shared with the wider St Marys metro upgrade, directing customers to the northern entrance.

The standard palette of signs are used and positioned according to best practice wayfinding principles.

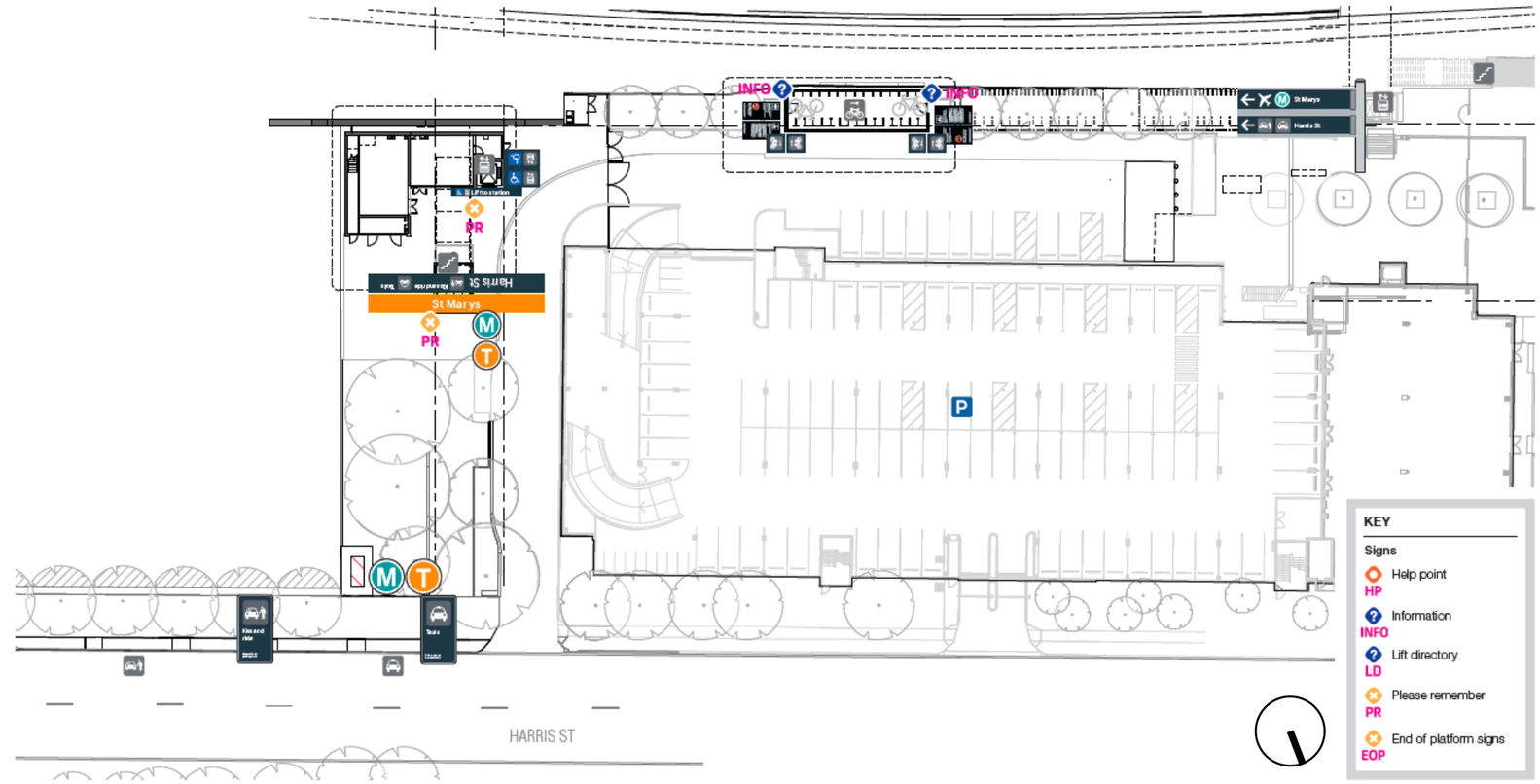


Figure 75 - Diagram of precinct signage types and locations

6.3.6 Landscape Materiality

1. Concrete paver with customised aggregates
2. Stainless steel
3. Class 2 formed concrete
4. Exposed aggregate concrete
5. Honed and polished local aggregate

Note: Materials and colours pending full co-ordination with future Sydney Metro Station

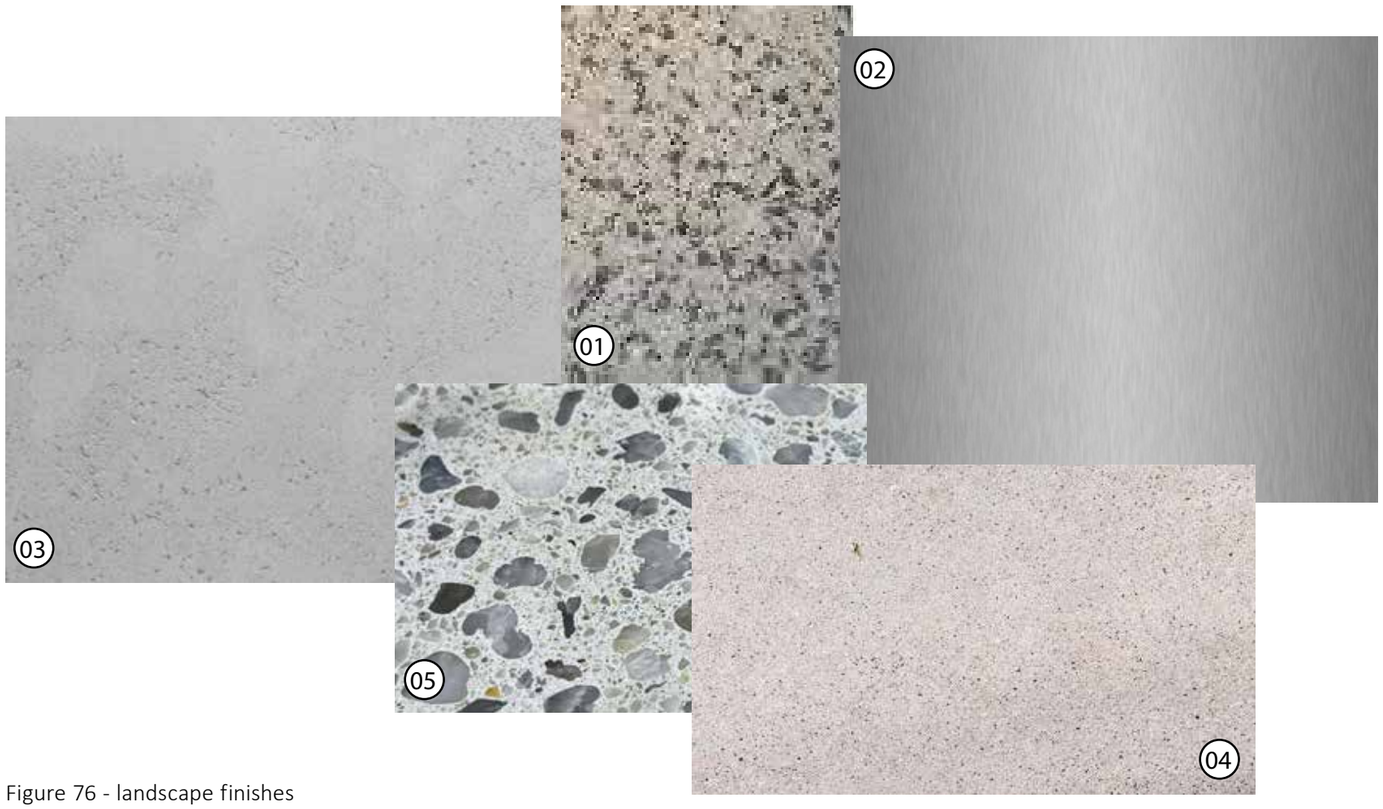


Figure 76 - landscape finishes

Cohesive Final Design

7 Cohesive Final Design

This PUDCLP presents an integrated landscape and place making outcome for St Marys Station footbridge and northern plaza. The proposed landscape design matches the current PLM stage 3 landscape design to promote a consistent and unified precinct outcome. The landscape design to the northern plaza and Harris Street have been developed to stay true to the principles to achieve compliance with the project Particular Specification requirements and meet the objectives of the reference design and Penrith City Council.

Sustainability

8

8 Sustainability

8.1 Green Infrastructure

The Sydney Metro Western Sydney Airport project is committed to meeting Green Infrastructure targets, which are strategies to reduce urban heat island effect, and improve stormwater capture on site through increased landscaped permeable surfaces.

St Marys Station footbridge Green Infrastructure targets and strategies are outlined in section 6.1.1.

- the station plaza planted areas must include at least 50% native species
- the station plaza tree species must include 100% native or indigenous species
- the interchange zones, public domain and street planted areas must include at least 50% indigenous species
- the interchange zones, public domain and street tree species must include at least 50% native or indigenous species
- groundcover, forbs and shrubs from native species to benefit biodiversity and human well-being
- at least 40% tree canopy cover in the station plazas, excluding areas covered by buildings
- at least 25% Tree Canopy Cover in the Public Domain, excluding areas covered by buildings
- Tree Canopy Cover is to be measured by the ground surface area (excluding buildings) that is shaded by tree canopy, as measured by the horizontal extent of a mature tree size in year 20 of Operation
- at least 40% permeable surfaces in external areas
- permeable surfaces are to be measured as materials that allow for water to pass through its structure and into the subgrade, measured as a percentage of total ground surface area (excluding buildings)

The PUDCLP also contributes to the sustainable design of the St Marys Station footbridge project through implementing urban design best practice principles and innovative design. These principles will contribute to the project's Transport Sustainability Design Guidelines (SDG) Version 4.0, under which the Project is targeting a 'Gold' rating.

8.2 Permanent Element Sustainability Considerations

Urban Water Cycle Management

The Harris Street public domain and the St Marys Station footbridge northern plaza use an innovative structural soil system which is modular, lightweight, and secure. The soil cells are designed to provide trees and plants in urban environments with suitable growing conditions for healthy growth, without disturbing the structures above.

The benefits include supporting large canopy tree growth and maximising the use of on-site stormwater harvesting for passive irrigation. The system comprises a modular recycled plastic frame which can structurally support the pavement loads above, while still providing enough space below the surface for tree roots to grow in uncompacted soil.

The selected product uses recycled waste plastic to minimise use of embodied energy.

Water Sensitive Urban Design - where possible, stormwater is directed into the tree pits and garden beds from surface inlets and adjacent paved surface falls, to improve the quality of the water and to provide passive irrigation, minimising additional irrigation requirements.

The northern plaza landscaping will be provided with a permanent automatic irrigation system which includes moisture sensors, which when combined with low-water use plant species will result in minimal ongoing irrigation demand for potable water after establishment.

The St Marys Station footbridge project has requirements for stormwater pollutant reduction targets and stormwater volume retention. Through analysis and liaising with Penrith City Council, Transport and Sydney Trains, it was deemed that volume retention for reuse was not viable due to limited amount of demand for reuse water.

Pollutant reduction targets were agreed, through consultation with Penrith City Council and Transport to only be applied to the northern plaza (excluding treatment of water within the rail corridor), and noted that the eastern catchment will be treated by the existing infrastructure in the multilevel carpark. Therefore the design proposes to utilise a combination of mesh pit filters and filter cartridges to meet the most stringent of reduction targets outlined by Sydney Metro for the water draining through the northern plaza to Harris Street.

Thermal Comfort

Paved surfaces to the St Marys Station plaza and the Harris Street public domain have been reduced to increase planting site coverage. Pavements have been selected with high solar reflectance index (SRI) values, which help to reflect sunlight away and reduce the buildup of heat on the ground.

This strategy is complemented by significant canopy tree coverage which will provide shade to the publicly accessible areas. The strategies used to reduce the heat island effect will provide greater comfort to all users of the public realm.

This strategy has incorporated climate risk adaptations, using drought tolerant species and canopy tree coverage where possible.

The Project has optimised thermal comfort and daylight distribution through the use of glazed windows and skylights to reduce glare and solar heat gain, incorporation of shading elements such as canopies, use of light-coloured materials and incorporation of natural ventilation to improve air flow.

8.3 Climate Change Considerations

Plant species selection has incorporated climate adaptation suggestions, through use of local provenance and drought tolerant indigenous vegetation to provide soil stabilisation, with additional considerations of wind resilience and debris impact.

The planting strategy has incorporated climate risk adaptation measures through considerations of vegetation selection and placement to minimise wind effects through the plaza as well as mitigate impact of debris.

Furniture and material selection have taken climate adaptation measures into consideration, using light coloured finishes where possible, and limiting materials (steel) exposure to sunlight, in order to reduce surfaces temperatures within the station. Where practical, lower carbon materials have been selected including low carbon concrete and steel.

8.4 Innovation and Project Legacy

The PUDCLP contributes to the Project's objective to incorporate innovative design and contributing to a lasting project legacy. The incorporation of these elements also contributes to the project's SDG rating, under which the project is targeting a 'gold' rating.

Community identity related initiatives:
the use of naturally occurring indigenous species, or local species that have a connection to the local community and environment

Initiatives to support active transport: the use of a bicycle shed, bike paths and shaded walkways on the project encourages cycling and walking within the broader transport network.

Educational initiatives: maintaining heritage elements from the historic St Marys station, offering a significant heritage experience for site users.

Management, Maintenance, and Implementation

9

9 Management, Maintenance, and Implementation

9.1 Timing and Responsibilities

In accordance with Condition E79(i), the timing and responsibility for implementation of the elements covered by this PUDCLP are described below.

It is essential that the Project is operational by the WSA Metro Line opening. St Marys Station footbridge will handover the completed works by the contracted dates for Practical Completion and in accordance with the requirements of the MC Contract, Including:

- Designing all handover items in accordance with the requirements of the project requirements to facilitate timely reviews and approvals
- Developing the design program with the delivery requirements in mind
- Standardising construction methodologies, where possible, to maximise efficiencies.

Refer Table 4 for completion and handover dates.

Table 4: Key Elements and Timing

Area of Works	Elements	Operator / Maintainer	Date of Handover
Northern Plaza- Hardstand Finishes	All hardstand surfaces up to the boundary of Harris Street including finishes	Sydney Trains	September 2026
Northern Plaza- Furniture and Fixtures	All furniture and fixtures including but not limited to bicycle hoops, bicycle store, bins, seating, railings is to be maintained by Sydney Trains	Sydney Trains	September 2026
Northern Plaza- Services and Civil	All associated infrastructure services including but not limited to drainage, detention tank, lighting, power, comms is to be maintained by Sydney Trains	Sydney Trains	September 2026
Northern Plaza- Services Building	All elements contained within, and including the structure of the Sydney Trains services building is to be maintained by Sydney Trains	Sydney Trains	September 2026
Northern Plaza- Soft Landscaping	All soft landscaping of the Northern Plaza is to be maintained by Sydney Trains	Sydney Trains	September 2026
Northern Plaza- Harris Street Works	All works completed within the Harris Street boundary including paving, soft landscaping, waiting shelters, signage and associated services are to be maintained by Penrith City Council.	Penrith City Council	September 2026
Station footbridge	All works associated with the construction of the new Station footbridge are to be maintained by Sydney Trains	Sydney Trains	September 2026
Station Platforms	All works associated with the station platforms including but not limited to associated services and finished surfaces are to be maintained by Sydney Trains	Sydney Trains	September 2026

Ownership and Maintenance Responsibility

The diagram adjacent illustrates the ownership delineation between Sydney Metro, Sydney Trains, and Penrith City Council.

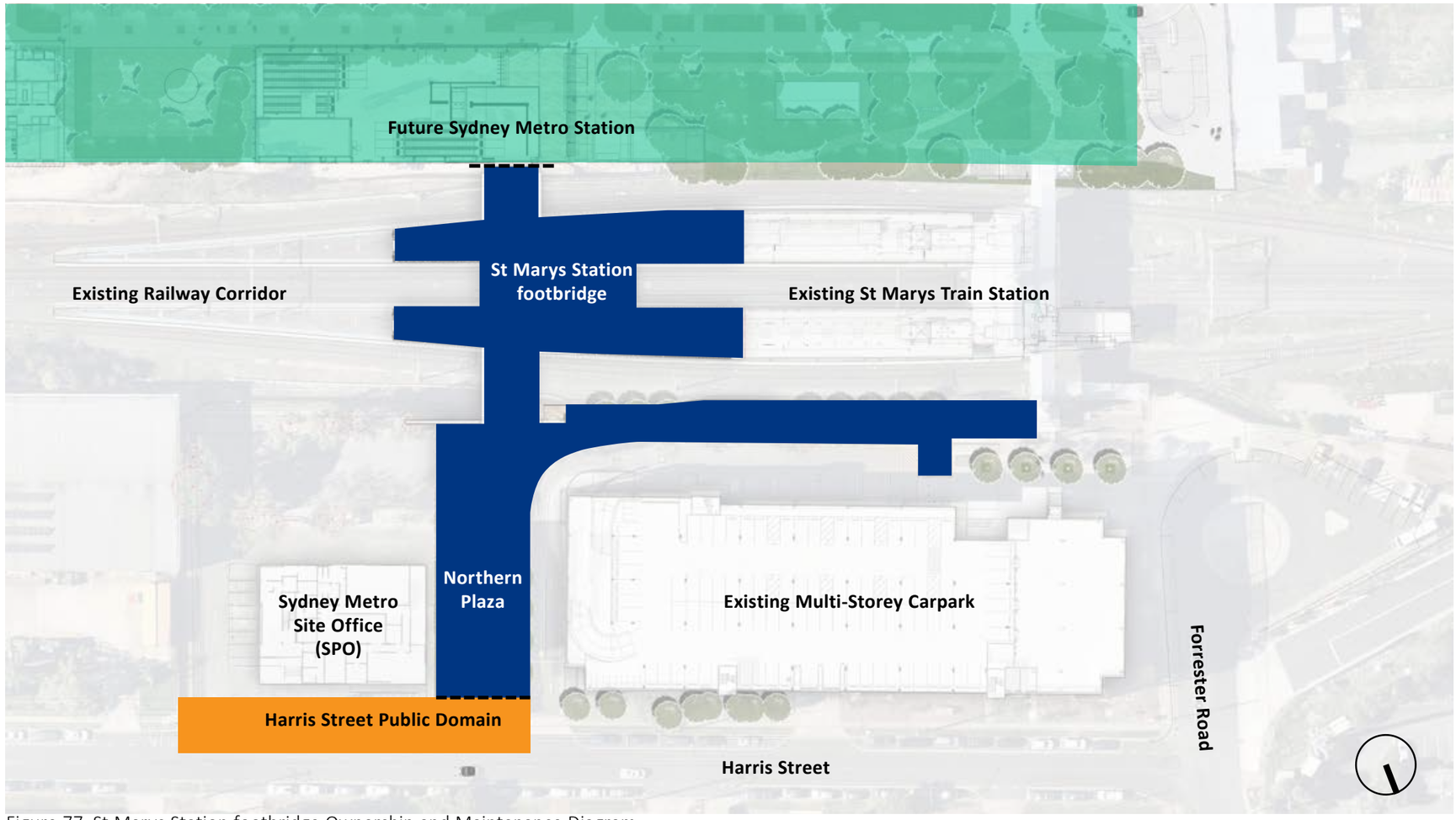


Figure 77: St Marys Station footbridge Ownership and Maintenance Diagram

LEGEND

- Future St Marys Station (not included in St Marys Station footbridge scope)
- Sydney Trains
- Penrith City Council
- Ownership Boundary

9 Management, Maintenance, and Implementation

9.3 Management and Maintenance for Design Elements

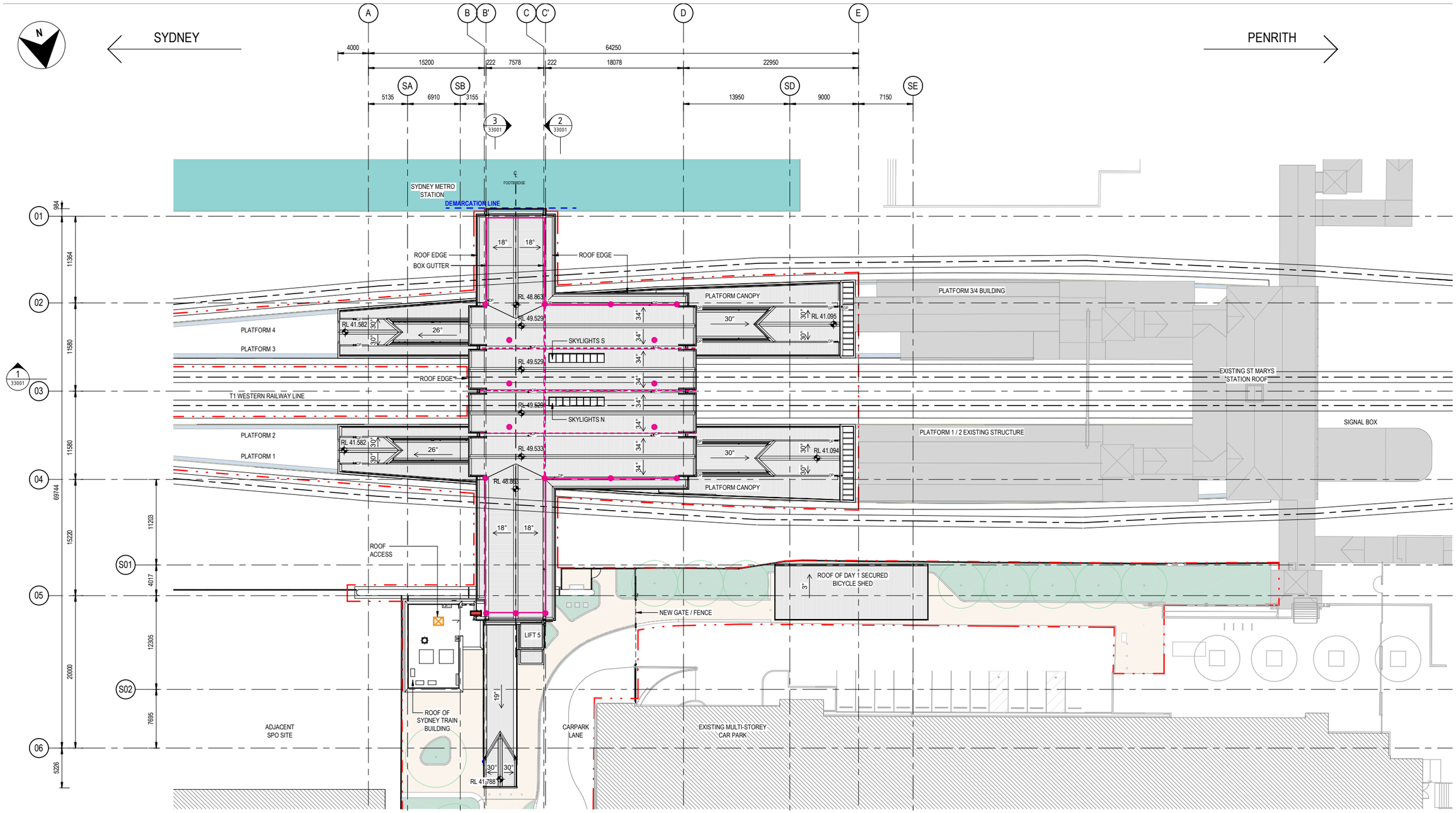


Figure 78: roof access diagram

General Maintenance

All elements and materials have been designed and chosen to prevent vandalism and minimize maintenance requirements. Where required, access points have been provided for regular and infrequent maintenance.

Footbridge Roof Level
The main roof of the footbridge is accessible through the Sydney Trains Building. Inside the Sydney Trains Building a ladder provides access to the roof via a roof access hatch.
Passage on the roof is provided through the gutter, which is level. Maintenance staff can safely work on the roof through the aid of a fall arrest system. The fall arrest system consists of a static line system and anchor points fixed back to the roof structure. The maintenance staff can attach to the static safety line with a lanyard that attaches to their safety harness.

Footbridge Facade
The footbridge balustrades are detailed such that the glazing can be replaced from inside the footbridge. Maintenance activities and external cleaning for any part of the façade would need to be undertaken during possession periods. These areas can be accessed from the platforms below the footbridge with the use of Elevated Work Platforms (EWP). A long pole wash can also be used on the external and internal sides of the glazing.
For external usage, this would also need to be undertaken during possession periods.

Footbridge Internal Areas
Internally most elements are made of tough materials such as concrete and steel. A stainless-steel skirting minimizes the damage and dirt to the are between the balustrade and the floor. The glazing of toughened, laminated glass ensures impact resilience.
For elements that are not immediately accessible, such as risers or cable trays and conduits inside the ceiling, access panels have been provided to facilitate access. For maintenance and inspection activities to these areas within the St Marys Station footbridge, ceilings, lighting fixtures and operational equipment can be accessed with a EWP. Minor activities could also be undertaken with a ladder and minimal maintenance staff.

Platfrom Canopy
Most of the canopy services can be reached by removing the ceiling cladding, which is mostly a click-in system in which the panels are not mechanically fixed. In positions where regular maintenance is expected, ceiling panels will be provided.

Indicative representation of ceiling access panel system.
Source: Scultform Click-on-Battens-Wall-Ceiling-Install-Manual (https://sculptform.com)

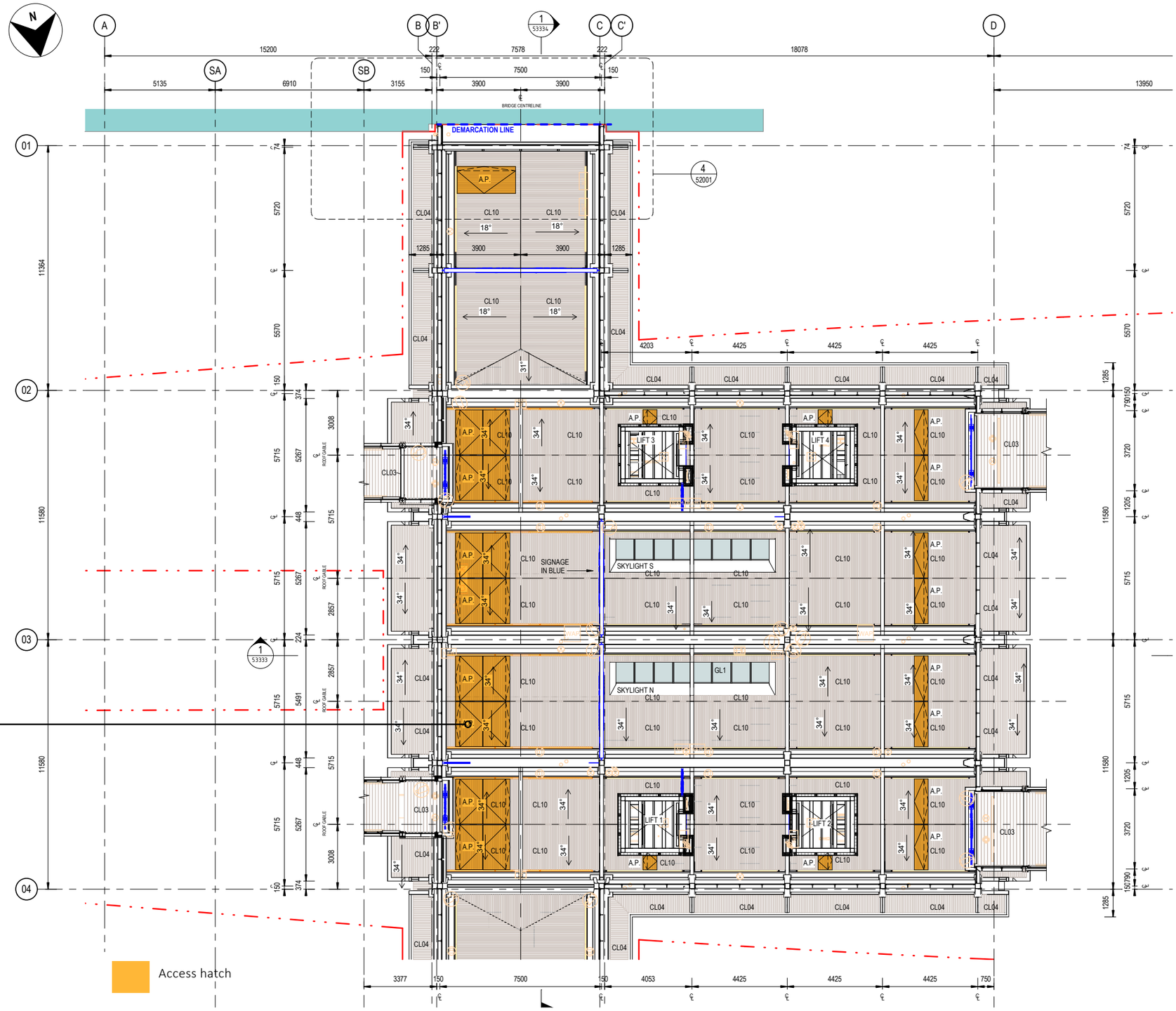


Figure 79: Ceiling access diagram, main concourse

Bird and vermin management

In addressing the issue of birds and vermin, our design focuses on passive measures rather than active solutions like electric bird wires, spikes, or ultrasonic sound repellents. To minimize the attractiveness of exposed horizontal surfaces, we've taken care to avoid them altogether. In cases where they are unavoidable, such as ledges and awnings, we've applied angles ranging from 15 to 35 degrees to deter birds and vermin.

Furthermore, when louvres are incorporated into the design, vermin mesh is applied at the back to prevent access by unwanted guests. In specific areas, we've employed Crime Safe security mesh with even smaller openings for enhanced protection.

Safety & Security Design

To safeguard against vandalism and break-ins, we've implemented various security measures:

- Crime Safe Security Mesh: We've added Crime Safe security mesh to all ground-level louvred openings, bolstering security.
- Anti-Graffiti Coating: Anti-graffiti coatings will be applied to all walls up to 3 meters from accessible surfaces, making it easier to remove graffiti and deter vandals.
- Brick Exterior: The Sydney Trains Building's brick exterior serves as a natural graffiti deterrent due to its textured surface, which doesn't provide a smooth canvas for vandals.
- CCTV Surveillance: CCTV cameras are strategically positioned throughout the building to monitor and deter potential security threats
- Help Call-Points: On both the concourse and platforms, help call-points are provided for immediate assistance and security response.
- Blast Resistance: The structure has been designed to withstand blast loads, serving as a deterrent against any potential threats involving explosive devices.
- Enclosed bike storage with transparent woven mesh enclosure designed to increase transparency.

Landscaping

The landscaping has been designed to optimise long-term maintenance. Irrigation shall be provided on an ongoing basis to the northern plaza and western pathway garden beds, and plaza tree planting.

Landscape maintenance will be continuous throughout operation of the project. The operator will be responsible for maintaining the landscaping in their licenced maintenance area to a high standard of health and appearance.

The following horticultural practices shall be carried out to ensure plants are maintained in a vigorous condition.

- Watering: generally ensure that all planting is receiving sufficient water to ensure vigorous growth and maintained in a healthy condition
- Weed and pest control: eradicate all grass, weeds and pests from within planted area manually or with approved weedicides and insecticides and remove from site and use measures to prevent re-infestation
- Monitoring all plants and trees for pest and disease on a monthly basis
- Fertilising as appropriate to the species
- Replacement of plants: treat or replace damaged plants and replace unhealthy or stolen plants to ensure minimum planting densities maintained
- Re-mulch as necessary to maintain mulched areas to the specified depths
- Litter and debris: ensure that the site is kept clean, free of litter, and general debris at all times
- Periodic reduction of biomass in the corridor to help maintain biodiversity / variety of ground layer herbaceous species
- Pruning of vegetation for safety with regards to operations of rail line, safety of public domain and CPTED surveillance

Appendix A
Evidence of Collaboration and Consultation

This section includes a summary of the collaboration and consultation undertaken during the preparation of this PUDCLP.

Appendix A
Evidence of Stakeholder Consultation

Table 5: Stakeholder Consultation

Stakeholder Group	Date	Agenda	Summary
PCC (Penrith City Council) Meetings	23.11.2023 15.12.2023 09.02.2024	Civil / Drainage	• Review of designs for the footbridge, ensuring compliance with local council guidelines. • Drainage solutions for the footbridge and surrounding area, particularly in relation to stormwater management. • Discussion of any required changes to roads, footpaths, or utilities due to the construction of the footbridge.
	29.05.2024 12.07.2024	Urban Design	• Review of the overall aesthetic and functional aspects of the footbridge within the St Marys precinct. • Input from PCC on ensuring the design integrates with existing urban planning strategies and enhances public space. • Consideration of public amenities such as seating, lighting, landscaping, and wayfinding. • Final adjustments and refinements to the urban design elements discussed earlier. • Ensuring that the footbridge fits harmoniously within the urban fabric and addresses community needs, particularly with respect to accessibility, safety, and aesthetics.
	27.06.2024 21.08.2024	Harris St Parking / Urban Design	• Discussion on the impact of the footbridge construction and operation on parking availability along Harris Street. • Consideration of solutions to manage parking demand, including the potential redesign of the Kiss and Ride area. • Ensuring that pedestrian and vehicular access around the parking area is safe and efficient. • Review of the urban design specific to Harris St. • Discussions on maintaining a balance between vehicular traffic, pedestrian flow, and parking availability.
	28.06.2024	Legacy Initiatives	• Identifying potential long-term benefits and initiatives associated with the footbridge project. • Exploration of opportunities to leave a positive, lasting impact on the local community through heritage recognition, improved public space, or infrastructure upgrades.
	01.10.2024	Presentation to Council on the existing urban design and CPTED outcomes	• Review the existing urban design / CPTED outcomes at St Marys Station • Review CPTED considerations • Review responses made in the FSM design. • Conclusion of CPTED Report. • Council satisfied with what is proposed, no further action.
Sydney Metro Meetings	05.04.2023	Architecture	• Overview of architectural design for the footbridge, including materials, structural form, and integration with Sydney Metro infrastructure. • Review of design considerations to ensure consistency with Sydney Metro's architectural standards.
	20.05.2024 06.06.2024	Urban Design	• Detailed discussion on how the footbridge complements the surrounding urban environment. • Focus on pedestrian flow, user experience, and integration with the transport network.
	09.07.2024 17.07.2024 24.07.2024	Pedestrian Modelling	• Analysis of pedestrian traffic volumes, particularly during peak travel times and special events. • Ensuring that the footbridge design accommodates future growth in pedestrian numbers and allows for seamless movement between platforms and surrounding areas.
	30.08.2024	FSM Signage & Wayfinding CASID Review	• Review of signage and wayfinding strategies for the footbridge to ensure clarity and accessibility for users. • Input on the placement of directional signs and integration with other Sydney Metro signage systems.
Heritage Working Group Meetings	20.09.2023 17.07.2024	Architecture / Heritage	• Consideration of how the footbridge design respects and preserves local heritage elements. • Discussion on architectural features that reflect the cultural and historical significance of St Marys. • Review of heritage impact assessments and any required adjustments to the design to minimize disruption to heritage-listed sites.

Appendix A
Evidence of Stakeholder Consultation

Stakeholder Group	Date	Agenda	Summary
PLM / SSTOM (Project Lifecycle Management / Sydney Metro Station Operational Maintenance) Meetings	02.02.2024	Materials & Finishes	• Selection of materials and finishes for the footbridge that align with durability, safety, and aesthetic requirements. • Review of finishes that withstand the local environmental conditions while maintaining a modern, appealing look.
	20.04.2024 02.05.2024	Architecture / ICDs (Interdisciplinary Coordination Documents)	• Review of architecture and interdisciplinary coordination documents to ensure seamless integration between structural, civil, and service elements of the footbridge. • Identifying and resolving any conflicts between disciplines during the design phase.
	03.05.2024	Acoustics	• Discussion on managing noise levels and ensuring the footbridge doesn't contribute to noise pollution. • Review of materials and design features to reduce acoustic impact.
	30.05.2024 07.06.2024 13.06.2024	Architecture / Structure / Services	• Coordination between the architectural design, structural engineering, and service installations (e.g., lighting, drainage, power). • Ensuring that all services are integrated into the footbridge without compromising design integrity or functionality.
	14.06.2024 21.06.2024 15.08.2024	FSM ICDs	• Detailed review of Interdisciplinary Coordination Documents (ICDs) for the FSM (Footbridge St Marys) project to ensure all teams are aligned. • Addressing any cross-disciplinary issues that may arise during construction.
	22.08.2024	PLM Structural ICD	• Focused discussion on structural engineering elements of the footbridge, ensuring the structure is safe, durable, and compliant with all relevant codes and standards.
Sydney Trains Meetings	26.05.2023	Services Building / Structure / OHW / Hydraulic	• Review of how the footbridge integrates with existing Sydney Trains services, particularly overhead wiring (OHW) and hydraulic systems. • Discussion on necessary adjustments to services infrastructure to accommodate the footbridge.
	02.06.2023	Services Building / Civil	• Coordination of civil engineering requirements for Sydney Trains services, including utility relocations and adjustments needed for the footbridge.
	13.12.2023	Drainage	• Review of drainage systems in and around the footbridge site to ensure proper water management and avoid any impact on rail operations.
	19.01.2024 03.05.2024	Access & Maintenance	• Discussion on ensuring that access for maintenance crews is adequately provided in the footbridge design. • Defining long-term maintenance responsibilities for both Sydney Metro and Sydney Trains.
	16.02.2024	Customer Services	• Consideration of the passenger experience, focusing on ensuring the footbridge provides convenient, accessible, and safe routes for all users, including those with mobility challenges.
	17.05.2024	Station Shut Down Scenarios	• Planning for station shutdowns during construction and ensuring minimal disruption to passenger services. • Coordination on communication strategies to inform passengers of any temporary closures or alternative routes.
	19.06.2024	Fire Life Safety	• Review of fire safety systems and evacuation plans to ensure compliance with Sydney Trains' fire safety requirements. • Integration of fire alarms and evacuation routes into the footbridge design.
	25.06.2024	OHW Consultation	• Detailed review of overhead wiring (OHW) systems and ensuring the footbridge design doesn't interfere with rail electrification systems.
	13.08.2024	Help Point Consultation	• Planning the location and functionality of Help Points on the footbridge to ensure passengers can easily access assistance if needed.
FRNSW (Fire and Rescue NSW) Meeting	06.08.2024	Presentation on Fire Engineering Brief	• Presentation of the fire engineering strategy for the footbridge, including evacuation routes, fire resistance, and emergency services access. • Ensuring the footbridge meets fire safety codes and standards as set out by FRNSW.
DPHI (Department of Planning, Housing and Infrastructure) Meeting	14.08.2024	St Marys Station footbridge PUDCLP Briefing	• High-level briefing on the St Marys Station footbridge Place, Urban Design, and Corridor Landscape Plan.
TTLG (Traffic & Transport Liaison Group) Meeting	04.07.2024	St Marys Station footbridge Interchange Access Plan (IAP) Briefing	• Presentation on the project's Interchange Access Plan (IAP)
Bradfield Development Authority (previously Western Parkland City Authority)	-	St Marys Station footbridge PUDCLP Briefing	• A briefing was offered via email on 19 August 2024, but no reply was received.
Western Sydney Planning Partnership	-	St Marys Station footbridge PUDCLP Briefing	• A briefing was offered via email on 19 August 2024, with a reply received on 1 October 2024 advising that a briefing was not required.

Appendix B
How feedback from Consultation has been addressed

This section includes relevant evidence of consultation, including meeting minutes, agendas, flyers/notifications, letters, email correspondence requesting or being provided with feedback.

Appendix B
How Feedback from Consultation has been Addressed

Table 6: Response to Stakeholder Consultation

Stakeholder Group	Date	Agenda	Description	Responses
PCC (Penrith City Council) Meetings	23.11.2023 15.12.2023 09.02.2024	Civil / Drainage	• Review of designs for the footbridge, ensuring compliance with local council guidelines. • Drainage solutions for the footbridge and surrounding area, particularly in relation to stormwater management. • Discussion of any required changes to roads, footpaths, or utilities due to the construction of the footbridge.	The project team provided a civil design to meet constraints as set out in council guidelines and recommendations from Council including connection to council stormwater drainage.
	29.05.2024 12.07.2024	Urban Design	• Review of the overall aesthetic and functional aspects of the footbridge within the St Marys precinct. • Input from PCC on ensuring the design integrates with existing urban planning strategies and enhances public space. • Consideration of public amenities such as seating, lighting, landscaping, and wayfinding. • Final adjustments and refinements to the urban design elements discussed earlier. • Ensuring that the footbridge fits harmoniously within the urban fabric and addresses community needs, particularly with respect to accessibility, safety, and aesthetics.	The project updated the design for streetscape along Harris St, including waiting shelter, pedestrian footpath extents, materiality, extents of garden beds and land ownership.
	27.06.2024 21.08.2024	Harris St Parking / Urban Design	• Discussion on the impact of the footbridge construction and operation on parking availability along Harris Street. • Consideration of solutions to manage parking demand, including the potential redesign of the Kiss and Ride area. • Ensuring that pedestrian and vehicular access around the parking area is safe and efficient. • Review of the urban design specific to Harris St. • Discussions on maintaining a balance between vehicular traffic, pedestrian flow, and parking availability.	The St Marys Project updated the parking arrangements on Harris St and integrate with the pedestrian footpath. Develop a design that does not preclude the future use of Sydney Metro SPO site.
	28.06.2024	Legacy Initiatives	• Identifying potential long-term benefits and initiatives associated with the footbridge project. • Exploration of opportunities to leave a positive, lasting impact on the local community through heritage recognition, improved public space, or infrastructure upgrades.	The project team is committed to exploring legacy initiatives that provide long-term benefits to the St Marys community. PCC put forward the idea of a mural and a bubbler for consideration as part of these initiatives. The final decision will be made in collaboration with Sydney Metro to ensure any proposed legacy initiatives meet approval requirements and are feasible within the project scope.
	01.10.2024	Presentation to Council on the existing urban design and CPTED outcomes	• Review the existing urban design / CPTED outcomes at St Marys Station • Review CPTED considerations • Review responses made in the FSM design. • Conclusion of CPTED Report.	Council satisfied with what is proposed, no further action.
Sydney Metro Meetings	05.04.2023	Architecture	• Overview of architectural design for the footbridge, including materials, structural form, and integration with Sydney Metro infrastructure. • Review of design considerations to ensure consistency with Sydney Metro's architectural standards.	The design was updated from reference design to consider the interaction between Sydney Metro station and the surrounding St Marys area.
	20.05.2024 06.06.2024	Urban Design	• Detailed discussion on how the footbridge complements the surrounding urban environment. • Focus on pedestrian flow, user experience, and integration with the transport network.	The design was modified to the Northern Plaza and Harris St frontage to provide enhanced customer experience.
	09.07.2024 17.07.2024 24.07.2024	Pedestrian Modelling	• Analysis of pedestrian traffic volumes, particularly during peak travel times and special events. • Ensuring that the footbridge design accommodates future growth in pedestrian numbers and allows for seamless movement between platforms and surrounding areas.	The project team undertook additional pedestrian modelling to simulate flows around the St Marys Footbridge providing justification of the St Marys Footbridge configuration.
	30.08.2024	FSM Signage & Wayfinding CASID Review	• Review of signage and wayfinding strategies for the footbridge to ensure clarity and accessibility for users. • Input on the placement of directional signs and integration with other Sydney Metro signage systems.	The design was updated to provide final positions and arrangement of wayfinding signs.
Heritage Working Group Meetings	20.09.2023 17.07.2024	Architecture / Heritage	• Consideration of how the footbridge design respects and preserves local heritage elements. • Discussion on architectural features that reflect the cultural and historical significance of St Marys. • Review of heritage impact assessments and any required adjustments to the design to minimize disruption to heritage-listed sites.	The project team adjusted canopies and architecture to enhance the heritage buildings and precinct.
PLM / SSTOM (Project Lifecycle Management / Sydney Metro Station Operational Maintenance) Meetings:	02.02.2024	Materials & Finishes	• Selection of materials and finishes for the footbridge that align with durability, safety, and aesthetic requirements. • Review of finishes that withstand the local environmental conditions while maintaining a modern, appealing look.	The design was updated to provide complementary materiality across between the northern and southern plazas
	20.04.2024 02.05.2024	Architecture / ICDs (Interdisciplinary Coordination Documents)	• Review of architecture and interdisciplinary coordination documents to ensure seamless integration between structural, civil, and service elements of the footbridge. • Identifying and resolving any conflicts between disciplines during the design phase.	Coordination between architectural and engineering disciplines to align footbridge and Sydney Metro building.

Appendix B
How Feedback from Consultation has been Addressed

Stakeholder Group	Date	Agenda	Description	Responses
Sydney Trains Meetings	03.05.02024	Acoustics	• Discussion on managing noise levels and ensuring the footbridge doesn't contribute to noise pollution. • Review of materials and design features to reduce acoustic impact.	The project team assessed acoustic levels produced by the St Marys footbridge project and amended mechanical plant to reduce noise levels to within budgeted ranges.
	30.05.2024 07.06.2024 13.06.2024	Architecture / Structure / Services	• Coordination between the architectural design, structural engineering, and service installations (e.g., lighting, drainage, power). • Ensuring that all services are integrated into the footbridge without compromising design integrity or functionality.	Integration and alignment of services and between Sydney Trains and Sydney Metro buildings.
	14.06.2024 21.06.2024 15.08.2024	FSM ICDs	• Detailed review of Interdisciplinary Coordination Documents (ICDs) for the FSM (Footbridge St Marys) project to ensure all teams are aligned. • Addressing any cross-disciplinary issues that may arise during construction.	The ICDs document the agreement of design and construction elements between parties.
	22.08.2024	PLM Structural ICD	• Focused discussion on structural engineering elements of the footbridge, ensuring the structure is safe, durable, and compliant with all relevant codes and standards.	The PLM Structural provision of inputs for Sydney Metro building supports
	26.05.2023	Services Building / Structure / OHW / Hydraulic	• Review of how the footbridge integrates with existing Sydney Trains services, particularly overhead wiring (OHW) and hydraulic systems. • Discussion on necessary adjustments to services infrastructure to accommodate the footbridge.	Explanation of footbridge siphonic drainage system and interaction with canopies, civil drainage and reticulation of outlets. Details of the OHW design solution and interface with footbridge.
	02.06.2023	Services Building / Civil	• Coordination of civil engineering requirements for Sydney Trains services, including utility relocations and adjustments needed for the footbridge.	Modelling of existing, proposed and relocated utilities and coordination of St Marys Footbridge infrastructure.
	13.12.2023	Drainage	• Review of drainage systems in and around the footbridge site to ensure proper water management and avoid any impact on rail operations.	Update drainage design to meet Sydney Trains maintenance and operational constraints.
	19.01.2024 03.05.2024	Access & Maintenance	• Discussion on ensuring that access for maintenance crews is adequately provided in the footbridge design. • Defining long-term maintenance responsibilities for both Sydney Metro and Sydney Trains.	Provide analysis of maintenance activities and update design to allow for appropriate access requirements.
	16.02.2024	Customer Services	• Consideration of the passenger experience, focusing on ensuring the footbridge provides convenient, accessible, and safe routes for all users, including those with mobility challenges.	The design was updated station furniture and precinct components to enhance customer experience and station staff recommendations.
	17.05.2024	Station Shut Down Scenarios	• Planning for station shutdowns during construction and ensuring minimal disruption to passenger services. • Coordination on communication strategies to inform passengers of any temporary closures or alternative routes.	An analysis of shutdown scenarios to produce conditions for barriers and shutter location and types to align with operational conditions was undertaken by the project team.
	19.06.2024	Fire Life Safety	• Review of fire safety systems and evacuation plans to ensure compliance with Sydney Trains' fire safety requirements. • Integration of fire alarms and evacuation routes into the footbridge design.	The project team confirmed of fire life safety solution for alignment with Sydney Trains requirements.
	25.06.2024	OHW Consultation	• Detailed review of overhead wiring (OHW) systems and ensuring the footbridge design doesn't interfere with rail electrification systems.	The project team provided further detail to explain the rationale of the design solution.
	13.08.2024	Help Point Consultation	• Planning the location and functionality of Help Points on the footbridge to ensure passengers can easily access assistance if needed.	The project team modified the layout of Help Points in station to suit operational and customer requirements.
FRNSW (Fire and Rescue NSW) Meeting	06.08.2024	Presentation on Fire Engineering Brief	• Presentation of the fire engineering strategy for the footbridge, including evacuation routes, fire resistance, and emergency services access. • Ensuring the footbridge meets fire safety codes and standards as set out by FRNSW.	The project team updated the Fire Engineering Report to address comments made in meeting.
DPHI (Department of Planning, Housing and Infrastructure) Meeting	14.08.2024	PUDCLP	• High-level briefing on the St Marys Station footbridge Place, Urban Design, and Corridor Landscape Plan.	
TTLG (Traffic & Transport Liaison Group) Meeting	04.07.2024	Interchange Access Plan (IAP)	• Presentation on the project's Interchange Access Plan (IAP)	

Appendix B
How Feedback from Consultation has been Addressed

Public Exhibition Period

The public exhibition period ran from Monday, 12th August 2024 to Sunday, 15th September 2024.

During this time, the project received 20 formal submissions, which are detailed in the table along with the project's responses.

Engagement activities during the public exhibition period included:
- Distribution of hardcopy and digital collateral
- Community information sessions
- Agency briefings
- Paid advertising
- Creation of a dedicated webpage

Appendix B
How Feedback from Consultation has been Addressed

Table 7: Public Exhibition Submissions and Responses

No.	Submission no.	Issues raised	Project response
1	**Lighting/Security/Access**		
1.1	FSM001, FSM007, FSM016	Request for improved lighting and security cameras, particularly in the evenings and winter, with clear markings for the vision impaired.	The public domain along the northern boundary of the existing St Marys Station would be improved as part of this project. This area has been designed to improve sightlines, pedestrian circulation, wayfinding, and customer safety. This includes footpaths, plantings, lighting, CCTV surveillance and wayfinding signage. The public domain finishes have been designed to provide colour contrast so that the path of travel is clearly defined. The design meets the illumination levels and comfort conditions recommended in the AS/NZS 1680 series and the Greenstar Lighting Comfort category. It is also suitable for the environment in which it is installed and complies with Occupational Health and Safety requirements.
1.2	FSM007	Request for additional lighting at the intermodal shelter on Harris Street to improve safety perceptions.	Harris St is currently lit by the Endeavour Energy lighting network. No additional lighting is proposed, as a lighting assessment has confirmed that the existing fixtures meet AS 1158 compliance, including coverage for the shelter, pedestrian footpath, Kiss and Ride parking, and accessible parking.
1.3	FSM011	Concern about heavy vehicles on Harris Street creating safety issues for Kiss and Ride users.	The size of new Kiss and Ride parking spaces on Harris Street would be designed to facilitate vehicle entry and exit. There will be new line marking to demarcate the spaces and new paving for the full width of the footpath to facilitate safer access.
1.4	FSM007, FSM012	Request for Opal card access to the new bicycle shed to prevent vandalism and boost use.	A new bicycle shed for 60 bicycle spaces will be provided on the northern side of St Marys interchange with an integrated electronic ticketing system and card readers installed in the new bike shed doors for entry and exit, allowing patrons to use their Opal cards for access. This is consistent with other bicycle sheds across the rail network.
2	**Colour/Design Elements**		
2.1	FSM003, FSM013	Feedback on the dark, uninviting colour scheme; recommendation for a more vibrant and welcoming design.	The colour and materials have selected to coordinate with the existing heritage elements, the existing station and car park and the new Sydney Metro station building. In addition to the building, the northern plaza will have new pavement and landscaping which would make the area more vibrant and welcoming. The design has undergone a thorough consultation with the independent government architectural body, The Design Review Panel (DRP). The design review process has recorded within this plan (see Appendix C).
2.2	FSM008	Criticism of the design for not reflecting the area's heritage; call for a more thoughtful, heritage-based design.	A commentary on the design development can be found in Section 5.1. Principles 1, 3, and 4 are particularly relevant to the architectural designs of the St Marys footbridge within the broader precinct context. On the platforms, the new canopies have been designed to respect the existing platform heritage elements. The colour and materials have selected to coordinate with the existing heritage elements and the existing station. The design has undergone a thorough consultation with the Sydney Metro Heritage Working Group.
2.3	FSM019	Disappointment over the lack of public art in the project; suggestion to incorporate local art to enhance the station.	The new footbridge forms one part of the Sydney Metro – Western Sydney Airport project. While the footbridge and northern plaza does not incorporate public art, there will be artwork installed as part of the St Marys Metro Station project on the southern side of the station. Please refer to the SSTOM Stage 2 PUDCLP for more information regarding public artwork as part of the Sydney Metro – Western Sydney Airport project at St Marys. Separately, we are currently working with Penrith City Council on exploring opportunities for local art in the St Marys precinct.
3	**Access**		
3.1	FSM012	Request for more accessible, day-to-day bike storage.	The current bicycle lockers on the northern side of St Marys interchange will remain unchanged. A new bicycle shed for 60 bicycle spaces will be provided on the northern side of St Marys interchange with an integrated electronic ticketing system and card readers installed in the new bike shed doors for entry and exit, allowing patrons to use their Opal cards for access.

Appendix B
How Feedback from Consultation has been Addressed

No.	Submission no.	Issues raised	Project response
3.2	FSM002, FSM007	Suggestion to include multiple lifts on the Harris St commuter car park platform to handle peak volumes.	St Marys Station will retain both the existing footbridge and lift access. The new footbridge design includes an accessible connection between the new and existing footbridges, ensuring an alternate accessible path is available if a lift is out of service. Pedestrian modelling shows that over 40% of passengers from the Sydney Metro Line, including those with large luggage, will use the lifts. The modelling also considers a range of users with varying mobility abilities at the same time. A new lift will be installed at the Northern Entrance, but no escalator is proposed. The lift will provide access to the footbridge level for passengers with luggage.
3.3	FSM004	Concern over the narrow car park entrance and Kiss and Ride area obstructing access, suggestion to relocate or make the road one-way.	The entry to the car park will maintain the alignment of the existing layback and vehicle crossing. It's important to note that the commuter car park driveway adjacent to the Kiss and Ride area is entrance-only and, as such, does not require any sight distance. The car park exit remains unchanged. A swept path analysis has been completed (see below), showing no obstruction from the Kiss and Ride area on Harris St. There are no proposals to alter the traffic flow on Harris Street, including making it one-way.
3.4	FSM005, FSM006, FSM007	Queries on added parking arrangements and managing single-lane traffic flow once the metro opens.	St Marys commuter car park was recently extended with two new levels in 2022, which delivered over 100 additional parking spaces in the area. The upgraded commuter car park is expected to accommodate the forecast future growth in park and ride travel to/from St Marys Station. The lane widths on Harris Street will remain unchanged, and there will be no alterations to the existing traffic flow on Harris Street.
3.5	FSM007	Call for step-free access to bike parking, particularly for disability bikes, due to hostile vehicle mitigation.	There are no steps between Harris Street and the bicycle storage area along the Northern Plaza. The northern plaza is not designed as a shared pathway, and the car park entrance is intended for vehicles only, not for cyclists.
3.6	FSM007	Wayfinding needed for secure bike parking, currently hidden by the multistorey car park.	The new bicycle shed accommodates 60 bicycles and would be a large structure. It will be visible from the entries at Forrester Road and the northern plaza. There will be visible signage installed on the bike shed.
3.7	FSM009, FSM018	Suggestion to make the footbridge an unpaid concourse for seamless pedestrian connectivity.	We understand the community preference for barrier-free access across the footbridge, though this must be balanced against the need to minimise loss of income from fare evasion, safety and security for customers and station staff. Pedestrians who want to use the new footbridge to cross from one side of the rail corridor to the other would be able to tap on and off with their Opal card or debit/credit card without payment. Connections are maintained and improved with the opal enabled (gated) connection during Metro operating hours. For tap-free access, pedestrians can continue to use the existing Sydney Trains footbridge. The current Sydney Trains footbridge does provide unpaid 24-hour connection from north to south.
3.8	FSM006, FSM010	Suggestion for a footbridge connecting the station and car park.	The location of the footbridge is fixed due to the connection to the metro station and constraints of the existing station platforms. The vehicle ramps of the existing commuter car park are located on the eastern end, prohibiting a direct connection to the new footbridge.
3.9	FSM017	Query about whether a moving walkway will connect the metro and existing platforms.	There will be access between the metro platforms and existing T1 line platforms using lifts and escalators.
3.10	FSM017	Concern about drop-off/pick-up access for mature or infirm passengers.	Three new kiss and ride spaces, including one accessible space, will be provided on Harris Street. This will provide direct entry to the northern plaza with lift access to the new footbridge and then by a second lift from the footbridge to the Metro platform.
4	**Street Furniture/Landscaping**		
4.1	FSM007	Suggestion for more external seating on the north side to enhance safety by encouraging people to linger.	Yes, the northern plaza has been designed to provide a variety of seating options including bench seats, low height walls, and integrated seating.

Appendix B
How Feedback from Consultation has been Addressed

No.	Submission no.	Issues raised	Project response
4.2	FSM015	Suggestion to adapt the design to future climate conditions with more shade, shelter, and greenery.	The design of the northern plaza and area between the station and the commuter car park considers the balance of direct sunlight, overshadowing and landscape. Climate change was considered during the design development and is addressed in Section 8.3 of the PUDCLP. If “protective spaces” refers to landscaping, commentary on green infrastructure, including tree canopy and ground coverage, can be found in Section 8.1.
5	**Amenities**		
5.1	FSM014	Need for more shops offering a variety of products and better cafes/restaurants in the area.	Penrith City Council: Council is leading an exciting planning pathway to manage growth and change in St Marys Town Centre over the next 20 years. The St Marys Town Centre Structure Plan, completed in 2022, sets the vision, place outcomes and directions to guide the growth of St Marys as a vibrant, welcoming, sustainable, and authentic strategic centre. Council is now progressing the St Marys Town Centre Master Plan. Supported by several technical studies, the Master Plan will refine the directions and framework of the Structure Plan. Further information on St Marys 2041: Planning Pathway, including the St Marys Town Centre Structure Plan, may be found on Penrith City Council’s website.
5.2	FSM019	Recommendation for station amenities such as vending machines, luggage storage, ATMs, and travel essentials for airport travellers.	Suggestion for amenities such as vending machines will be considered by Sydney Trains as the operator and maintainer of the new footbridge.
Response to Other Stakeholder Submissions Received			
Penrith City Council			
Theme		Issues Raised	Project Response
Passive Surveillance		Concern from Penrith City Council over lack of passive surveillance on the western pathway, more details on CPTED principles requested	The design has incorporated CPTED principles, using open spaces, glazing, open materials (e.g., mesh), and deterrents such as lighting and CCTV coverage. CCTV monitors the new works around the carpark, although the carpark itself is out of scope. Regarding passive surveillance along the western pathway, glazing is used around the footbridge, and open materials such as palisade corridor fencing, and mesh surround the bicycle store.
Access		Council supports improved north-south connectivity but advocates for 24/7 unpaid access to the footbridge.	The Sydney Metro FSM connection will close nightly between 12:15am to 04:15am (Sun-Thurs) and 01:15am to 04:15am (Fri & Sat). During these times, essential station maintenance and cleaning activities will occur to ensure the station condition is maintained to Metro’s Customer Standards. Several maintenance activities are performed using rope access and elevated work platforms. Access to public is restricted as part of safety. The current Sydney Trains footbridge does provide unpaid 24-hour connection from north to south. Station data only shows around 100 to 120 persons disembarking at St Marys Station during these hours, although it is acknowledged that residents from the broader community also use this connection, not just rail passengers.
Property Boundary		Concern over St Marys Station footbridge permanent built form on Council-owned land and ensuring ongoing access.	The boundary adjustment is part of a separate process and subject to agreement between TAHE and Council. This is not the subject of the PUDCLP.
Accessibility		Request for the PUDCLP to address accessibility needs, particularly for disadvantaged communities.	The design has considered persons with limited accessibility, as demonstrated in the PUDCLP under Section 1.7 Compliance – “E66,” and Section 3.4, which outlines the relevant guidelines and standards, including AS 1428.1: Design for Access and Mobility.
Retail Activation		Support for retail activation along the northern plaza but concerns over the limited frontage.	This project does not preclude the activation of the frontage of a future development, allowing for potential enhancements or expansions in line with planning and community needs.
Appendices		Missing appendices: Evidence of Collaboration and Consultation, Feedback Response, DRP advice integration.	The Appendices have been added to the document.
Connecting with Country		Request for further information on Connecting with country considerations.	This was addressed on page 13 (Section 1.7). The St Marys Station footbridge contractor is not required to respond to the Connecting with Country Framework or the Sydney Metro West Connecting with Ngura (Country) document. The Sydney Metro Station contractor’s PUDCLP will address the requirement in consultation with the Sydney Metro Western Sydney Airport Connecting with Country Working Group.

Appendix C
How DRP advice and recommendations has been addressed

SENSITIVE: NSW GOVERNMENT

Western Sydney Airport

Records of Advice and Recommendations Register 2022/2023/2024

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	15/09/2022	9.11	Buildings	Provide further design options for the northern façade (entry portal and Sydney Trains building) reconsidering: a. Gate line location b. Architectural form and materials, particularly considering how the design quality, language and detailing can better relate to the metro station to create a more unified ensemble c. The urban expression of the Sydney Trains pod, with a view to making a less defensive public interface d. Opportunities for the Sydney Train's pod to relate to the material palette of the metro service structures, if known and available e. Heaviness and depth of the canopy expression with a view to making reductions in structural material and edge profiles to create a finer, lighter expression f. Detail of the northern edge of the canopy with a view to opening more generous sightlines into the footbridge	AD - This is FSM scope. Please note FSM architectural design will be led by SSTOM as per FSM/SSTOM interface. AD 13.07.23 - Superseded by recent commentary.	Closed	closed -SS by a new comment
FSM	15/09/2022	9.12	Precinct	Pinch points between the new footbridge and the access road to the existing multistorey carpark were noted, presenting a safety and customer experience issue for cyclists utilizing the proposed bike facilities, as well as pedestrians. It was also noted that proposed tree planting to the public domain area between the rail corridor and footpath to the proposed cycle storage needs consideration. Provide a presentation on a holistic public domain design for the northern plaza and the zone between this and Forrester Road (see diagram in DRP advice sheet). Consider: a. How clashes between cyclists moving in both directions will be avoided at the pinch points, considering many may not dismount when approaching this corner b. Provision of a more generous pedestrian experience at this important public interface c. Provision of clear sightlines to avoid conflicts between cyclists and customers waiting for and exiting the lift d. Strategies to ensure tree planting will be successful in this constrained location e.g. permeable paving e. Bicycle and pedestrian connections to Forrester Road f. Urban cooling strategies for the plaza, which may include active water features in combination with tree canopy and/or the redirection of water to soils to hydrate landscape and feed transpiration.	AD - This is FSM scope. Please note FSM architectural design will be led by SSTOM as per FSM/SSTOM interface. 20231130-close SS by DRP33	closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.09	Buildings	Develop a clear conceptual approach to the assembly of parts to guide the architectural response. This could be by conceiving of the project as an aerial concourse with connections to ground, rather than a footbridge with a concourse grafted on. It was noted that the naming of the project as a "footbridge" has perhaps suggested a conceptual diagram that is flawed.	20231130- close SS by Design dvelopment	closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.1	Buildings	Rather than seeking a distinctive and differentiated architectural expression, reconsider the project as a "background" element. Strategies to consider here could include adopting or interpreting the gabled language of the Metro station, expressing the functional continuity between the two pieces of infrastructure.	by changing the roof design in DRP 30, this comment has been addressed due to the design development - closed to DRP satisfaction	Closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.11	Buildings	Give careful attention to achieving a refined junction between heritage station buildings and new stair canopies.	20231130- close SS by Design dvelopment	Closed	Closed -To The DRP's Satisfaction

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	20/4/2023	16.12	Buildings	Simplify the number of architectural elements and the material palette, including screening and paving types.	SM response: Noted - Material palette is to be largely the same for both SSTOM and FSM - Interface Control Document (ICD) for material and finishes is in progress between FSM and SSTOM FSM: The proposed material palette has been simplified and further developed in collaboration with PLM and Sydney Metro under the lead match arrangement. The current Architecture materiality was addressed in DRP 39 Slides 23-27. Refer to slide 24 of evidence pack provided prior to DRP on 14 June 2024. 20240612- DRP Opinion was : leave this open-more inputs are needed from FSM DRP 43- the response was presented by FSM and the comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.13	Precinct	Give early consideration to Hostile Vehicle Mitigation and security fencing to ensure solutions	HVM was presented in DRP 22 and this comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.14	Buildings	Ensure the secure bicycle storage structure is fully and architecturally resolved and reads as part of the project.	FSM: Bicycle storage structure is fully and architectural resolved and it's design is complimentary to the architecture of the revised and current Footbridge/Concourse building. 20240612- DRP Opinion : more inputs are needed from FSM DRP 43- the response was presented by FSM and the comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.15	Precinct	Reconsider the plan at ground to address intuitive wayfinding to the lift and associated CPTED issues with the current arrangement.	20231130- close SS by Design Development	closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.16	Precinct	Re-investigate levels along the laneway to the carpark to determine if the drop between the footpath and laneway can be eliminated.	SM response: Levels are effectively fixed given mandated maximum height of stair to concourse and fixed street level. There is approximately 600mm height difference to car park access road and therefore no balustrade required.- Retaining wall doubles as HVM barrier This comment was closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.17	Precinct	Confirm and ensure required soil volumes to support full and healthy tree canopy.	FSM: This was presented at DRP on 14 June 2024. 20240612- DRP Opinion : more inputs are needed from FSM DRP 43- the response was presented by FSM and the comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	20/4/2023	16.18	Precinct	Justify the inclusion of a bioswale in the northern plaza considering: a. it will be charged with roof water b. the impacts this element will have on the plaza design c. the barrier it may present to accessing active frontages to the plaza.	FSM: Bio swale has been removed from the design. It did not meet the peak flow and water quality requirements. Refer to slide 2 of evidence pack provided prior to DRP on 14 June 2024. SM response: :there is no bio swell anymore closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	20/4/2023	16.19	Precinct	Consider the multiple benefits of green roofs to manage stormwater, reduce temperatures and signal the high sustainability aspirations of TfNSW	SM response: Noted - there is no PS requirement to include green roofs so not mandated FSM scope ST has no appetite on maintaining the PVs closed-out of scope-Green roof is not in FSM scope of work closed by DRP -not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	20/4/2023	16.2	General	Ensure that future FSM presentation materials are provided at 90% completion no later than three days in advance of the DRP meeting.	SM response: Noted - Material palette is going to be mostly the same in both SSTOM and FSM - Interface Control Document (ICD) for material and finishes is in progress between FSM and SSTOM the comment was closed -SS by new comments	Closed	closed -SS by a new comment

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	1/06/2023	19.01	General	1. It is strongly recommended that further detailed design be delayed until the FSM design team meet with the design director/s of the Parklife Metro, Sydney Metro and TfNSW to generate a full range of additional options in sketch form. These additional options should be prepared for presentation at DRP 21, 29 June 2023. The goal of the session will be to establish a three dimensional and sectional approach to the footbridge, with attention to junctions, major security interfaces and key environmental issues such as orientation.	SM response: FSM has addressed the comments and demonstrated in the DRP session xx and with today's update the station design, including contextual considerations and junctions (Sydney Trains and Metro stations) and design in section and 3D and particularly roof form No further change to the roof form is required. Detailing and alignment with SSTOM finishes is ongoing. Ongoing design coordination with SSTOM is occurring and ICD being developed to describe common elements. Finishes, levels etc. are also being addressed at the TWG. the comment was closed -SS by new comments	Closed	closed -SS by a new comment
FSM	1/06/2023	19.02	General	2. In preparing for the session, it is advised that: a. the latest and most accurate information on the Metro station design (roof and soffit) be used b. additional options must consider all project elements concurrently (footbridge, concourse, northern entry urban design and architecture, platform stair canopies) to ensure an architectural solution of coherence and synthesis c. attention be given to communicating the conceptual diagram behind each option, alongside hand drawn plans and key sections.	SM response: FSM has presented the updated design solution to DRP 33 session with further development shown inDRP 43 session.c The comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.24	Buildings	24. Provide a further presentation on the build-up of the FSM to give the Panel a greater understanding of the proposed construction sequencing.	This comments is superseded by new design development and can be closed FSM: Please refer to document titled "Footbridge St Marys - Staging Presentation" for illustration of construction sequencing. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.25	Buildings	25. Investigate further options for the articulation of the roof form to enrich its appearance when viewed from surrounding developments. If skylights are justified, explore options for their design as an element to organise the roof, considering their articulation and geometric expression, and potential for alignment with the platform stairs.	SM response: Noted, refer to design development of roof FSM: Revised and current roof forms have been investigated and presented in DRP 30 on 09/10/23, DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24. Refer to slide 3 of evidence pack provided prior to DRP on 14 June 2024. DRP 30 Letter acknowledges proposed roof is appropriately articulated & support skylight arrangement. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.26	Buildings	26. Reduce the thickness of the footbridge/concourse roof and/or develop a different treatment of its leading edge to ameliorate the monolithic appearance of this element while also achieving an appropriate interface with stair canopies.	SM response: Noted- Presented today DRP 37 Refer to the Design development of the roof FSM: Revised and current roof edges have been investigated and presented in DRP 37 on 15/02/24. Letter from DRP regarding - DRP 37 acknowledges support of roof edge resolution. Refer to slide 4 and 5 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.27	Buildings	27. Audit the dimension of the structural columns to the footbridge/concourse area to reduce this element as much as possible.	SM response: Further reducing the columns for the 4 bay option will significantly increase the roof structure and therefore increase the size of the columns. Increasing the cost of material and program impacts. SM believes that the columns allow for better customer flow. FSM: Revised and current structure has been investigated and presented in DRP 30 on 09/10/23, DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24. In particular this was addressed in DRP 35 Slides 19-34. Refer to slide 5 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction

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FSM	**24/07/2023**	**22.28**	**Buildings**	28. Provide further detail on the resolution of the junction between the footbridge and Metro ("Interface detail sketch") with attention to: a. how the glazed infill meets the rotated structure of the Metro portal b. how mullion framing can be minimised.	SM response: Noted, refer to design development of roof it is superseded by new comments re new roof FSM: Revised and current SSTOM/FSM interface has been investigated in collaboration with PLM and Sydney Metro, and presented in DRP 39 on 28/03/24. In particular, this was addressed in DRP 39 Slides 3-22. Refer to slide 6 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	**closed**	**Closed -To The DRP's Satisfaction**
FSM	**24/07/2023**	**22.29**	**Buildings**	29. Develop a similarly strong and refined resolution of the soffit with the lift and stairs at the northern end of the footbridge. Consider how a view out to sky and surroundings will be maintained or strengthened here.	SM response: Noted, refer to design development of roof FSM: Revised and current design has been investigated and presented in DRP 30 on 09/10/23, DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24.In particular, this was addressed in DRP 33 Slides 39 & DRP 35 Slides 14-18 & DRP 39 Slides 24-27. Refer to slide 7 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	**closed**	**Closed -To The DRP's Satisfaction**
FSM	**24/07/2023**	**22.3**	**Buildings**	30. Develop a stronger architectural language for the walls to the footbridge/concourse considering the module of structure to infill, materials, play of depth, light/shade, and how this may resonate with the façade design and materials of the adjoining Metro.	SM response: Solid base to walls have been replaced by full height glazed walls FSM: Revised and current design has been investigated and presented in DRP 30 on 09/10/23, DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24.In particular, this was addressed in DRP 39 Slides 23-27. Refer to slide 8 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	**closed**	**Closed -To The DRP's Satisfaction**
FSM	**24/07/2023**	**22.31**	**Buildings**	31. Provide further imagery of the junction between the soffit and platform stair canopies to the west. A reflected ceiling plan would also assist in understanding the soffit design in its entirety.	SM response: Closed- DRP 37 presents a simplied version, reducing depth and removing the enclosure around the escalators FSM: Revised and current design has been investigated and presented in DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24.In particular, this was addressed in DRP 33 Slides 36-37 & DRP 35 Slides 32-34. Refer to slide 9 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	**closed**	**Closed -To The DRP's Satisfaction**
FSM	**24/07/2023**	**22.32**	**Buildings**	32. Provide information on the soffit finish (i.e., battens, Prodema), and the integration of lighting and other services, ensuring that visual clutter minimised.	SM propose to close due to the design development which has been presented in DRP 35 FSM: Soffit finish has been developed in collaboration with PLM under the lead match arrangement. Revised and current design has been investigated and presented in DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24.In particular, this was addressed in DRP 33 Slides 22-73. Refer to slide 11 of evidence pack provided prior to DRP on 14 June 2024. closed by DRP 20240612-not to the DRP's satisfaction	**closed**	**Closed -Not To The DRP's Satisfaction**

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FSM	24/07/2023	22.33	Buildings	33. Continue the design development of Study 1 as the beginning of an approach to resolving the interface of the heritage and new roofs. a. Investigate the relocation of gutters to the leading edge, noting that a corridor possession is already required to clean gutters on the heritage awning. b. Subject to customer requirements such as assisted boarding being managed elsewhere on the platform, investigate the elimination of the proposed glazed section between the heritage roof and new canopy, which may assist in softening any junction between new and old.	SM response: a. Operational protocol will be in place to allow for maintenance of the roof. b.Closed- the heritage advise and SM heritage SME preference is to have glazed interface FSM: Revised and current design has been investigated and presented in DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24. In particular, this was addressed in DRP 33 Slides 18-25, & DRP 37 Slides 23-25. Refer to slide 10 of evidence pack provided prior to DRP on 14 June 2024. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	24/07/2023	22.34	Buildings	34. Audit the structure of the platform canopies with a view to reducing it as much as possible, particularly the size and/or number of columns.	SM response:Further reducing the columns for the 4 bay option will significantly increase the roof structure and therefore increase the size of the columns. Increasing the cost of material and program impacts. SM believes that the columns allow for better customer flow. FSM: Platform canopy design has been revised to reduce the overall visual bulk of the structure. Introducing a cranked beam to further refine the edge condition. Revised and current design has been investigated and presented in DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24.In particular, this was addressed in DRP 33 Slides 22-73. Refer to slide 11 of evidence pack provided prior to DRP on 14 June. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	24/07/2023	22.35	Precinct	35. Reconsider the location of the lift at the northern end of the footbridge to determine if there is scope to change its location and/or operation to further alleviate the pinch point created between this and the adjacent kerb at ground level.	SM: panel accepted Base scheme FSM: Location of the northern lift location has been investigated and presented in DRP 33 on 16/11/23 and DRP35 on 14/12/23.In particular, this has been assessed in DRP 33 Slides 52-70. Refer to slide 12 of evidence pack provided prior to DRP on 14 June 2024. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	24/07/2023	22.36	Precinct	36. Investigate opportunities to open the space behind the footbridge stair up further.	SM: panel accepted Base scheme and so this can be closed FSM: Revised and current design has been investigated and presented in DRP 33 on 16/11/23.In particular, this has been assessed in DRP 33 Slides 52-70. Refer to slide 12 of evidence pack provided prior to DRP on 14 June 2024. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	24/07/2023	22.37	Precinct	37. Provide a shadow study for the northern plaza considering the heights of adjacent buildings and other future development.	In DRP 44 FSM response was presented : Refer to slides 13, 14, and 15 of evidence pack provided prior to DRP on 14 June 2024. in DRP 45 additional information on species based on shadow studies and low maintenance selections was presented to the DRP- and the comment was closed by DRP and transfered to SM and TfNSW to be considered in detail and how the layouts work in relation to buildings and their cast shadows, especially on the understorey.	closed	Closed, to be transferred to relevant SM Working Group

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FSM	24/07/2023	22.38	Precinct	38. Give further consideration to microclimatic conditions within the plaza, specifying the number and species of trees to suit.	FSM: The tree quantities and species of trees have been carefully selected based on a range of design criteria including current and projected micro-climate, hardiness, connection to Cumberland Plain ecologies, Green Infrastructure objectives, and coordination with the PLM southern plaza tree selections. A combination of Eucalyptus moluccana and Zelkova serrata provides both evergreen and deciduous tree amenity to the plaza, and adaptable canopy coverage to suit the seasons (shade in summer, solar access in winter). This was presented at DRP presentation on 14 June 2024. DRP 43- the response was presented by FSM and the comment was closed by DRP-SS by new comment	Closed	closed -SS by a new comment
FSM	24/07/2023	22.39	Precinct	39. Identify and design for further constraints to tree planting (e.g., overhead wires).	FSM: Proposed trees are clear of all existing and proposed services and OHWS, and placed to ensure their full mature potential. This was presented at DRP presentation on 14 June 2024. DRP 43- the response was presented by FSM and the comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.40	Precinct	40. Provide further information on the proposed water tank to the northern plaza including: a. its size b. impact of loss of soil volume on potential growth of trees c. minimal soil coverage needed to support proposed tree and other plantings.	In DRP 44 FSM response was presented : The OSD tank will be buried with a typical soil cover of 600mm to support general mass planted garden beds. The proposed trees have been sited to use the deep soil available in the garden bed beyond the OSD tank, and do not require the soil above the tank to achieve their full mature potential. The soil above the OSD tank is excluded from tree soil volume calculations as it does meet the minimum 1.2m soil depth requirement for trees. In the DRP, 45 additional information regarding soil volumes was presented, but it did not satisfy the DRP. It was noted that this information is inconsistent with the SM specifications, which are not adequate for healthy plant growth. This serves as a lesson learned for future SM projects.	closed	Closed -Not To The DRP's Satisfaction
FSM	24/07/2023	22.41	Precinct	41. Provide further species selection options for the row of tree planting indicated to the rail corridor.	In DRP 44 FSM response was presented : The proposed tree species adjacent the rail corridor is Tristaniopsis Laurina (Water Gum). This species has the capacity to grow into a small tree which is suitably sized to provide pedestrian amenity to the garden bed adjacent the western pathway, without becoming so large as to become a maintenance and security issue to the rail corridor. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	24/07/2023	22.42	Precinct	42. Provide further detail on the bicycle storage facility, including intuitive wayfinding and access to it, and its detailed design (including internal spatial arrangement, materials, finishes, colour), simultaneously considering potential for this northern-side facility to compliment/coordinate with the bike store at the Metro entry.	In DRP 44 FSM response was presented : Bicycle storage structure is fully and architectural resolved and it's design is complimentary to the architecture of the revised and current Footbridge/Concourse building. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed but not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	27/07/2023	23.56	Buildings	56. Illustrate the build-up of the supporting structure, construction methodology and other project constraints of the FSM making clear which components are fixed and cannot change.	SM response: 23-56- Refer to design development of roof – fixed and flexible items have been presented-see next page FSM: Revised and current design has been investigated and presented in DRP 30 on 09/10/23, DRP 33 on 16/11/23, DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24 Fixed components/constraints was addressed in DRP 33 Slides 50. Refer to slide 16 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction
FSM	27/07/2023	23.57	Buildings	57. Accepting these constraints, develop three to four different project parti diagrams to illustrate a range of different architectural approaches for the FSM. These diagrams should communicate how programmatic elements can be arranged in varying hierarchies to solve the formal and functional requirements of the FSM. The underlying parti of the Reference Design should be shown as the base case. There are a range of further detailed comments on the concourse as presented, but the need to establish strong, convincing organising principles for the architecture, which then inform any detailed design solution, is the key objective of the present design review, and forms the focus of advice at this stage.	SM response:23-57- 3 parti diagrams were presented and due to the new design of the roof we can close this comment- see next second page FSM: Letter from DRP regarding - DRP 30 acknowledges presentation, which included parti diagrams, are sufficient. Refer to slide 17 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	closed	Closed -To The DRP's Satisfaction

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FSM	10/08/2023	24	Buildings	Footbridge St Marys forms part of the Critical State Significant Infrastructure (CSSI) approval for Sydney Metro Western Sydney Airport. Clause A1 of the approval states that "the Proponent must carry out the CSSI…generally in accordance with the Sydney Metro Western Sydney Airport Environmental Impact Statement (EIS)". One of the appendices to the EIS are the "Design Guidelines" which set out the objectives for the design of the project including "the need to deliver an enduring and sustainable legacy for Sydney". The principle associated with this objective states that "a high standard of design and functionality is required for stations and precincts as the means of ensuring an enduring legacy" and to enable the project to deliver the Sydney Metro vision which is to "transform Sydney with a new world-class metro."The mechanism to determine whether the Sydney Metro Western Sydney Airport project is achieving this required "high standard of design and functionality" is the independent Design Review Panel. Under CSSI Condition of Approval (CoA) E67 the role of the Panel is to "provide advice and recommendation to the Proponent during the	Closed due to the design development	Closed	Closed -To The DRP's Satisfaction
FSM	10/08/2023	24	Buildings	After six reviews, the DRP is not satisfied that the current design for Footbridge St Marys is capable of achieving the required standard of design quality. The proposal has been compartmentalised into a series of discrete design problems but lacks the overarching architectural and functional idea needed to unite them.The design standard for Footbridge St Marys should be equivalent to the high quality of design being achieved on St Marys metro station proper, and have a considered relationship to it.As such, it is recommended that the project return to first principles to establishan appropriate, overarching design logic for this important and highly visiblepiece of public infrastructure. A commitment from Arcadis and LORAC tosupporting the design team through the design excellence process will beessential to achieving the standard of design quality required under the CSSIapproval. In addition, it is noted that the introduction of fresh design eyes can bevery beneficial in circumstances such as this. This can be achieved in a range ofways, for example through a change in personnel from within the current designfirm or the addition of a new design team to work in collaboration. This shouldbe considered	DRP 33- presented by FSM and closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.01	Buildings	1. Develop more detailed and accurate drawings to illustrate the options for the number of gables to the concourse, rendering the options accurately against lifts, stairs and other connections.	DRP 33- Provided. Refer to slides 6 to 17 the comment was closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.02	Buildings	2. Develop a finely detailed roof structure for the concourse, considering alternatives such as timber for the structural frame.	DRP 33- Provided. Refer to slides 23 to 43 Note: a timber structure is not viable at this location due to bomb blast requirements and required fire rating. closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.03	Buildings	3. Provide more information on drainage and water collection from the concourse/footbridge structure.	DRP 33- Provided. Refer to slides 19 to 31 closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.04	Buildings	4. Consider alternative locations for the installation of PVs, noting that a more accessible location may allow for a simpler but larger array for the same cost.	DRP 33- Not a requirement and so this has not been adopted for this project DRP:still open- refer to Sydney Train to be closed out. FSM: No further comment from FSM. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction

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FSM	22/10/2023	30.05	Buildings	5. Develop a clear strategy for the coordinated integration of the following elements beneath the main structure of the concourse/footbridge: a. upstands, balustrades and glazed or perforated screens, b. services conduit reticulation, including for CCTV, lighting, signage, sprinklers (if required) etc., c. downpipes. The above-listed elements should be rendered in all detailed drawings moving forward to ensure their integration and refinement is not overlooked, and that they become part of the architectural expression of the FSM.	DRP 33- a.Provided. Refer to slides 32 to 43 b.Provided. Refer to slides 28 to 32 C.Provided. Refer to slides 19 to 32 DRP: closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.06	Buildings	6. Provide more information on the detailed design of the interface between the gabled concourse and platform canopies, with attention to issues including: a. coordination with adjacent screens, b. achieving a fine leading edge, c. soffit design, d. services integration, e. signage.	DRP 33- Provided. Refer to slides 43 to 46 DRP:closed by DRP- ss by new comments	Closed	closed -SS by a new comment
FSM	22/10/2023	30.07	Precinct	7. Provide more information on what is fixed and flexible within the scope and location of the elements that comprise the northern plaza.	DRP 33- Provided. Refer to slides 47 to 50 closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	22/10/2023	30.08	Precinct	8. In proceeding to develop a unified scheme for the FSM that includes the northern plaza, issues to address include: a. reassessment of the scope and location of constructed elements (size, form and location of the Sydney Trains services building, location of connecting lifts and stairs) and other BOH elements, the arrangement of which in previous proposals resulted in pinch points, awkward spaces and CPTED issues. b. lower patronage/pedestrian numbers from the north which may influence the width of connecting stairs.	DRP 33-Provided. Refer to slides 52 to 70 Provided. Refer to slide 51 Note: the current northern stair width is based on requirements of clause 2.4.1(b) (ii)D from Sydney Metro's "Particular Specification" which states the stair requires a minimum 3,600mm cumulative width between handrails. closed by DRP	closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.02	Buildings	Provide further information on the junction between the FSM and Metro roofs and soffits to ensure a seamless and elegant resolution of this highly visible connection.	DRP 35:Provided. Refer to slides3 -13 DRP: closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.03	Buildings	Investigate the design of the assembly of elements at the northern stair and lift to explore a more elegant resolution at this termination of the footbridge.	DRP 35: Provided. Refer to slides 14 -18 closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.04	Buildings	Explore all options to further reduce the depth of the FSM roof structure.	DRP 35:Provided. Refer to slides 20 -25 closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.05	Buildings	Consider further refinements or "feathering" to lighten the edges of the primary and secondary FSM roof forms.	DRP 35:Provided. Refer to slides 20 -25 DRP: closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.06	Buildings	Provide further information on the proposed material for the FSM roof edge/s.	DRP 35: Provided. Refer to slides 20 -25 closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.07	Buildings	Provide further information on the purpose and resolution of the skirt/facia beneath the FSM concourse.	DRP 35: Provided. Refer to slides 26 -29 closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.08	Buildings	Provide confirmation that all roof water from the FSM concourse and smaller canopies is being harvested for storage and reuse elsewhere. If not being harvested, provide information on how stormwater will be connected to Penrith City Council's network.	WSUD-SS by 35.23 legacy comment - proposed to be closed FSM: FSM confirm that water is not being harvested. The roof drainage is directed to the northern plaza (was addressed in DRP 37 Slides 23-25). Refer to slide 18 of evidence pack provided prior to DRP on 14 June 2024.. Civil drainage then picks up the water, and takes through an On site detention system which matches the post development peak flow to the predevelopment peak flow. The drainage then goes to Harris Street, a new kerb inlet pit will be constructed which will connect to the west to the existing kerb inlet pit. The water is treated prior to discharge to PCC network.Consultations have been held with PCC to ensure alignment with council. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	16/11/2023	33.09	Buildings	Review the services integration strategy for FSM to minimise or eliminate weighty bulkheads.	DRP 35: Provided. Refer to slides 36 -37 DRP:Refer to slides 36 -37 The comment was closed by DRP-SS by updated comments due to the design development	Closed	closed -SS by a new comment

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	16/11/2023	33.10	Buildings	Re-examine the leading edge of the FSM platform canopies, reducing the thickness of this highly visible interface as much as possible.	DRP 35: Provided. Refer to slides 30 -34 The comment was closed by DRP-SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.11	Buildings	Investigate further options for the resolution of services to the lifts along the FSM concourse. A lighter, umbilical connection could be explored.	DRP 35:Provided. Refer to slides 38-42 DRP:the comment was closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.12	Buildings	Undertake daylighting studies to confirm that natural light to the FSM concourse will be even and without dark/light patches, refining the location and design of the skylights if needed.	DRP 35:Provided. Refer to slides 43-49 DRP: the comment was closed by DRP- SS by updated comments due to the design development	Closed	closed -SS by a new comment
FSM	16/11/2023	33.13	Buildings	When investigation the design of skylights to the FSM concourse further, reconsider the design of the adjacent battens which in this location add to the sense of depth and heaviness of the roof structure.	In DRP 44 FSM response was presented : Revised and current design has been investigated and presented in DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24 Final Skylight integration is included in DRP 39 Slide 26. Refer to slide 19 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.14	Buildings	Extend the daylight studies of the skylight to include analysis of the solar gain and glare from low-angled sun from the east and west. This study may inform a more nuanced treatment of the infill glazing panels.	In DRP 44 FSM response was presented : A glare study was completed which show the design satisfies the requirements stipulated in the NSW Government Department of Planning 'Development Near Rail Corridors and Busy Roads Guideline', 2008, section 5.8 'Lighting, External Finishes and Design'. Refer to slide 20 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.15	Buildings	Develop a strategy for signage integration, with particular emphasis on how signage can be supported without connecting through the battened soffit.	In DRP 44 FSM response was presented : Revised and current design has been investigated and presented in DRP35 on 14/12/23, DRP 37 on 15/02/24 & DRP 39 on 28/03/24 Signage integration was presented in DRP 35 Slides 15, 22-73. Refer to slide 21 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:to leave it open The final response/Update on this comment was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.16	Precinct	Clarify the proposed cycle route to the FSM bicycle storage facility	FSM: Cyclist will take the shared path; however most will come in from Forrester Rd. Presented at DRP 30 on 09/10/2023. Refer to slide 22 of evidence pack provided prior to DRP on 14 June 2024. legacy comment -closed by DRP 20240612	Closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.17	Precinct	Investigate further realignment/refinements to the low wall/integrated HVM along the access road to the St Marys car park to address the pinch point at the stairs, in particular considering the potential for clashes between cyclists (who are unlikely to dismount) and pedestrians.	In DRP 44 FSM response was presented : DRP 33 identified that the reference design had a 2.2m pedestrian path (assessed in Slide 52-68). Refer to slide 23 of evidence pack provided prior to DRP on 14 June 2024. The minimum requirement for shared pathway is 2.5m The pinch point is in excess of 2.5m between HVM and Lift 5. The alignment of the HVM wall has been aligned to optimise the footpath whilst maintaining vehicular access to the multistorey carpark. This was consistent with the DRP presentation on 14 June 2024. DRP 43- was presented by FSM and DRP opinion was to keep it open-for the purpose of coordination and risk assessment in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	16/11/2023	33.18	Precinct	Design the northern plaza of the FSM with future active frontages to the eastern edge in mind. PCC confirmed that a Structure Plan and Masterplan are currently being prepared for the St Marys town centre, with best uses for the north-eastern site being considered. PCC will provide an update on this work once further developed.	In DRP 44 FSM response was presented : The FSM northern plaza has been designed with flexibility in mind, with a fully paved plaza space with paving which continues to the boundary. This paving has the ability to be extended seamlessly to a future active frontage, which maximises opportunity for activation with outdoor dining. A specimen deciduous tree forms a focal feature within the paved plaza area, providing shade and visual amenity and a human-centered experience which will add value to any future active frontage. The garden bed beyond the plaza will provide a soft landscaped buffer and backdrop to the future development, with potential to incorporate additional seating edges and other furniture. Strong sightlines between the northern plaza and future development will be maintained across the garden bed through careful layering of understorey planting and clear underpruned tree canopies. This was presented at DRP presentation on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.19	Buildings	Provide a presentation on the strategy behind material selection and colour palette at the next DRP review, providing options for review if appropriate.	for both architectural and landscape design materials are coordinated by PLM in material and finishes ICDs to be the same legacy comment - proposed to be closed FSM: The proposed material palette has been simplified and further developed in collaboration with PLM and Sydney Metro under the lead match arrangement. The current Architecture materiality was addressed in DRP 39 Slides 23-27. Refer to slide 24 of evidence pack provided prior to DRP on 14 June 2024. Urban Design and Landscaping materiality was at DRP on 14 June 2024. legacy comment -closed by DRP 20240612	Closed	Closed -To The DRP's Satisfaction
FSM	16/11/2023	33.2	Precinct	20.Provideapresentationonthestrategybehindmaterialselectionandcolourpalette	DRP 35:the response was presented by FSM and the comment was closed by - SS by updated comments due to the design developmentclosed20231124	closed	Closed -To The DRP's Satisfaction
FSM	14/12/2023	35.15	Buildings	15. Ensure that the materials and detailing of the FSM Sydney Trains building is consistent with CHROFI's services buildings, with particular attention to brick work selection, textures and how openings/doors/windows are being formed and detailed.	In DRP 44 FSM response was presented :Further to the material presented to DRP 35 Slide 47, which details CHROFI's services buildings materiality, Consultation with PLM & Sydney Metro held 02.02.24 regarding materials for Sydney Trains building. Agreed between parties for FSM to take inspiration from PLM bicycle store brickwork for the Sydney Trains building, which has been incorporated. Refer to slides 25 - 33 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac - more info was requested by the DRP IN DRP 45 on 2nd October the update on the brick works which were in consistant with the bike store of the SSTOM was presented and the comment was closed by DRP and transfer to SM and TfNSW. to be managed during the implementation stage to be compliance with the architectural detail.	closed	Closed, to be transferred to relevant SM Working Group

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	14/12/2023	35.16	Precinct	16. Refine the design of the FSM concourse supporting beam as it interfaces with other elements, considering: a. removal of the corbelling under the footbridge b. provision of a consistent treatment and alignment (horizontally and vertically) for the bottom third of the supporting beam along its entire length – from beneath the footbridge, along the façade and as it turns the corner to meet the stairways at both ends. Review this member to determine if there is any redundancy in this zone that would allow its profile to be inset to reduce the sense of bulk of this member.	FSM:a.The corbel is required for structural reasons because the bridge planks would otherwise exceed their maximum permissible spans b.As illustrated in DRP35, these main structural members carry the concourse almost entirely; the large spans and heavy loads lead to there being no redundancy in the member. A rebated edge reduces the visual bulk of the member by splitting it into smaller parts and creating a visual alignment to the precast members spanning the rail line. the response was Presented in DRP 37 by LORAC slides3-4- the comment was closed by DRP but not to DRP satisfaction- while DRP acknowledge the existing constraints, strongly suggest that Due diligence needs to be done in terms of corbel design	closed	Closed -Not To The DRP's Satisfaction
FSM	14/12/2023	35.17	Precinct	17. Provide information on the specification for off-form concrete at FSM.	FSM:Specification provided, including benchmarks for the project. The benchmarks are from Sydney Central Station and Erskineville the response was Presented in DRP 37 by LORAC slides3-4- the comment was closed by DRP	Closed	Closed -To The DRP's Satisfaction
FSM	14/12/2023	35.18	Precinct	18. Consider further refinements to the interface of the FSM concourse roof and platform canopies beneath. Options to explore could include: lowering the height of the canopy to align with adjacent glazed screens; glazed screening in the gable end to provide weather protection, allowing the canopy to be pulled back; pitching the canopy to nest under the concourse gables to provide continuous weather protection.	FSM:This interface has been further refined. •The buildup and length of the escalator canopy has been minimized. •The glazed side panels, that served as enclosures to work in conjunction with the previously proposed roller shutters, have been removed. Presented in DRP 37 by LORAC slides 7-9- DRP: closed - to DRP's satisfaction- some more consideration is needed for column edges in order to avoid kincks and corners	Closed	Closed -To The DRP's Satisfaction
FSM	14/12/2023	35.19	Precinct	19. Investigate additional options for the overlap of the footbridge roof andthe stair/lift canopy at the northern end of the FSM, including itsextension to the column line of the footbridge, and pulling the pitched footbridge roof back further to create a more pronounced break. It wasnoted that the approach here may also inform resolution of the interface with the services component on the eastern side, by reducing the extent of overlap.	FSM:The canopy has been reduced in overhang. This minimized canopy meets weatherproofing requirements while creating a zone for the siphonic pipes from the roof drainage to enter the Sydney Trains Building in a subtle and innocuous manner. Presented in DRP 37 by LORAC slides 10-15-- DRP: closed but not to DRP satisfaction- while DRP acknowledge the existing constraints, and despite of all valuable efforts that have been taken Design excellence has not been achieved	closed	Closed -Not To The DRP's Satisfaction
FSM	15/12/2023	35.20	Buildings	20. Provide further optioneering on the interface between the Metro station and FSM roofs. Options to explore include adjustment of the ridge line on the footbridge roof to align laterally with the Metro gable, and reconsideration of options that provide an articulated ‘gap’ or transition zone between each structure.	In DRP 44 FSM response was presented : Roof geometry at the interface with SSTOM building has been further developed in collaboration with PLM. Revised and current design has been investigated and presented in DRP 39 on 28/03/24. In particular, this was addressed in DRP 39 Slides 2-22. Refer to slide 34 of evidence pack provided prior to DRP on 14 June 2024.Revised and current design has been investigated and presented in DRP 44. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	16/12/2023	35.21	Buildings	21. Collaborate with PLM further to determine the function of the pink portal wall at the interface between Metro and the FSM, and how this could be designed out or refined to assist in a more seamless transition.	DRP FSM response was present: Roof geometry at the interface with SSTOM building has been further developed in collaboration with PLM. Revised and current design has been investigated and presented in DRP 39 on 28/03/24. In particular, this was addressed in DRP 39 Slides 2-22. Refer to slide 34 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	17/12/2023	35.22	Precinct	22. Continue to refine the edge detail of the FSM roof, investigating a thinner leading edge by exploring options such as a raking soffit, and using a custom fabricated steel profile, rather than the heavy, horizontally layered build-up of steel elements.	FSM:All roof edges have been refined, following a hierarchy of similar types. the response was Presented in DRP 37 by LORAC slides3-4- the comment was closed by DRP - slide 23-31- DRP	Closed	Closed -To The DRP's Satisfaction

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FSM	18/12/2023	35.23	Precinct	23. TfNSW/SM to provide further clarification on how stormwater collected from the FSM roofs will be managed.	FSM:The roof drainage is a siphonic system which collects the footbridge roof water and directs to the northern plaza area. Civil drainage then picks up the water and takes through an On site detention which matches the post development peak flow to the predevelopment peak flow. The drainage then goes to Harris Street, a new kerb inlet pit will be constructed which will connect to the west to the existing kerb inlet pit. Consultations have been held with PCC to ensure alignment with council. closed by DRP 20240612-not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	15/02/2024	37.01	Buildings	Explore opportunities to remove kinks and corners in glazed screens to create a simple visual language, while avoiding areas for litter collection	In DRP 44 FSM response was presented : Roof geometry at the interface with SSTOM building has been further developed in collaboration with PLM. Revised and current design has been investigated and presented in DRP 39 on 28/03/24. In particular, this was addressed in DRP 39 Slides 2-22. Refer to slide 34 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	15/02/2024	37.02	Precinct	Explore introducing trees and soft planting, including climbing plants where possible, to soften the elevation of the services component.	In DRP 44 FSM response was presented : Additional garden beds have been introduced to the built form west elevation, to soften it and to provide more intuitive wayfinding for pedestrians. Final landscape design is shown below. It is noted that climbing plants introduce both a maintenance issue for the asset manager as well as a security concern as a climbing aid to access the rail corridor, noting this they have not been incorporated within the design. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed but not to the DRP's satisfaction	closed	Closed -Not To The DRP's Satisfaction
FSM	15/02/2024	37.03	Buildings	3.Further reduce the visual bulk of the horizontal element connecting the SSTOM and FSM roofs. Consider; a.Visually separating the element from the 'quad column structure', b.Lowering the element to conceal the head of the gate, with glazed vertical elements, c.Providing sketches rather than detailed visualisations to ensure conceptual clarity and continuity with other elements of FSM.	In DRP 44 FSM response was presented : Design resolution with SSTOM interface has ben developed in collaboration with PLM. Revised and current design has been investigated and presented in DRP 39 on 28/03/24, In particular, this was addressed in DRP 39 Slides 2-22. Refer to slide 36 of evidence pack provided prior to DRP on 14 June 2024. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	28/03/2024	39.01	Buildings	1. Ensure that the most up-to-date and detailed model of the metro station is being used when finalising design development of the interface between Metro and FSM.	In DRP 44 FSM response was presented : FSM confirm the most up to date SSTOM model is being used for design development at the interface with SSTOM. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	28/03/2024	39.02	Buildings	2. Consider how the form and detailing of the solution now achieved for the interface between FSM and Metro can inform the resolution of the northern end of the footbridge and its connections with lift, stairs, roof form etc.	In DRP 44 FSM response was presented : Design of the Northern end of the footbridge is finalised as presented in DRP35 Slides 14-18. Slide15 of DRP 39 addresses the integrated approach which also includes the Northern Entry. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	28/03/2024	39.03	Buildings	3. Subject to the final decision regarding the soffit material and finish for St Marys metro station, investigate alternative finishes for the battens for the FSM soffit to achieve a high level of consistency with the adjoining, while also meeting regulatory and aesthetic requirements.	In DRP 44 FSM response was presented : Upon consultation with PLM, FSM have been informed that PLM are proceeding with solid timber battens from "Scupltform" or an acceptable equivalent manufacturer and will be in an Australian Oak finish. FSM will match this finish with Australian Oak look aluminum battens also from "Scupltform" or acceptable equivalent. The battens to be used in FSM must be non-flammable to ensure compliance to regulatory standards and aesthetic consistency with SSTOM are both achieved. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	28/03/2024	39.04	Buildings	4. Consider low embodied carbon materials wherever possible to offset any unavoidable use of carbon-intensive materials such as aluminum, e.g., the use of recovered/recycled aggregates in the proposed terrazzo flooring.	In DRP 44 FSM response was presented : Low carbon opportunities are being considered within the design as part of compliance to SDG requirements. In order to address Particular Specification requirement PS-01, section 1.6.2 (g) [Contractor must achieve a minimum greenhouse gas emissions reduction target of 25% to be demonstrated using the CERT.] low carbon material opportunities have been considered in the design process through an embodied carbon assessment and subsequent investigations into low carbon concrete and steel options. Where feasible, these mixes have been incorporated into design. The design team continues toinvestigate further opportunities for inclusion of these materials. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	28/03/2024	39.05	Buildings	5. Align the flooring material between Metro and FSM to ensure visual continuity.	In DRP 44 FSM response was presented : Agreed in principle and is being pursued.FSM have held design workshops with PLM and coordinated flooring material alignment. Visual continuity is now achieved and documented in the final design as shown in slide 26 DRP 44 below. The tile floor is being coordinated with the SSTOM team to ensure consistent paver and paver size for this interface location/level. The floor sample below and its aggregate has been shared with the FSM team and agreed upon. The FSM tile orientation has been adopted by the SSTOM team to interface fully with the FSM. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed to the DRP's satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	28/03/2024	39.06	Buildings	6. Provide an update on the design of the northern plaza, particularly considering changes to the temporary building that forms its eastern edge.	In DRP 44 FSM response was presented :Updated Northern Plaza design is shown below. This has been completed in consultation with Sydney Metro and PLM. Finishes and materials are to match PLM as per the lead / match arrangement. Following further consultation with the Sydney metro and TfNSW teams, the northern plaza has been amended to provide further consideration to the flow of the entry path by: shifting the bicycle hoops away from the access road and adjusting the path and garden bed alignments to allow for the current boundary alignment along Harris St. in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:closed -Superseded by a new comment	closed	closed -SS by a new comment
FSM	14/06/2024	43.06	Precinct	6.Provide further options for the location of the hydrant booster valve enclosure in the Northern Plaza(e.g. set it back further into the landscape from the footpath and entr), Explore all options to reduce rather than emphasize, its bulk and impact., and consider the use of the carpark entry road by fire vehicle when accessing the hydrant.	In DRP 44 FSM response was presented : The fire hydrant booster valve location is governed by statutory AS 2419.1 and DtS provisions of NCC ensuring operational functionality and access during a fire emergency and enabling Fire and Rescue NSW (FRNSW) to locate and access upon first arrival, reducing response time and enhancing fire suppression efforts.The booster valve must be clearly visible and marked with appropriate integrated signage making it identifiable to the fire brigade in an emergency with unobstructed access around, clear of obstacles, parked vehicles, or any other barriers that could impair access during an incident, the booster assembly must be oriented in a manner that allows direct connection of hoses and equipment from the appliance hardstand. (Harris Street) The FSM team have reviewed the position and size and worked to reduce the height by approx. 300mm. The FHB has been obscured by a precast wall, thereby making the element a welcoming feature. Furthermore, when reviewed in context (see image below) it becomes apparentthat the FHB scale is appropriate as it is ‘dwarfed’ by the adjacent structures. in DRP 44 was presented by Lorac - more info was requested by the DRP The final Update with the lower wall was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	14/06/2024	43.07	Precinct	7.Ensure pedestrian lighting design and fixtures in the Northern Plaza are discrete and consistent with the PLM selection for the Station Street plaza. Fixtures with outreach arms, shown in some of the renders, are not supported.	In DRP 44 FSM response was presented : Light fixtures used for pedestrian lighting in the North Plaza Area are based on the Sydney Trains list of Approved Products Register taken from the TfNSW sharepoint: WE-EF VFL-530 series WE-EF VFL-540 series in DRP 44 was presented by Lorac and FSM proposed to close- DRP opinion was:to remain open The final response/Update on this comment was presented in DRP 45 on 2nd October and comment was closed by DRP and transfered to SM working group for further development on the colour, tempreture, brightness and PA ratingto be the same as SSTOM side and part be to be persued for the reduction of the pole size through engineering input.	closed	Closed, to be transferred to relevant SM Working Group

PACKAGE	MEETING DATE	ITEM #	THEME	DRP ADVICE	ACTION / RESPONSE	STATUS	close categories
FSM	14/06/2024	43.08	Precinct	8.In reviewing species selection for the Northern Plaza, consider: a.different Eucalypts, as the E. moluccana may be too large in this location b.relocating taller evergreen trees to the aest of the plaza , with the smaller more compactly planted evergreen trees to the west to screen the carpark	In DRP 44 FSM response was presented : Following further consultation with the Sydney Metro and TfNSW teams the design is proposed to be amended to include a row of narrow evergreen trees along the western side of the plaza to screen/buffer the car park entry road. Larger deciduous trees will be included in the wider western planter bed to avoid overshadowing the plaza during winter when there is increased shade from the adjacent structures. in DRP 44 was presented by Lorac - more info was requested by the DRP The final Update with the lower wall was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	14/06/2024	43.09	Precinct	9.Remove the redundant gate and fencing adjacent the new northern bicycle storage building at St Marys.	In DRP 44 FSM response was presented : AMB security standard require multi-level car parks to be able to be completely. The proposal is to replace the existing gate and fencing to ensure compliance to this requirement. in DRP 44 was presented by Lorac - more info was requested by the DRP The final Update with the lower wall was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	14/06/2024	43.10	Precinct	10.Integrate signage with lighting poles in the Northern Plaza where possible.	In DRP 44 FSM response was presented :The FSM team have discussed this with the project Wayfinding specialist, who have met with the TfNSW wayfinding team regarding the project and confirmed the proposed arrangement is in accordance with TfNSW wayfinding requirement. No additional wayfinding signage is required within this precinct. in DRP 44 was presented by Lorac - more info was requested by the DRP The final response/Update on this comment was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	25/07/2024	44.16	Buildings	Reconsider the junction between the footbridge and Sydney Trains building in terms of stormwater management, materials and detailing to achieve an improved architectural resolution in this visible location.	The final response/Update on this comment was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction
FSM	25/07/2024	44.17	Buildings	Investigate the requirements for statutory signage (type, number, locations) to ensure this is well integrated into the architectural design and coordinated with other signage.	The final response/Update on this comment was presented in DRP 45 on 2nd October and comment was closed by DRP- to their satisfaction	closed	Closed -To The DRP's Satisfaction

Appendix D
Interchange Access Plan (IAP)

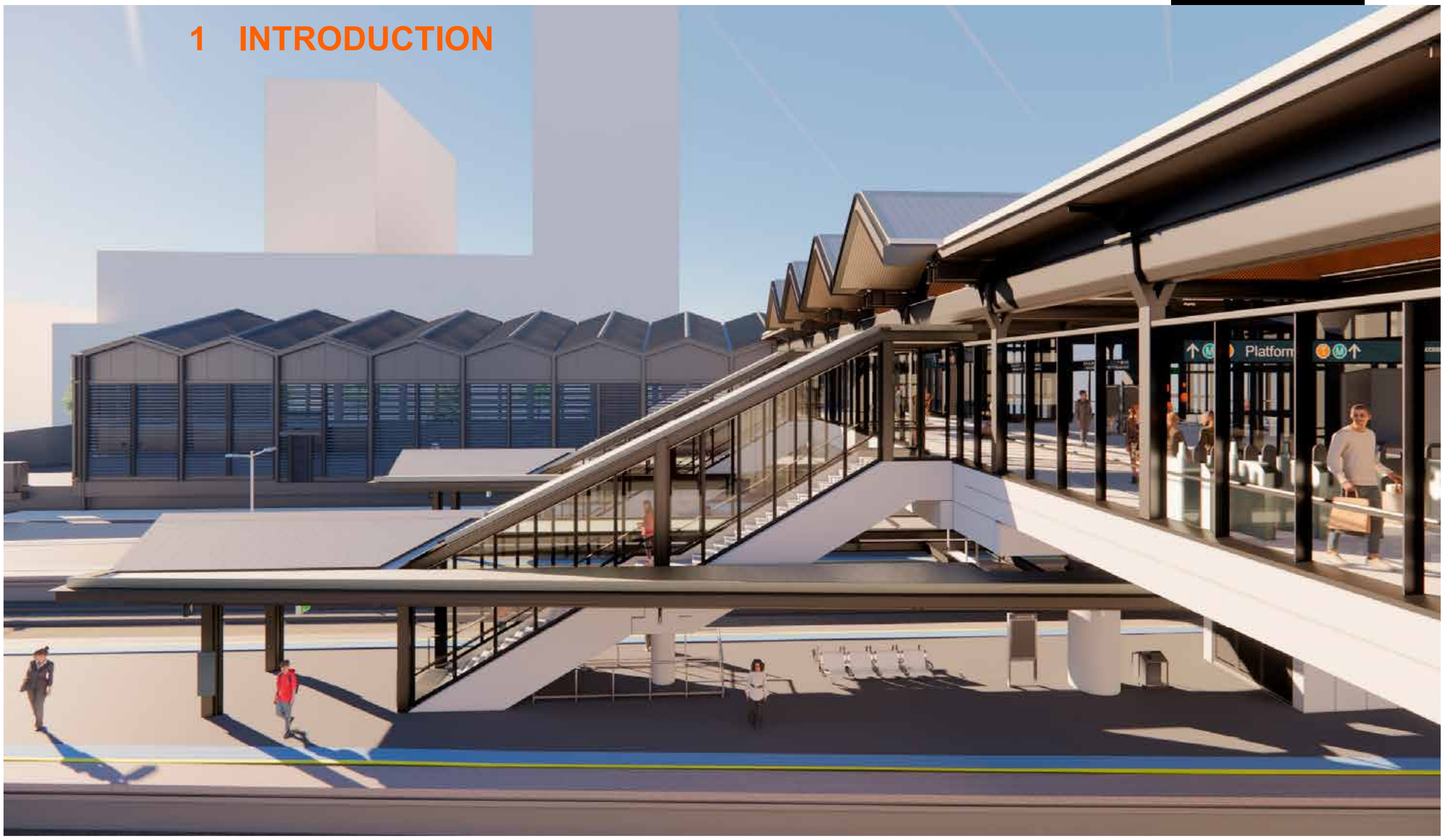
St Marys Station Footbridge

Interchange Access Plan

November 2024

Contents

1 INTRODUCTION



1.1 BACKGROUND

In conjunction with the Sydney Metro WSA works, Transport for NSW ("Transport") is delivering a new footbridge and pedestrian plaza at St Marys Station as part of the TAP program. The fully accessible footbridge will connect the north and south of the station precinct and provide an easy and efficient interchange, with connections to the entries of the stations and platform-to-platform connections between the metro and suburban trains.

1.2 INTERCHANGE ACCESS PLAN

The focus of this Interchange Access Plan is the new footbridge, the Northern Plaza and the provision for Kiss and Ride, and Taxi on Harris Street.

The Interchange Access Plan assesses the physical and operational aspects of the footbridge and associated amenities by applying broad transport and access standards, guidelines, principles and strategies.

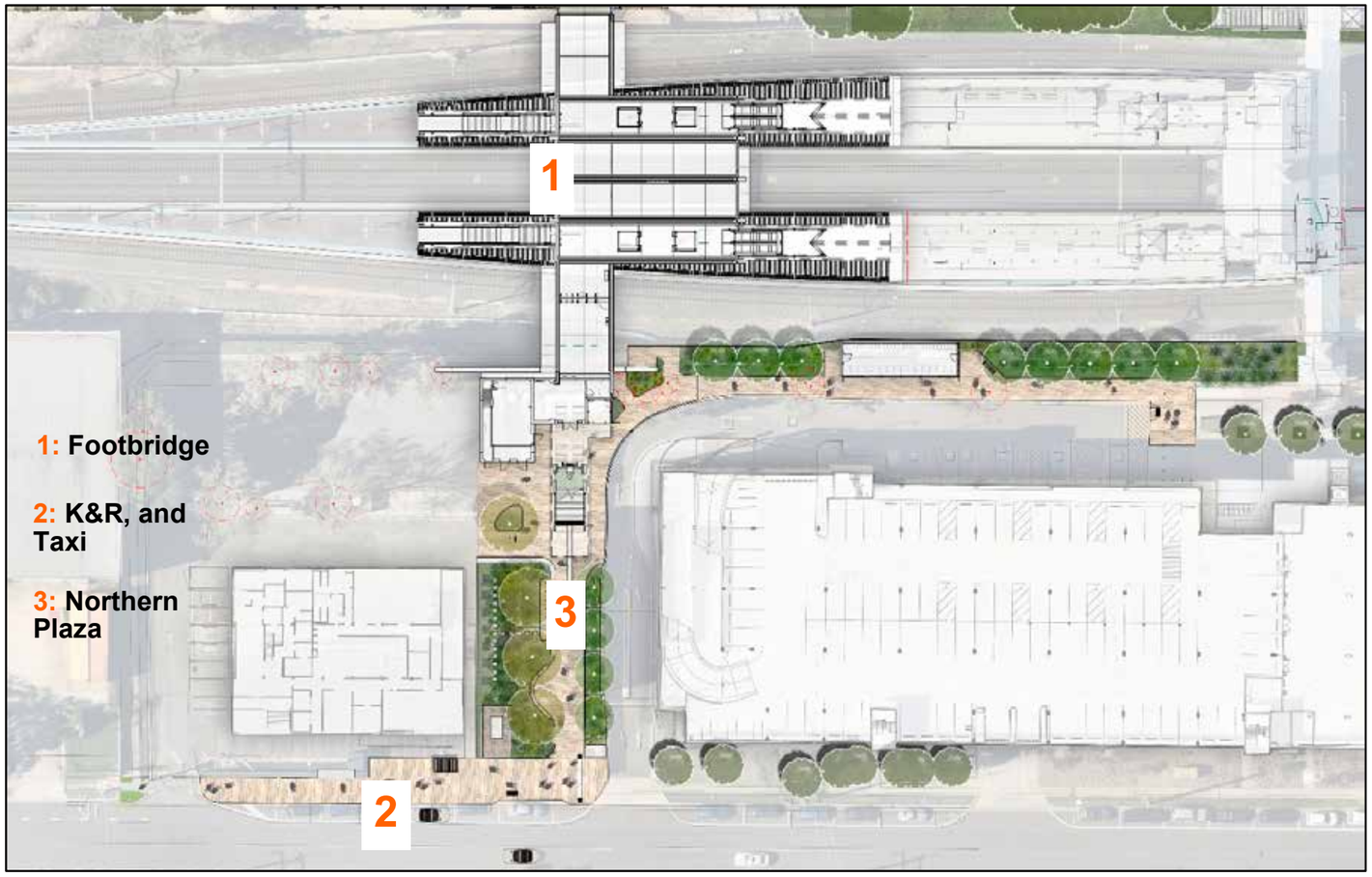


Figure 1

The IAP sets out areas that are likely to require attention, as part of the footbridge or its connectivity, and identifies the agency or stakeholder responsible for delivering improvements.

1.3 PURPOSE OF THE PLAN

This Interchange Access Plan has been prepared to provide detailed interchange deliverables that are facilitated by the new footbridge. It aims to:

- Provide details of the footbridge and its functionality
- Inform the design of connections to the footbridge
- Provide a list of actions for the delivery of the footbridge and associated facilities.

The Interchange Access Plan is provided to inform planning and investment decisions. This document will be updated in response to station design as required.

2 INTERCHANGE AND TRANSFER PLANNING

2.1 TRANSPORT VALUES AND PRINCIPLES

Transport is responsible for ensuring the needs of the customer are at the centre of planning and decision making for the transport system, and that all projects and services are designed and operated accordingly. This is reflected in the Transport's mission statement:

'The customer is at the centre of everything we do in transport.'

2.2 SYDNEY METRO CUSTOMER PRINCIPLES

Sydney Metro aims to serve a diverse set of customers who will undertake several journeys throughout the day and week using the metro. The design and delivery of service is centred around the customer – their needs, behaviours, and their jobs to be done.

Sydney Metro's commitment is to deliver a reliable 'door-to-door-to-door' (from origin to destination and back again) transport solution, which is easy for all customers. This is through designing a seamlessly integrated experience with a focus on moving customers around safely, quickly and easily, and that is adaptive to change. Providing services centred around the customer is key to Sydney Metro's ongoing success and building a solid customer base. Customers expect the provision of a service that is on time, clean, safe, comfortable, efficient, convenient, has the right information, and has adequate customer service. These basics are key drivers of customer satisfaction.

Sydney Metro's goal is to deliver a level of service that goes beyond satisfaction, makes it easy for customers to use the metro, and encourages repeat use across the multiple types of journeys they may make. This will support Transport's goal of increasing the number of journeys taken on public transport by the public, both in the peak and off-peak periods. Sydney Metro provides a customer focus by addressing customer needs at all stages of the journey. A critical principle of Sydney Metro is that every effort will be made to make good connections to other modes, ensuring easy and quick transfer. It is critical to customers that their journey is seamless and well-integrated across all connecting modes and that there is easy and safe access to connect to or from the metro.

At each stage of the journey there are several touchpoints where the customer will interact with a Transport product, service, system, or is interacting in one of Transport's spaces such as a station or an interchange or using one of Transport's modes. At these touchpoints the aim is to make it easy to interact as well as provide consistency in service delivery and information, such that it is easy for a customer to have a seamless journey. The stations, interchanges, trains, and complete travel experience all contribute to and will be integral to the customer experience.

A high-quality transport product is critical to attracting and retaining customers, and to meeting broader transport goals. Linking communities, schools, hospitals, key destinations and businesses with the new metro network is key in delivering the easy customer experience.

Sydney Metro's customer principles inform the design, development and operation of the services, products, systems, and spaces to enable customers to have an easy and safe customer experience.

2.3 AN INTEGRATED CUSTOMER JOURNEY

Customers see their journey from 'door-to-door-to door' and may plan and use multiple travel modes throughout their journey in order to achieve their tasks. It is critical to customers that their journey is seamless and well-integrated across all connecting modes, and that access to/from the metro from other modes is easy, efficient, and safe.

The Sydney Metro customer journey map captures the touchpoints in a customer's journey from door (origin – planning the day) to door (destination) to door (return to origin). Key customer satisfaction drivers and customer principles that are important to customers have been noted at each journey

stage. The satisfaction drivers indicate the service attributes that customers consider most important, what customers believe represents value, and the elements of the transport experience that contribute to customer satisfaction.

Customer experience of the transport system is made up of two core elements – the functional benefit and the experience of the journey itself.

Customer Value Proposition research suggests there are a number of broad factors that encourage people to use public transport.

These factors reflect the trade-offs customers consider when making their travel choices and indicate known customer 'pain points' that impact customer interaction with public transport. Sydney Metro must ensure that these elements are well understood to deliver products, services, systems, and stations that match customer needs and increase its customer base.

2.4 FOOTBRIDGE FUNCTIONALITY AND ROLE

The fully accessible, 55-metre-long footbridge will connect the north and south of the station precinct and play a vital role in making sure St Marys Station provides an easy and efficient interchange for customers, with quick and user-friendly platform-to-platform connections between the metro and suburban trains.

The new bridge will connect seamlessly with the future metro station at St Marys, where customers will be able to transfer between the new metro line to the existing Sydney Trains suburban T1 Western Line.

The footbridge will facilitate movements in both directions for:

- Passengers accessing Sydney Metro services from Harris Street
- Passengers accessing Sydney Train Services from Harris Street and Station Street
- Passengers travelling northbound on WSA services and transferring to Sydney Trains T1 eastbound and westbound services
- Passengers travelling southbound on WSA services and transferring to Sydney Trains T1 eastbound and westbound services
- Residents and workers walking in both directions across the railway

2.5 HARRIS STREET PARKING

Several spaces are to be provided on the kerbside of Harris Street for Taxis, and Kiss and Ride bays including a bay for an accessible Kiss and Ride point.

Harris Street is a B-Double Route and needs the full 3.5m width of lanes to be retained. Widening a bay to provide the Accessible Kiss and Ride space would reduce the width of the lane or the kerb would need to be moved, narrowing the footpath where there are numerous services located.

2.6 MODAL HIERARCHY

Designing an efficient interchange requires the allocation of space to different users, according to Sydney Metro's modal hierarchy. This IAP responds to the modal hierarchy which prioritises transfers from more equitable and sustainable modes, such as walking and cycling, over vehicle-based modes, including the provision of supporting infrastructure. The modal hierarchy used in this plan is consistent with the transport planning principles defined in the Environmental Impact Statement (EIS).

Figure 2

The following table details the modal hierarchy.

MODE	Description
Walking and cycling	Walking and cycling are the highest priority access modes as they are the most sustainable, cost-effective, equitable and accessible. Pedestrians and bicycle riders have the lowest environmental impact and (typically) require the least amount of space, while also promoting personal safety, urban and commercial viability.
	The footbridge will provide safe, easy, quick, direct, continuous, high-quality, clearly signposted and accessible access between the platforms and other modes for connecting and transferring customers.
	The footbridge will connect to a safe and well-defined pedestrian connection to the nearest footpath on the adjacent street network.
	The footbridge will support pedestrian networks in and around the station. It will cater for forecast demand, and provide safe access to the station and other modes for all (including older people, and people with young families and disabilities, who have greater safety and mobility needs) in line with Disability Discrimination Act 1992 (DDA) requirements. Links to stations through the site will be open as long as trains are operating.
	Pedestrian infrastructure will be designed to accommodate modelled volumes/demands in accordance with relevant Australian Standards, and Austroads and NSW Government guidelines.
	The footbridge will enable through-access to allow for bicycles to be taken on metro trains in accordance with Austroads Guidelines and NSW Government directions.
Rail	Clear and intuitive wayfinding to and on the footbridge will be provided to ensure an easy customer transfer.
	The footbridge will support accessible facilities, safe, accessible paths of travel between Sydney Metro platforms and other rail platforms, in accordance with the *Disability Standards for Accessible Public Transport 2002* (DSAPT).
Bus	Transfer to other public transport modes is a high priority in station planning. The footbridge will support connectivity between walking, cycling, rail and bus travel. These services expand the effective catchment area of Sydney Metro. Seamless and safe transfer is required to encourage transfers
	The footbridge will support accessible facilities and safe, accessible paths of travel between station and bus in accordance with the DSAPT.
Taxi	Taxis are the highest priority of the car-based modes, supplementing public transport for access to locations remote from the public transport.
	The footbridge will be well-connected to taxi zones that will be visible and well-signposted, and located where taxis can depart easily in most directions to reduce any unnecessary travel to reach the passenger's destination.
Kiss-and-ride	The footbridge will be well-connected to Kiss-and-ride facilities the preferred mode of access to the station by private vehicle
	Ridesharing services, such as GoCatch and Uber, will use Kiss-and-ride zones to pick up and drop off passengers.
	The footbridge will support accessible facilities and accessible paths between station and kiss-and-ride facilities in accordance with the DSAPT.
Park-and-ride	The footbridge should be well-connected to Park-and-ride facilities, which is the lowest priority of all modes.

Table 1

2.7 LEGISLATIVE REQUIREMENTS AND APPLICABLE GUIDELINES

Sydney Metro stations and interchanges should be consistent with the following legislative requirements and guidelines listed in the following pages.

Legislation/Guideline	Description
Legislation	
Disability Discrimination Act 1992	SMWSA stations and interchange facilities to compliant with the *Disability Discrimination Act 1992*.
Disability Standards for Accessible Public Transport 2002	*Disability Standards for Accessible Public Transport 2002* (Transport Standards) (DSAPT) enables public transport operators and providers to remove discrimination against people with disabilities from public transport services 'as far as possible'.
Strategy and Policy	
Future Transport 2056	The strategy outlines a 40-year vision to guide transport planning, investment and mobility strategies. It includes issue-specific and place-based supporting plans that focus on integrated solutions rather than individual modes of transport. The strategy also focuses on the role of transport in delivering movement and place outcomes that support the character of the places needed for the future.
Western City District Plan	Prepared by the Greater Sydney Commission (GSC), the Western City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It contains the planning priorities and actions for implementing the Greater Sydney Region Plan: A Metropolis of Three Cities, at a district level and is a bridge between regional and local planning.
St Marys Town Centre Structure Plan	This document forms part of Council's Places of Penrith Strategic Framework and is a key component of the planning pathway for St Marys Town Centre. It adopts a place-based and design-led approach to guide the growth of St Marys Town Centre over the next 20 years.
Guidelines	
Australian Standards	Standards relevant to construction, operation and maintenance of interchanges and all relevant modes. The relevant standards have been considered throughout the development of this plan and were used to guide the design development of the interchange. The standards were used to ensure the provision of safe and efficient multi-modal interchange facilities
Austroads guidelines	Austroads' levels of service (LoS) establish standards of performance for key infrastructure, based on its ability to accommodate forecast use and movements safely and efficiently. Levels range from A to F, in descending order of performance. Austroads guidelines were considered throughout the development of this plan and were used to guide the design development process to provide safe and efficient interchange facilities.
TfNSW Traffic and Transport Technical Directives	The content of the directives was applied in conjunction with the relevant Austroads guidelines, and were incorporated in the design of the multi-modal interchange facilities, such as crossing facilities, and changes to the existing road layout.
TfNSW Interchange Wayfinding Requirements	Sets out requirements as outlined by Transport, and outlines objectives and controls to ensure that intuitive, clear and consistent signage is provided at the interchange.
TfNSW Interchange Planning Guidelines	Guidelines for the development of interchanges. These guidelines have been considered in the design of the interchange, to ensure high quality infrastructure and a safe and efficient service is provided throughout.
TfNSW Walking Space Guide: Towards Pedestrian Comfort and Safety	Guidelines for the development of pedestrian comfort. This guideline has been considered elements appropriate to the project as general principles for the footpaths.
TfNSW Road User Space Allocation Policy 2021	This Policy applies to the entirety of the public road reserve from boundary to boundary on proposed and existing classified roads in built up areas in regional and metropolitan NSW except for motorways. Transport for NSW allocates physical and temporal road user space safely and equitably to support the movement of people and goods and place objectives.

Table 2 (cont. next page)

Legislation/Guideline	Description
Crime Prevention Through Environmental Design	Provides guidance on crime prevention strategies through the design of physical spaces. The content of this crime prevention strategy has been considered through the development of this plan, as demonstrated through the station and interchange layout that includes the provision of pedestrian plazas and additional public domain to improve pedestrian safety.
State Transit Bus Infrastructure Guide	Provides guidance to ensure the consistent delivery of safe and effective bus-related infrastructure across New South Wales. The key components of the guide have been considered throughout the development of this plan, including the planning of bus facilities and consideration of the availability and quality of the interchange and transfer facilities.
Local Guidelines	The footbridge and associated facilities to be compliant with Penrith City Council Guidelines

2.8 DEFINING THE INTERCHANGE AREA

It is difficult to separate the area to be included in an IAP for the footbridge and northern plaza from that of the station as a whole. Consequently, there may be substantial overlap in this IAP with that for the St Marys Metro station.

For the footbridge, the area included in the precinct has been determined by considering:

- The likely demands for pedestrian access to the station entry/entries via the proposed footbridge.
- Walking routes between the footbridge and proposed cycle storage areas.
- Walking routes between the footbridge and surrounding bus stops.
- Walking access between the footbridge and planned taxi zones, ranks or stands.
- Walking access between the footbridge and the location of Kiss and Ride facilities.
- Walking access between the footbridge and the location of Park and Ride facilities
- Where appropriate, transfer from other modes, including coaches.

Catchments for walking (800m) and cycling (2.5km) have been defined in the Metro Stations IAP for St Marys and are adopted for the footbridge.

2.9 TERMS AND DEFINITIONS

Term	Definition	Ownership/responsibility
Station	The station, located directly within the interchange area, involves the station building, service facilities and operation areas, as well as various exit and entrance points. It includes the area directly owned by Transport as part of Sydney Metro and is under the direct responsibility of the contracted operator.	One or more of the following: • Sydney Metro operator. • Transport. • Other transport operators.
Interchange	The interchange involves the area directly around the station that is populated by uses which support that of the station. This facilitates easy customer access and transfer between transport modes and entry to urban centres. Surrounding sites within this interchange area may be owned by a range of stakeholders and may not be connected.	One or more of the following: • Sydney Metro operator. • Transport. • Other transport operators. • Local council. • Private property owners.
Precinct	The precinct involves the wider surrounds of both the station and the interchange. The interchange acts as the transport centre point for this precinct which has important amenities and place-making opportunities. Land within the precinct may also be owned by several other stakeholders.	One or more of the following: • Transport. • Local council. • Private property owners.
Catchment	The station walking catchment is generally within an 800-metre walk of the station. For suburban stations the catchment and the precinct may be the same. For urban stations the precinct will generally be smaller than the catchment. The Project may seek greater catchment areas to assess specific outcomes, such as parking impacts on local streets. The cycling catchment for Sydney Metro stations is taken as 2.5 kilometres, due to their proximity to each other and potential destinations along the network. This is a comfortable 10-minute bike ride for an average rider.	One or more of the following: • Transport. • Local council. • Private property owners.

Table 3

2.10 FOOTBRIDGE DESIGN

The footbridge and connected areas, including the Northern Plaza, are integral to the station and the precinct. Their designs are consistent with the Station Design and Precinct Plan, which highlights urban outcomes and identifies opportunities for improvements. It is also consistent with the St Marys Station IAP.

2.10.1 DESIGN PROCESS

Interchange planning and design is dependent on the requirements and aspirations of customers. Sydney metro identifies three key stages in the planning process, demonstrated in the figure alongside:

- Interchange concept
- Interchange design and operation
- Interchange Design Refinement and Access Plan

This process allows for external facilities and connections in the wider precinct, to be integrated into the planning of the station.

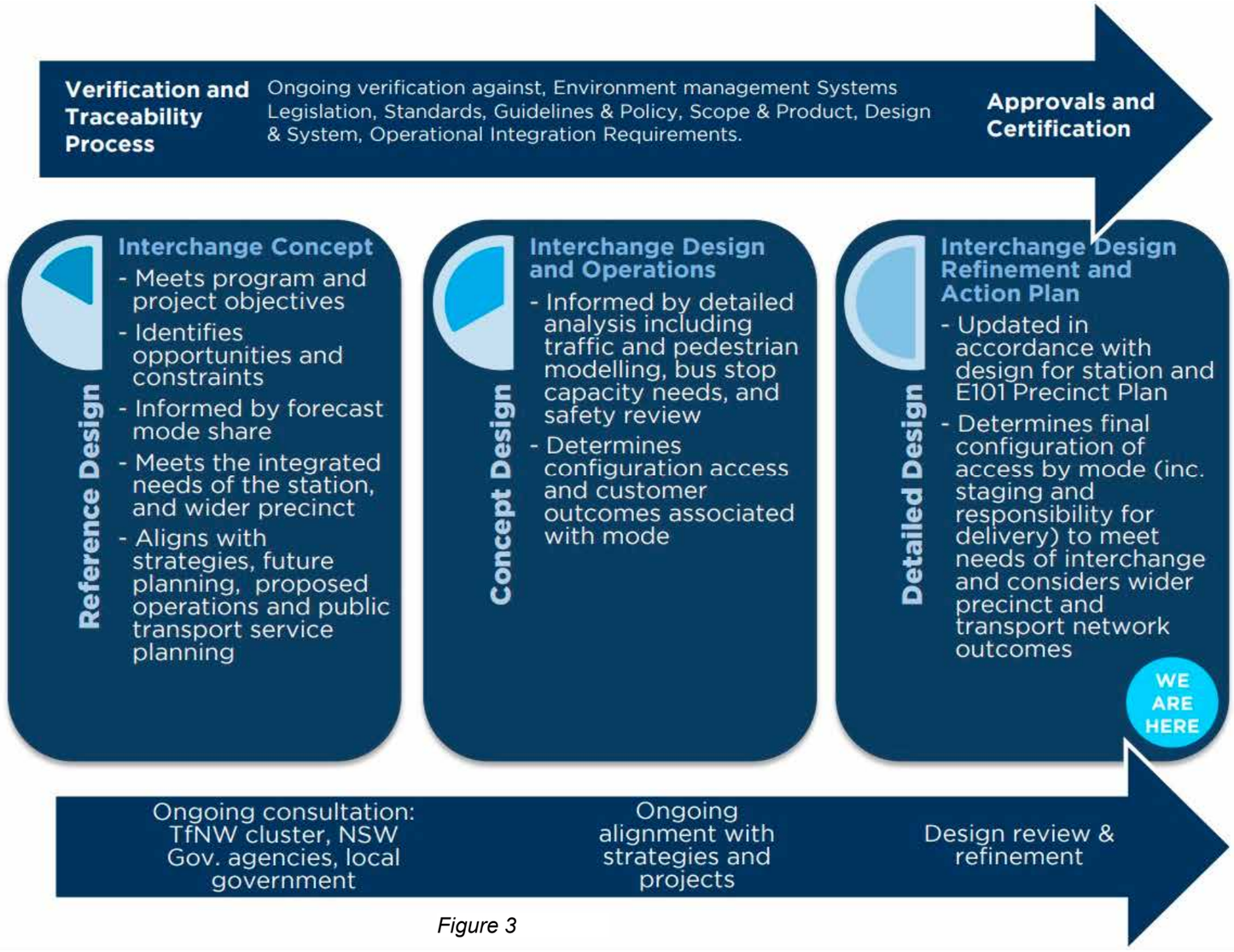
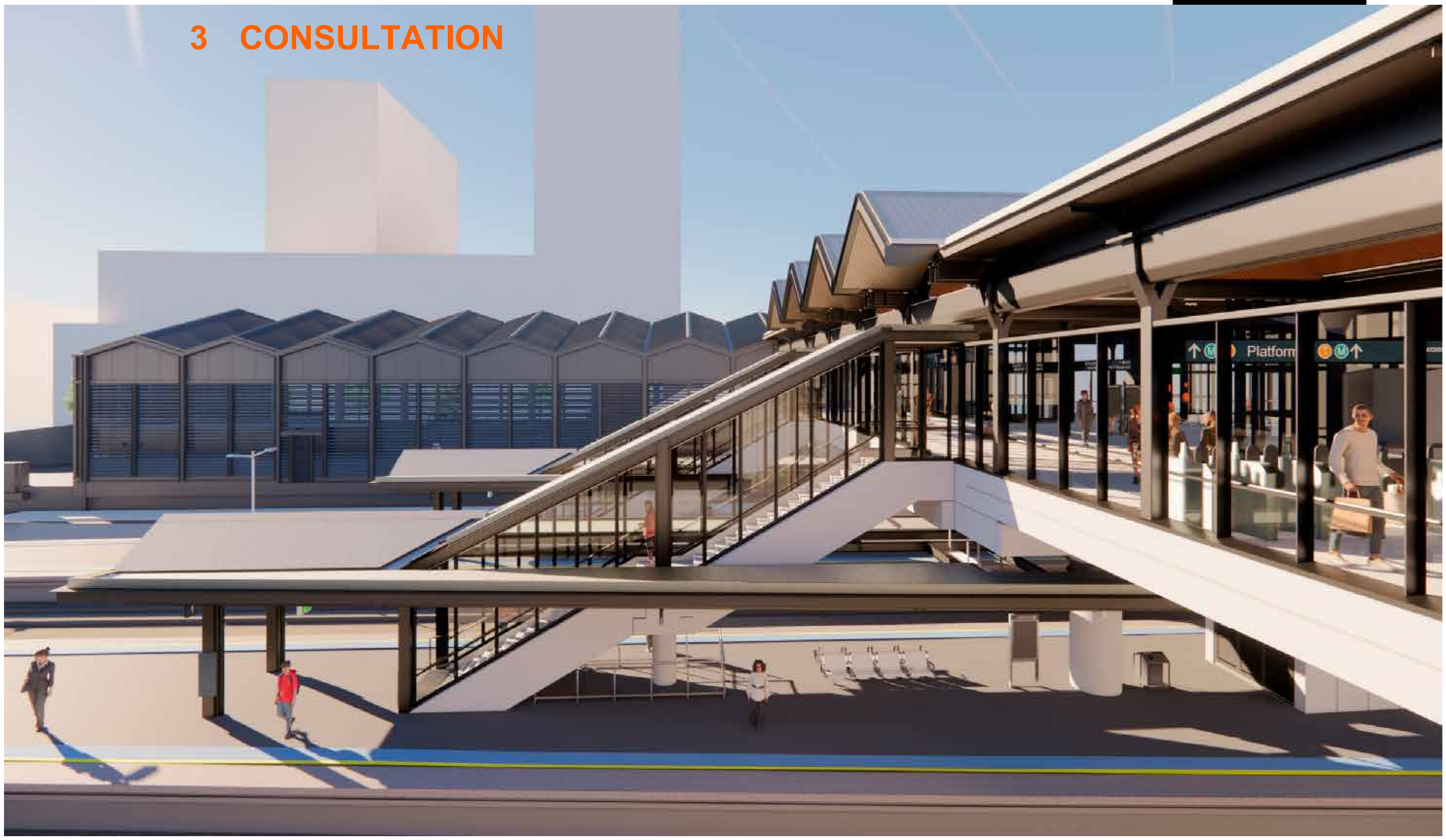


Figure 3

To ensure the quality of the station design and performance, a validation process is required to support detailed design development. This process allows for compliance with requirements, specification, standards and guidelines to be verified, along with technical design audits, safety assurance, safety-in design and risk reviews.

Continuous stakeholder engagement is input along with any required modelling updates necessary for the support of road authorise for approval.

3 CONSULTATION



3.1 OVERVIEW

As part of the St Marys station IAP, several sessions of consultation were conducted. These sessions were not specifically about the footbridge, the discussion of the footbridge, the Northern Plaza or Kiss-and-Ride, and Taxi may have been discussed. Details of these are listed below.

Consultation of IAP	Description	Date
Penrith City Council (PCC)	Penrith City Council was consulted throughout the development of the wider station precinct. This included: • multiple discussions surrounding the precinct design including active transport and cycling infrastructure, and • vehicle requirements. Draft IAP submission and review period. *It is noted that PCC is part of TTLG*	23/11/2023, 15/12/2023, 09/02/2024, 23/04/2024, 29/05/2024, 27/06/2024, 28/06/2024, 12/07/2024 Ongoing
Traffic and Transport Liaison Group (TTLG)	Draft IAP presentation. An out of session meeting was help with the TTLG to present the initial findings and work conducted as part of the St Marys IAP. Draft IAP submission and review period. Introductory presentation at TTLG meeting Update information session at TTLG meeting	18/04/2024 Ongoing 6/06/2023 04/07/2023
Transport for New South Wales (Transport)	Consulted to coordinate transport infrastructure and service planning and delivery, including major future	Ongoing
Bradfield Development Authority (BDA) *(previously Western Parkland City Authority - WPCA)*	BDA was consulted on structural and construction matters. This included Over Station Development construction sequence, structural and architectural design, and station access options. Draft IAP and Submission *It is noted that BDA is part of TTLG*	16/02/2023, 23/03/2023, 16/05/2023, 17/05/2023, 23/05/2023, 23/05/2023, 21/06/2023 Ongoing
Sydney Trains	Sydney Trains was consulted throughout the development of the wider station precinct. This included: • Station Shut Down Scenarios, Access & Maintenance, Customer Services • Fire Life Safety	26/05/2023, 02/06/2023, 13/12/2023, 19/01/2024, 16/02/2024, 03/05/2024, 17/05/2024, 19/06/2024, 25/06/2024
Sydney Metro	Sydney Trains was consulted throughout the development of the wider station precinct. This included: • Architecture & Urban Design • Pedestrian Modelling	05/04/2023, 20/05/2024, 06/06/2024, 09/07/2024, 17/07/2024

Table 4

4 PLANNING CONDITIONS

4.1 OVERVIEW

This Interchange Access Plan addresses the requirement for an IAP to be developed in consultation with the Traffic and Transportation Liaison Group for the new Metro Station. The proposed footbridge and associated facilities of the North Plaza and the parking for Taxi and Kiss and Ride facilities are integral elements of the new upgraded station, and this Internet Access Plan focuses on those elements of the station.

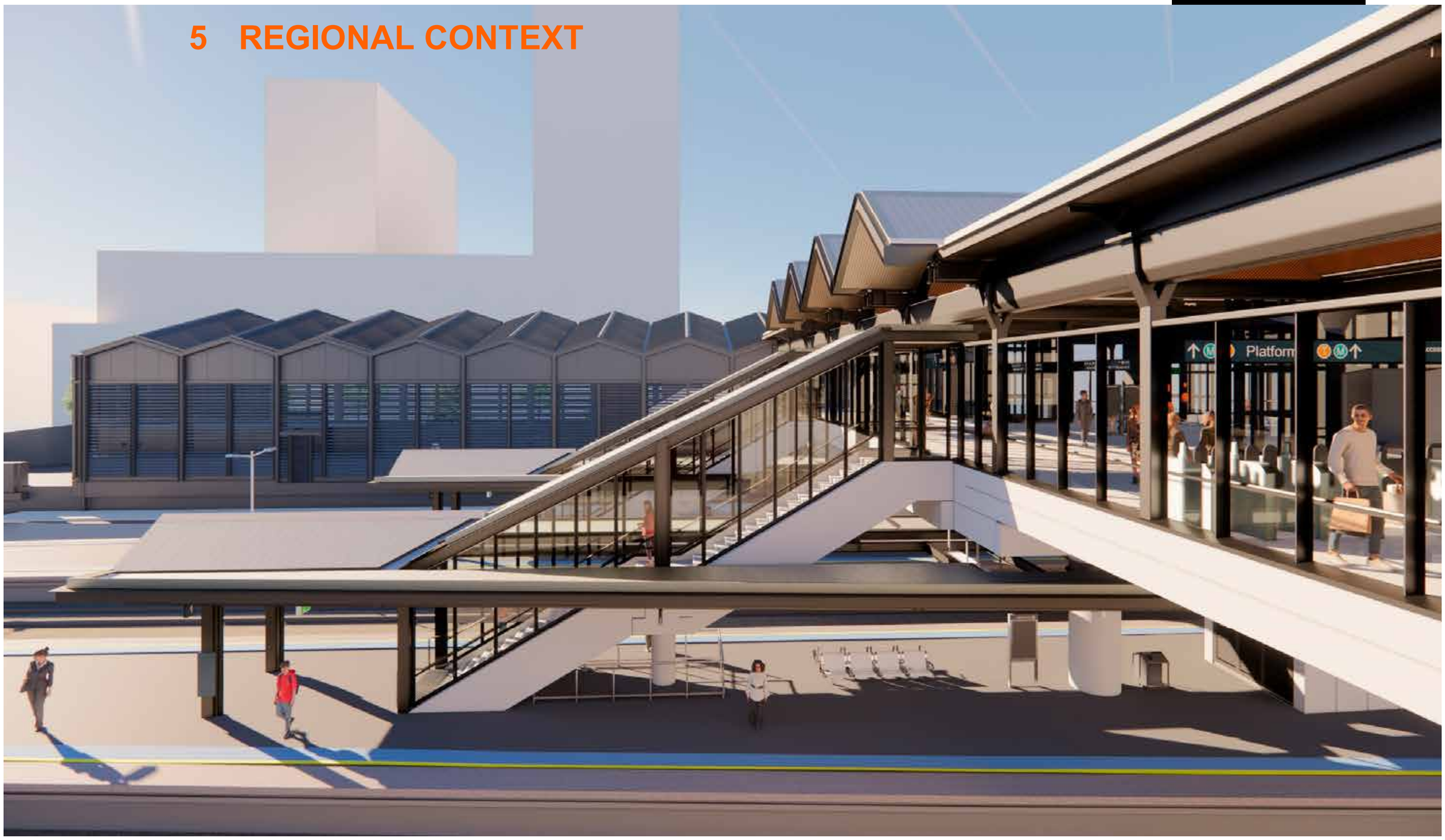
The Proponent must develop an Interchange Access Plan for each station to inform the final design of transport and access facilities and services, including footpaths, cycleways, passenger facilities, parking, traffic and road changes, and integration of public domain and transport initiatives around and at each station. The Interchange Access Plan(s) must consider walking and cycling catchments and take into account the factors in the following table.

Description	Response
Station access hierarchy consistent with the planning principles defined within the EIS	The modal hierarchy has been defined and included in this IAP and is consistent with the IAP for the new station. Details of the modal hierarchy are contained in Section 2 and Section 9
Safe, convenient, efficient and sufficient access and transfer between stations and other modes of transport (including the preservation of additional entrances and subterranean connections in response to future land use changes and patronage demand)	The appropriate transfer between stations and modes have been considered and included in planning and design. Details of the consideration are contained in Section 7 and Section 8
The Maintenance or improvements of pedestrian and cyclists level of service within a justified proximity to stations	Forecast demand has been used to model the movement of pedestrians across the footbridge and in the concourse. In the precinct, the footpaths and cycleways have been designed with the level of service provided to pedestrians and cyclists in mind. Details are contained in Section 7 and Section 8
Consider current transport initiatives and plans	All current transport initiative and plans were considered in the planning of the Metro station, which informed the design of the footbridge. Detailed in Section 2, Section 5, Section 6 and Section 7
Consider opportunities and constraints presented by existing and proposed transport and access infrastructure and services	Opportunities and constraints were considered in the planning of the Metro Station, which informed the design of the footbridge and associated facilities. Details in Section 7

Table 5 (cont. next page)

Description	Response
Monitor and take into account patronage changes resulting from land use, population, employment, transport infrastructure and service changes	The impact of changing land use, population, employment, transport infrastructure and service changes were a major part of the planning of Metro Station, which informed the planning and design of the footbridge. Forecast volumes of demand for the stations were provided for modelling of the pedestrian movement on the bridge and in the concourse. Details are contained in Section 7 and Section 8
Integration with infrastructure and services	The footbridge and associated facilities have been designed to integrate with the station. Details in Section 7 and Section 9
Legislative requirements and applicable guidelines are to be considered	All legislation and appropriate guidelines have been considered. Details in Section 2
Consider infrastructure, final design, service measures, management and the level of access and service to be achieved for all users.	Design and planning of equal access for all users of the footbridge and associated facilities have considered. Details in Section 2 and Section 7

5 REGIONAL CONTEXT



5.1 OVERVIEW

The Regional Context for the footbridge and its associated facilities is more closely related to the wider context of the Metro Station and the provision of the Metro Network. It shares its Regional Context with the station, which is elaborated in the IAP for St Marys Metro Station.

5.2 SYDNEY METRO

Sydney Metro has four core components:

Sydney Metro - Western Sydney Airport

Metro rail will also service Greater Western Sydney and the new Western Sydney International (Nancy Bird Walton) Airport. The new railway line will become the transport spine for the Western Parkland City's growth for generations to come, connecting communities and travellers with the rest of Sydney's public transport system with a fast, safe and easy metro service.

Six new stations will be delivered at St Marys, Orchard Hills, Luddenham, Airport Business Park, Airport Terminal, and Western Sydney Aerotropolis. The Australian and NSW governments are partners in the delivery of this new railway.

Sydney Metro Northwest

Services started in May 2019 in the city's northwest between Rouse Hill and Chatswood, with a metro train every four minutes in the peak.

Sydney Metro City & Southwest

The Sydney Metro City & Southwest project includes a new 30-kilometre metro line extending metro rail from the end of the Metro Northwest Line at Chatswood, under Sydney Harbour, through new central business district (CBD) stations and southwest to Bankstown.

It is due to open in 2024, and will deliver new metro stations at Crows Nest, Victoria Cross, Barangaroo, Martin Place, Gadigal, Waterloo and new underground metro platforms at Central Station. In addition, it will upgrade and convert all 11 stations between Sydenham and Bankstown to metro standards.

Sydney Metro West

Sydney Metro West will be a new underground metro railway that will double rail capacity between Greater Parramatta and the Sydney CBD transforming Greater Sydney for generations to come.

This once-in-a-century infrastructure investment will have a target travel time of about 20 minutes between Parramatta and the Sydney CBD, link new communities to rail services and support employment growth and housing supply. The construction of Sydney Metro West will create more than 10,000 new direct jobs and 70,000 indirect jobs.

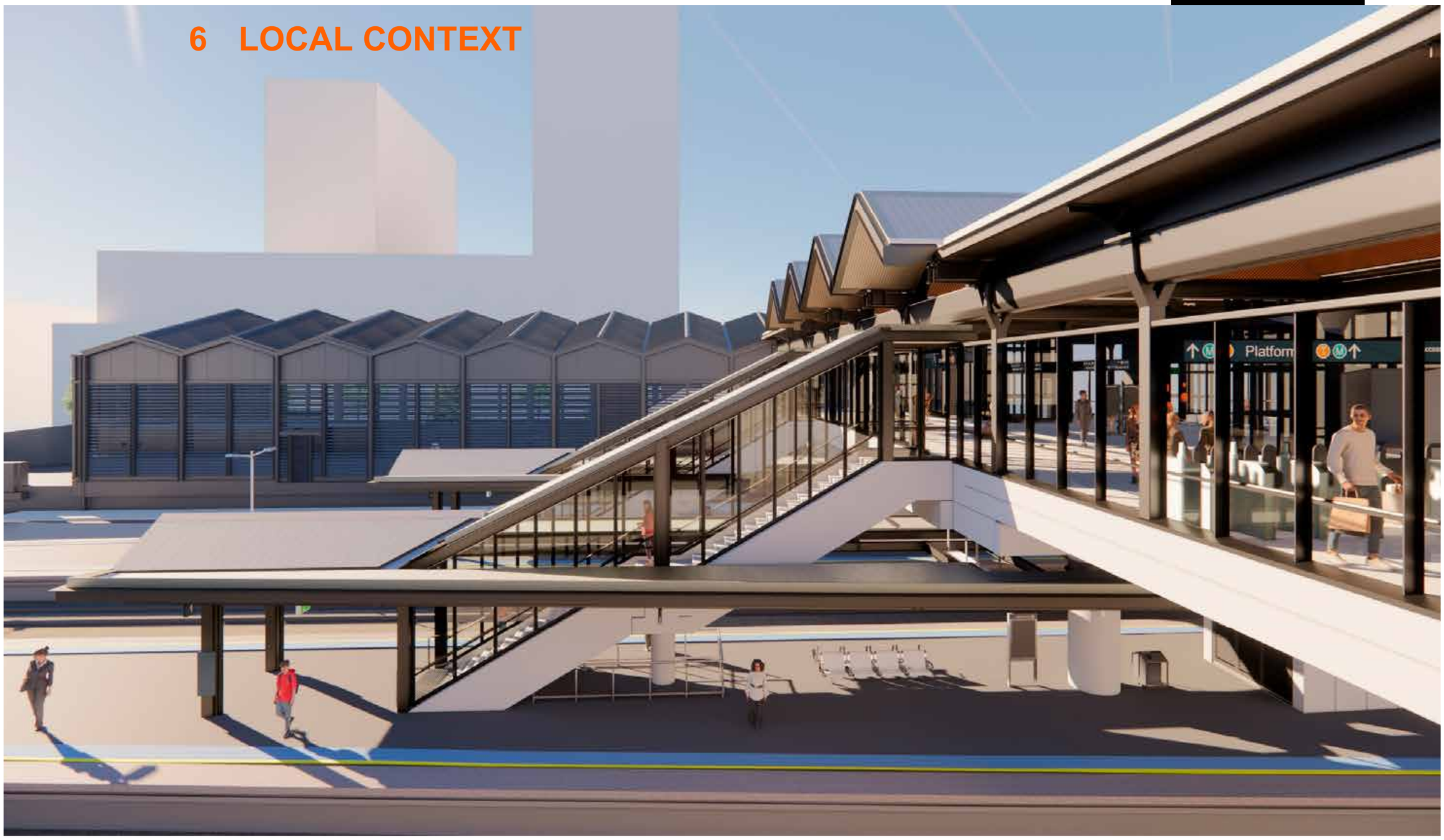
Stations have been confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD.

5.2.1 METRO - WESTERN SYDNEY AIRPORT OBJECTIVES

The objectives of Metro - Western Sydney Airport are to:

- Improve the quality of the transport experience for customers.
- Provide a transport system that can satisfy long–term demand.
- Grow public transport patronage and mode share.
- Support the productivity of the Western Economic Corridor.
- Improve the resilience of the transport network.
- Improve the efficiency and cost effectiveness of the public transport system.

6 LOCAL CONTEXT



6.1 OVERVIEW

St Marys is expected grow strongly in the period up to 2041. Council expects the population to grow from 3,700 (2016 census) to more than 15,000 in 2041, with the number of dwellings increasing from 1,800 (2016 Census) to more than 5,000 in 2041. At the same time, the number of jobs in the St Marys Town Centre is expected to grow from 3,500 to up to 9,000 jobs.

The figure alongside shows the planned configuration of St Marys Town Centre. Dunheved Business Park will be the centre of much of the growth of jobs and is located on the north of the Sydney Trains railway line. Areas south of the railway line will house St Marys village, the retail area and the commercial centre. The two existing schools will also be on the south side of the railway line in the western part of the town centre.

The railway line separates the business park in the north and the rest of the activity areas in the town centre. The existing and planned connections across the railway line comprise:

- The existing footpaths on each side of the bridge on Glossop Street
- The existing footbridge at St Marys Station
- The new footbridge at St Marys Station

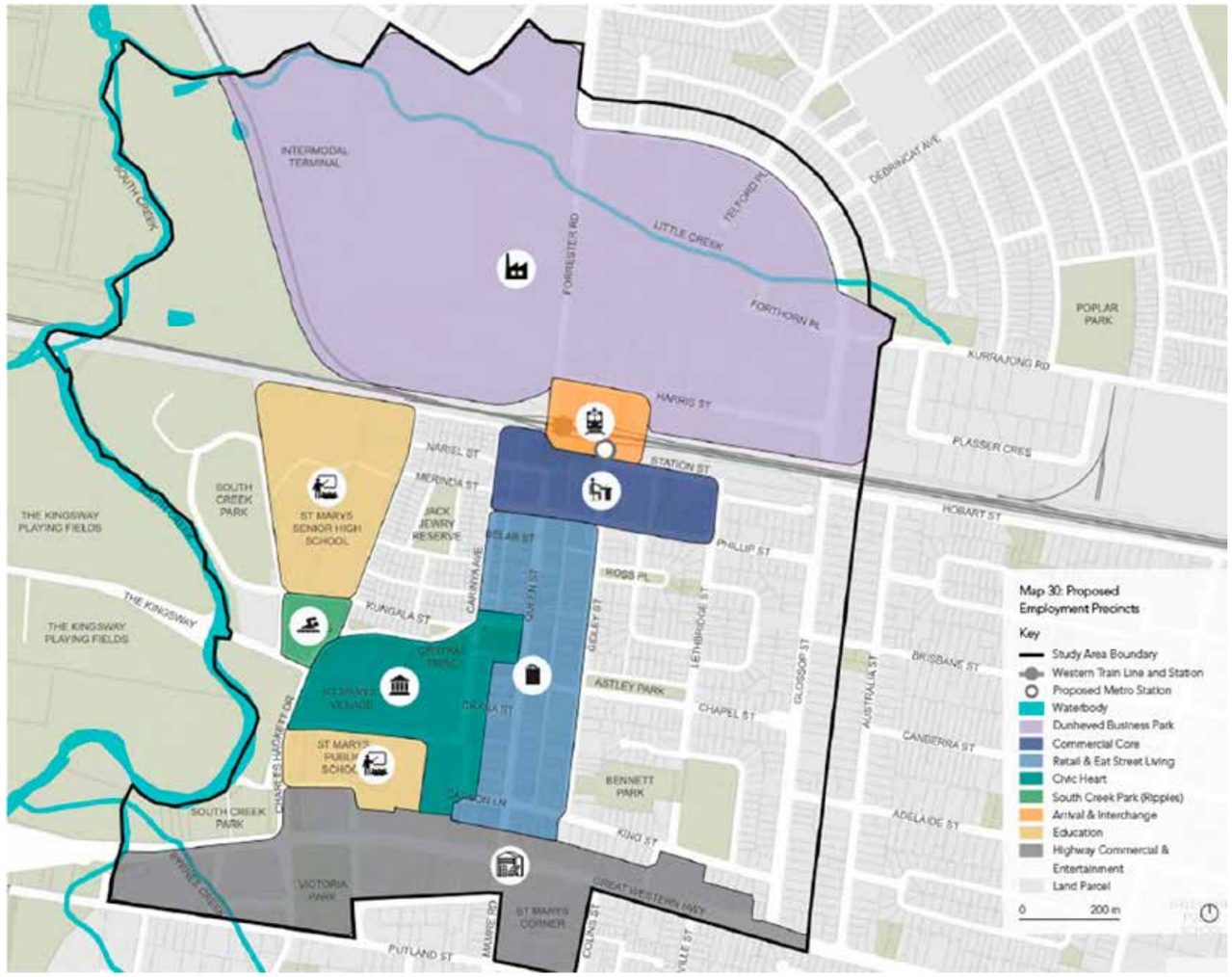


Figure 4 **Sourced from the St Marys Precinct Plan*

6.2 CONNECTIONS

DISTANCE FROM FOOTBRIDGE GATE LINE TO ACCESSIBLE (PRIORITY) PARKING ON HARRIS STREET: 80M

DISTANCE FROM FOOTBRIDGE GATE LINE TO TAXI / KISS AND RIDE PARKING ON HARRIS STREET: 90M

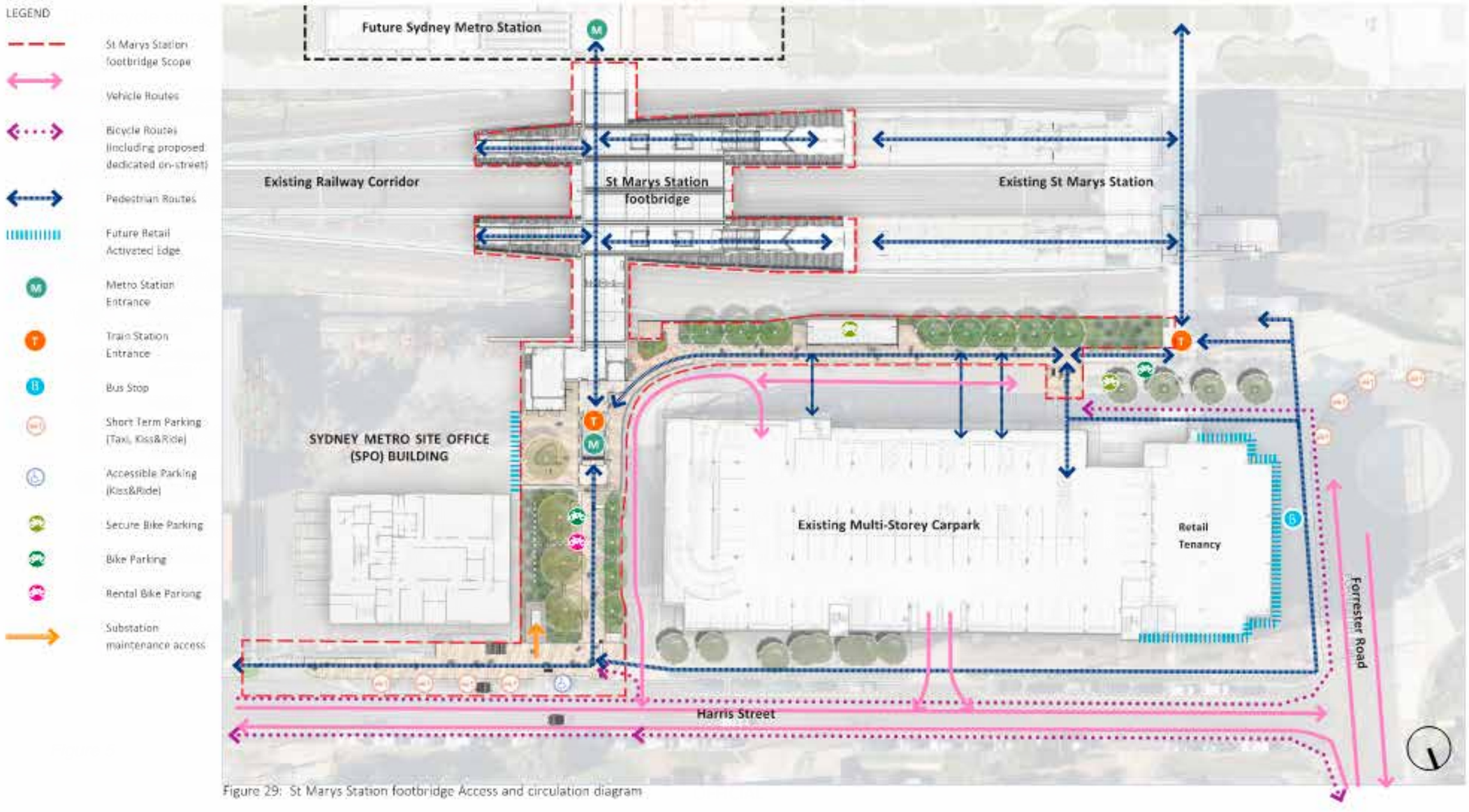


Figure 29: St Marys Station footbridge Access and circulation diagram

7 INTERCHANGE AND TRANSFER REQUIREMENTS

7.1 NEED FOR THE FOOTBRIDGE

The conditions of approval require demonstration that the future demand will be accommodated safely. The design year for the footbridge is 2056 and future pedestrian demands have been provided by Metro for use in detail modelling of the station and footbridge.

The footbridge and concourse will need to provide easy movements for a range of different origins and destinations in and around the station. These include movements that:

- **ENTER THE STATION**
  - to board Sydney Trains services to the Sydney CBD [1 in the diagram below]
  - to board Sydney Trains services from the Sydney CBD [1 in the diagram below]
  - from Harris Street to board Sydney Metro northbound services [2 in the diagram below]
  - from Harris Street to board Sydney Metro southbound services services [2 in the diagram below]
- **LEAVE THE STATION**
  - from Sydney Trains eastbound services [1 in the diagram below]
  - from Sydney Trains westbound services [1 in the diagram below]
  - from Metro northbound services to exit via Harris Street [2 in the diagram below]
  - from Metro southbound services to exit the station via Harris Street [2 in the diagram below]

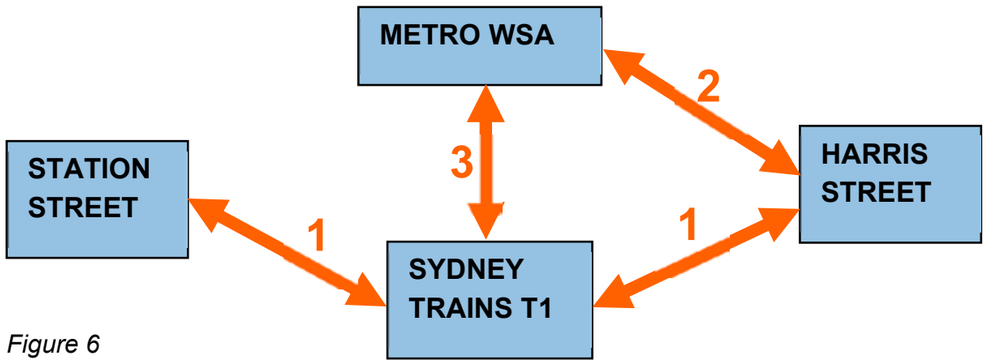


Figure 6

- **CHANGE FROM SYDNEY TRAINS TO METRO** [All 3 in the diagram below]
  - Change from Sydney Trains eastbound services to Sydney Metro northbound services
  - Change from Sydney Trains westbound services to Sydney Metro northbound services
  - Change from Sydney Trains eastbound services to Sydney Metro southbound services
  - Change from Sydney Trains westbound services to Sydney Metro
- **CHANGE FROM METRO TO SYDNEY TRAINS** [All 3 in the diagram below]
  - Change from Sydney Metro northbound services to Sydney Trains eastbound services
  - Change from Sydney Metro southbound services to Sydney Trains eastbound services
  - Change from Sydney Metro northbound services to Sydney Trains westbound services
  - Change from Sydney Metro southbound services to Sydney Trains westbound services

7.2 DEMANDS

The busiest time for the footbridge will be during the morning peak hour. The forecast of demand has around 15,000 people moving around the station during the morning peak hour in 2056. Most of these will use all or part of the bridge and concourse.

During the morning peak hour in 2056:

- Around 2,000 people will exit St Marys station
- more than 4,000 people will enter the station St Marys
- Nearly 9,000 people will catch trains towards the Sydney CBD
- the largest demands are expected to be passengers leaving St Marys travelling towards the Sydney CBD on Sydney trains services, and Sydney Metro northbound passengers changing to Sydney Trains services towards the CBD. These two movements will total nearly 7,000 people, or almost half of the total demand.
- There will be significant demand for interchanges between Metro WSA southbound services and Sydney Trains T1 services in both directions.
- Around 900 people will enter the station from the north, including passengers from the footpath network north of the station, cyclists, Park and Ride users, Taxi passengers and drivers who park cars in the multistorey car park.

This figure alongside shows the size and complexity of passenger movements around the station in diagrammatic form.

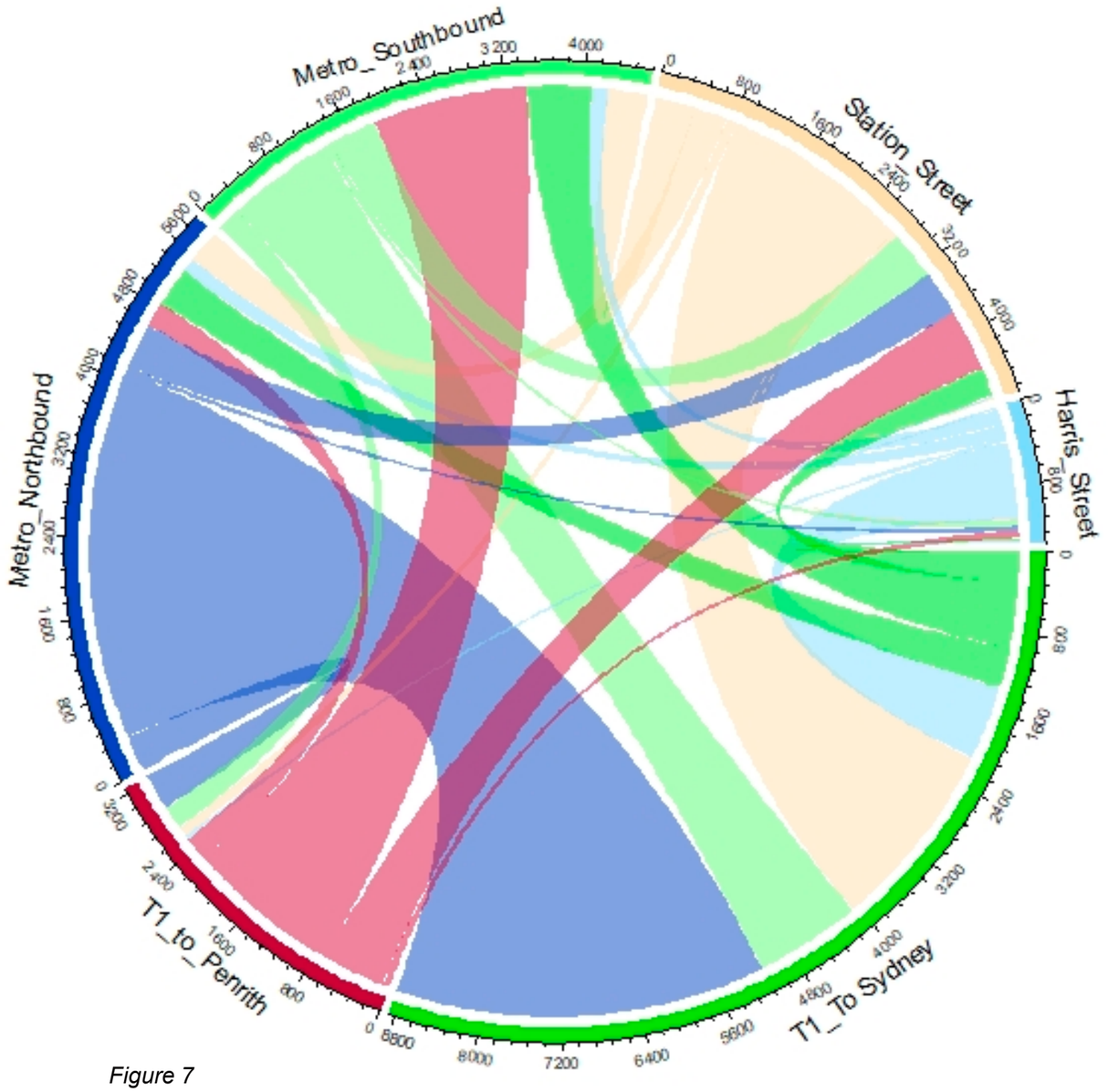


Figure 7

7.3 REQUIREMENTS

The requirements for facilities at St Marys north of the railway line can be summarised as follows:

- For pedestrians:
  - a footbridge with a concourse connecting the northern side of the station to the Metro Station
  - A plaza (North Plaza) that provides a hub for footpaths around the precinct and functions as an entry to the footbridge
- For car passengers travelling to or from the stations:
- Taxi bays
- An Accessible Kiss and Ride bay
- Kiss and Ride bays

The need for these facilities are summarised in the following tables.

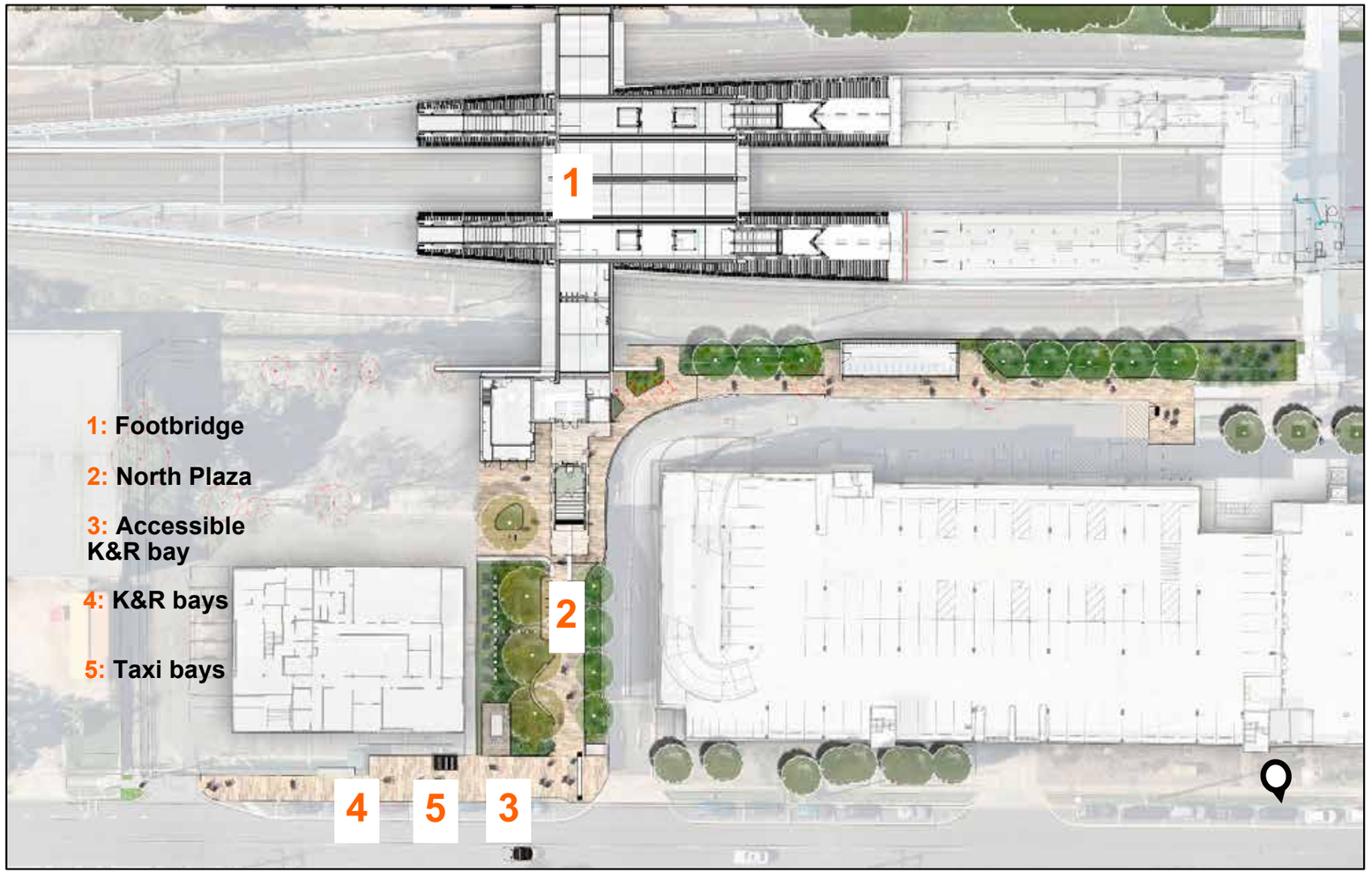


Figure 8

7.4 WALKING INTERCHANGE REQUIREMENTS

Road Space Allocation

The existing pedestrian network along Harris Street comprises a narrow concrete path on grass sidewalks on the southern side and less formal, grassed footpath on the northern side of the road. On both sides of the road, the footpaths are interrupted by driveways and informal parking. The following table provides a summary of the existing conditions for pedestrians.

Existing conditions

Item	Description
St Marys Station	There is no direct pedestrian access to the station from Harris Street currently. Current access to the station from the north is focussed on the existing footbridge at the western end of the station, which can be accessed through the multistorey carpark or via Forrest Road.
Station Extremities	Forrest Road provides the only viable access for pedestrians to the existing footbridge. There are five short term drop off bays and a bus stop in Forrest Road's turnaround facility. Most other passenger interchange facilities are located on the southern side of the station.

Table 6

Future Station Integration

Item	Description
Location of Access	The new footbridge will be located towards the eastern side of the station, in line with the current laneway that runs along the eastern edge of the multistorey carpark. The current laneway will be converted to a pedestrian plaza that connects Harris Street to the new footbridge. The new footbridge in include a new concourse over the platforms of the existing station and a connection into the Metro station on the soth of the railway lines.
Design Considerations	The pedestrian environment on the north of the current railway station will house the existing multistorey carpark, a bus stop and bicycle storage areas. Design outcomes to accommodate movements between these areas include: • Provision of a pedestrian plaza (North Plaza) between the footbridge and Harris Street, • A network of new footpaths connecting each of the elements of the northern station precinct. All footpaths on the northern precinct will be DDA compliant

Table 7 (cont. next page)

Item	Description
Pedestrian Modelling	The new footbridge, concourse and existing station platforms were modelled using forecasts of the pedestrian demand in 2056. The outcomes of the modelling show that conditions on the footbridge during peak hours, with surges of demand as trains arrive and depart are at acceptable levels. The passenger experience ill be safe and comfortable.
Connection to Station	The footbridge will be connected to platforms on the existing station by stairs, escalators and lifts. It will be connected to the Metro station by stairs and escalators.
Transfer To and From Taxi	The transfer of passengers walking to and from the newly provided taxi bays will be serviced by DDA compliant footpaths through the North Plaza
Transfer To and From Kiss and Ride	The transfer of passengers walking to and from the newly provided Kiss and Ride bays will be serviced by DDA compliant footpaths through the North Plaza
Transfer To and From other facilities	A network of DDA compliant footpaths will be provided to link the bus stop, bicycle storage and multistorey carpark

7.5 TAXI AND KISS & RIDE INTERCHANGE REQUIREMENTS

Road Space Allocation

There are no provisions for taxis or Kiss and Ride on Harris Street currently.

In Forrest Road, there are five bays for 5-minutes parking that would be used for Kiss and Ride or Taxi passengers.

Existing conditions

Item	Description
St Marys Station	There are no spaces provided along the kerb in Harris Street.
	There are 3 x taxi bays and 12 x Kiss and Ride bays (including 1 x accessible Kiss and Ride bay)
Station Extremities	There are five short-term drop off bays and a bus stop in Forrester Road's turnaround facility.

Table 8

Future Station Integration

Item	Description
Location of Access	Ideally, the new parking bays for taxis and for drop and pick-ups will be located on the Harris Street's southern kerb, as close as possible to the entry to North Plaza. Their locations have yet to be finalised.
Design Considerations	One bay will be provided for accessible Kiss and Ride. This bay will need to be wider than the current parking arrangement provides for. The increase in width needs to allow for maintaining the current lane width in Harris Street, which is a designated B-Double route. Accommodating this bay by reducing the width of the footpath is being investigated but the existence of several services under the surface of the footpath cause issues for the design that are currently being worked on.
Transfer To and From Taxi and Kiss and Ride	The Taxis and Kiss and Ride bays will be connected to the footbridge by the DDA compliant North Plaza

Table 9

8 OPERATIONS, MAINTENANCE AND MANAGEMENT

The performance of the footbridge has been undertaken using static analysis of pedestrian movements and simulation of pedestrians' passage across the bridge. The outputs of these analyses help to understand the operating performance of the footbridge and to inform the design development process.

Simulation was used to test the performance of the footbridge in various abnormal service operations, to ensure that the footbridge did not become overcrowded and threaten the safety of its users. Various evacuation scenarios were also studied to ensure the safety of passengers and staff.

In general, everyday operations, the ideal would be to avoid the performance of the footbridge dropping to level of service D or worse. The pedestrian modelling during the morning peak has been analysed to show that the bridge operates satisfactorily, with widespread areas of levels of service better than C, with queues forming only limited areas at the top of escalators.

The escalators are crucial to the continuing efficient operation of the station.

The principles for access to assets for operational and maintenance purposes will include measures for:

- safe access, ensuring that passengers, maintenance workers and station staff are protected from hazardous incidents
- efficient operation, ensuring that vertical transport facilities such as lifts and escalators operate properly, to prevent overcrowding that results in dangerous conditions and panic
- documentation of the procedures for maintenance of the bridge and vertical transport facilities so that responsibility for these procedures is clearly defined.

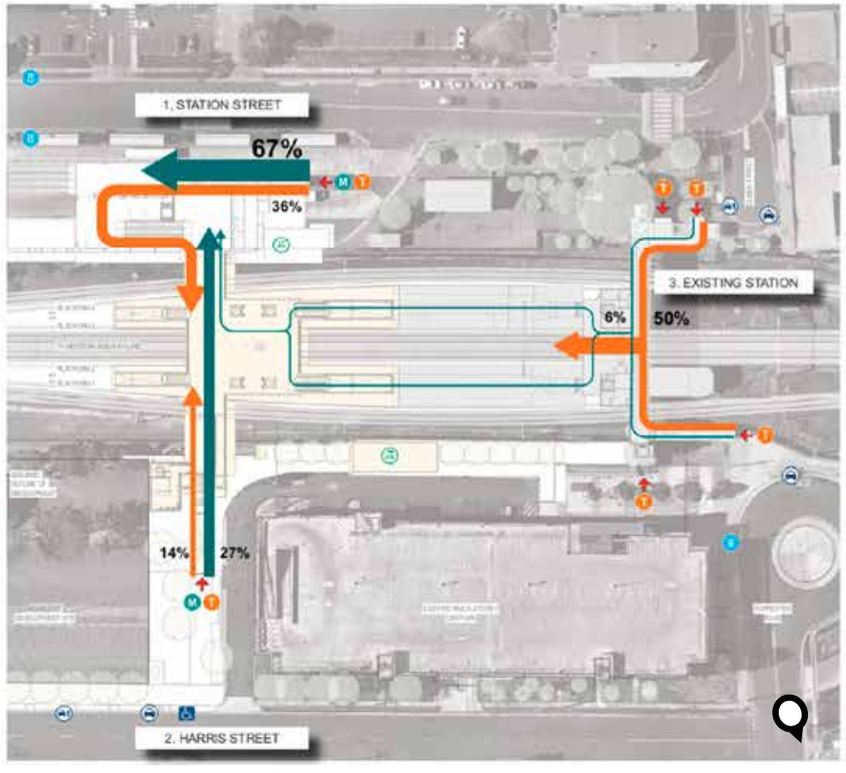


Figure 9

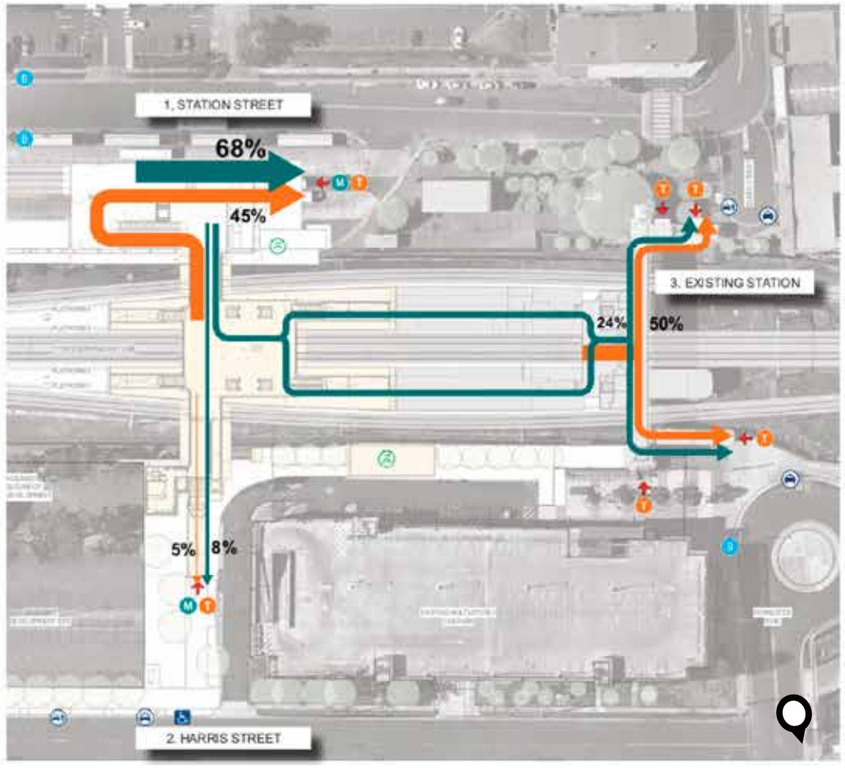


Figure 10

9 MODAL HIERARCHY

9.1 OVERVIEW

Walking is the dominant mode for the footbridge and North Plaza, and is highest in the modal hierarchy, but other modes will benefit from its provision. The provision of Kiss and Ride and Taxi bays in Harris Street, along with the network of footpaths connecting them to the footbridge, will enhance the accessibility of the current station and the new Metro station.

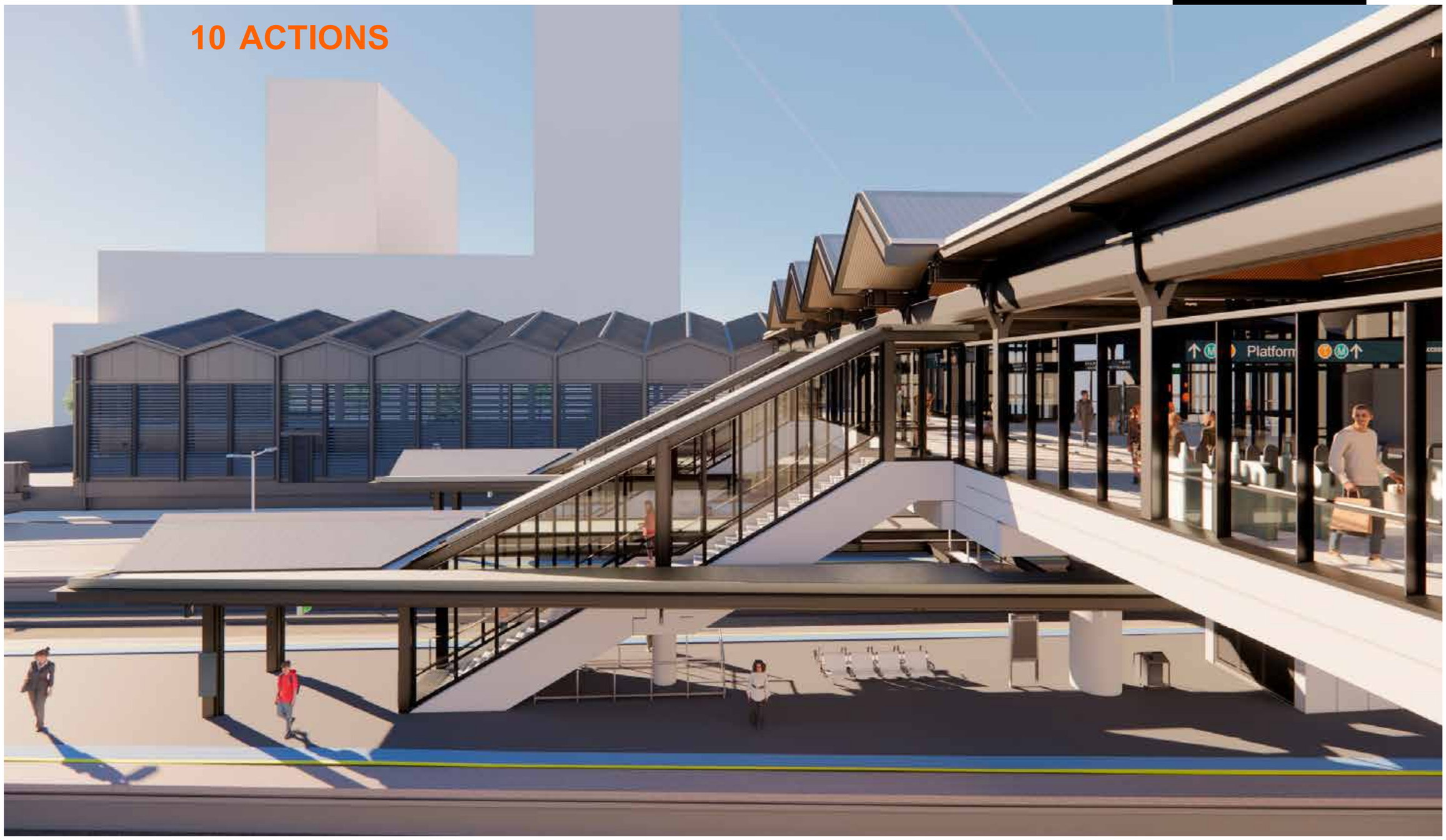
The modal hierarchy and the benefits the footbridge provide are summarised in the following table.

MODE	Provision	Consideration and Network Benefit
Walking	New pedestrian bridge	• Provides a connection between the Metro station and the existing station • Provides additional access to T1 platforms on the existing station • Provides an additional connection between Harris Street and Station Street
	New plaza on north side of existing station	• Provides a hub for connection footpaths to facilities for other models of transport
	Footpath network	• New footpaths associated with the footbridge and North Plaza provide efficient and direct access to the footbridge and other activities in the precinct
	Wayfinding facilities	• Comprehensive and clear signs and directions will improve access to the footbridge and station
Cycling	Footpath and wayfinding to footbridge	• The footbridge will provide access to riders who wish to take their cycles onto metro trains • The network of footpaths with clear signage will enhance quick access between the cycle storage area and the footbridge, station and other parts of the precinct
	Bicycle parking facilities	• Provision of 60 new bicycle spaces provided in the secure bicycle facility within the Northern Plaza • 10 bicycle spaces will be provided in the public domain within the Northern Plaza • Provision of space proofing for shared (hire) bicycle services • A safeguarded secure bicycle provided for additional 139 additional bicycle spaces • Retention of existing 8 bicycle lockers and 8 bicycle rack spaces
Rail	Additional vertical transport connections to T1 platforms	• The new footbridge with the attached new concourse will provide new lifts, escalators and stairs for additional access to the Sydney Trains T1 platforms. This will reduce congestion as passengers arrive at or leave the platforms.
	Connection to Metro	• The footbridge provides access between the existing station and the new Metro Station across railways. This allows for efficient interchanges between services
Bus	Footpath and wayfinding to footbridge	• The network of footpaths with clear signage will enhance quick access for bus passengers walking between the bus stop and the footbridge, station and other parts of the precinct

Table 10 (cont. next page)

MODE	Provision	Consideration and Network Benefit
Taxi	2 x new taxi bays	• The taxi bays provided on Harris Street will allow for a close and quick transfer to the trains for taxi passengers
	Footpath and wayfinding	• The network of footpaths with clear signage will enhance quick access for taxi passengers walking between the bus stop and the footbridge, station and other parts of the precinct
Kiss-and-ride	2 x new Kiss and Ride bays	• The Kiss and Ride bays provided on Harris Street will allow for a close and quick transfer to the trains for car passengers who are dropped at the station
	1 x new accessible K&R bay	• The accessible Kiss and Ride bay provided on Harris Street will allow for a close and quick transfer with extra room for manoeuvring into and out of cars and for efficient access to and from the trains for car passengers who are dropped or picked up at the station
	The footbridge will support accessible facilities and accessible paths between station and kiss-and-ride facilities in accordance with the DSAPT.	• The network of footpaths with clear signage will enhance quick access for car passengers walking between the drop-off locations and the footbridge, station and other parts of the precinct
Park-and-ride	The footbridge will be well-connected to Park-and-ride facilities, which is the lowest priority of all modes.	• The network of footpaths with clear signage will enhance quick access for car drivers who walk between the multistorey carpark and the footbridge, station and other parts of the precinct

10 ACTIONS



10.1 OVERVIEW

The access plan provides an integrated planning response to the planning conditions for the new footbridge at St Marys station. The access plan provides a broad understanding of the continuous planning for St Marys Station. It includes attribution of the responsibility for the actions that provide and maintain to provide safe and efficient access to the station across the footbridge.

Each action is detailed in the table on the next page and are indexed according to the labels on the diagram alongside.

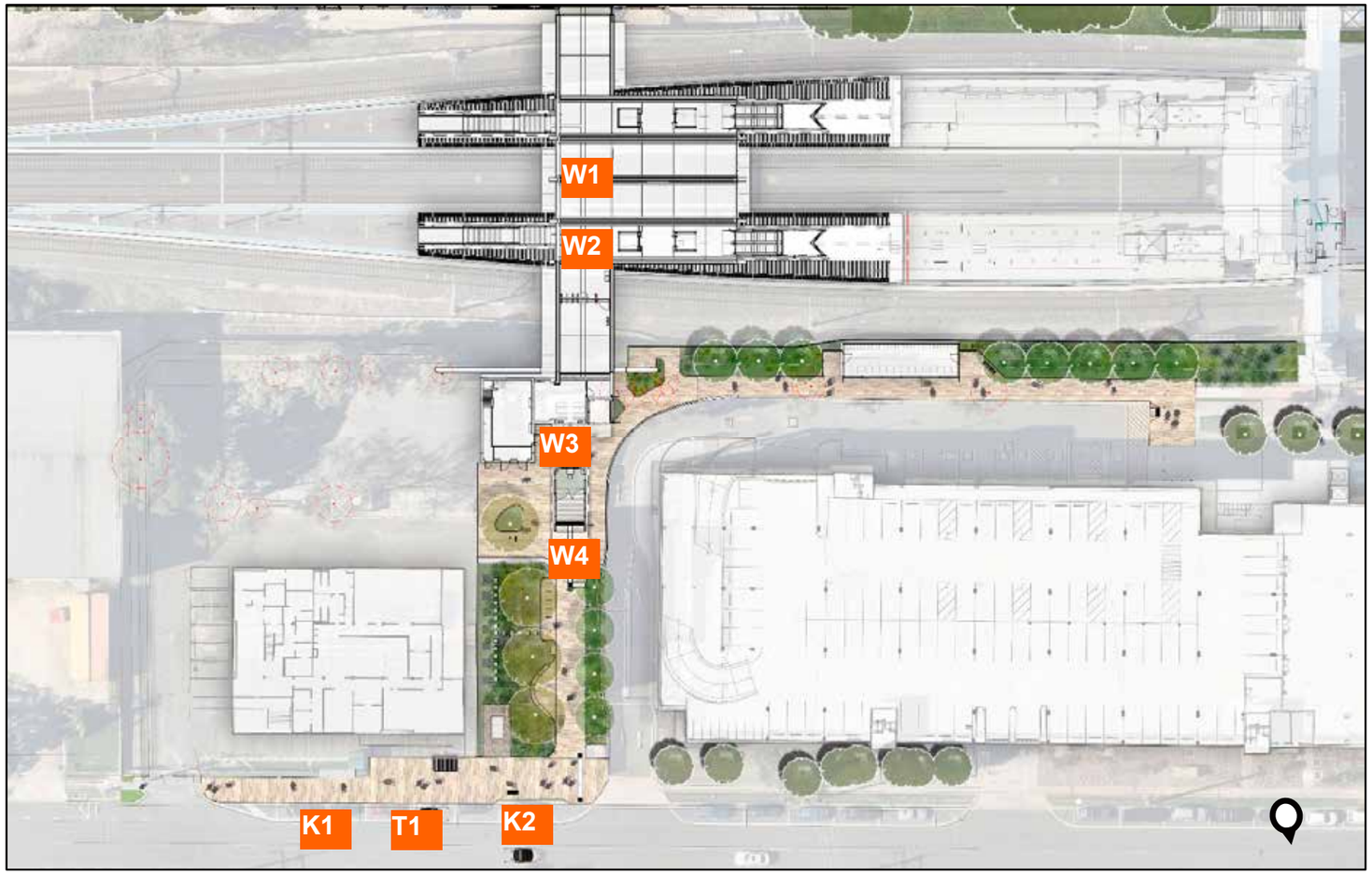
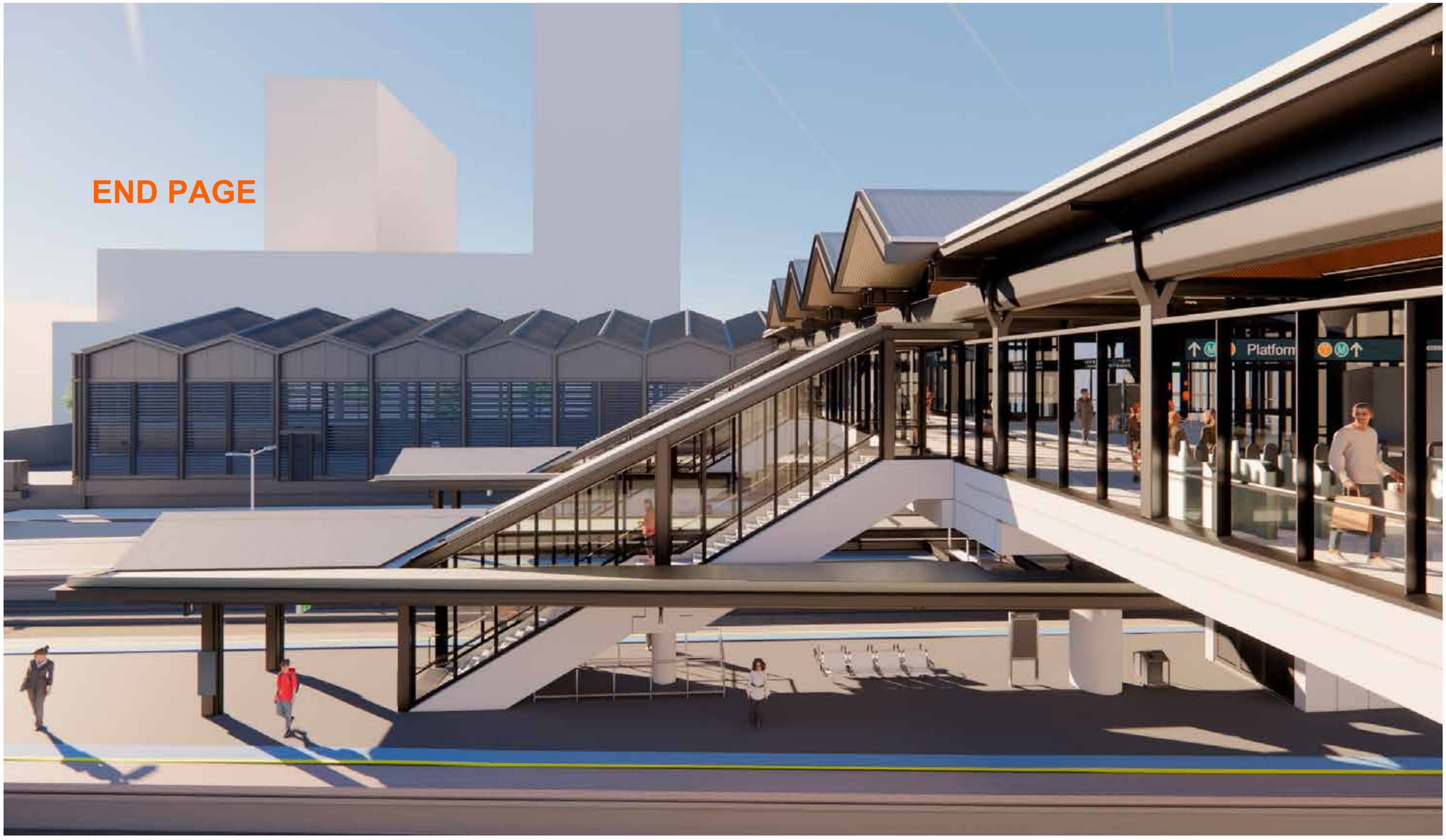


Figure 11

Label (from diagram)	Action	Delivered by
Walking		
W1	Provide new footbridge with concourse connecting North Plaza to the existing station and the new Metro station	St Marys Station footbridge project
W2	Provide accurate wayfinding signs to guide users between North Plaza, the existing station and the new Metro station	St Marys Station footbridge project
W3	Provide the North Plaza to function as a hub for pedestrians moving between Harris Street, the new footbridge, and other interchange facilities on the northern side of the station	St Marys Station footbridge project
W4	Provide accurate wayfinding signs to guide users to the footbridge, Harris Street, cycle storage area, taxi, kiss and ride and park and ride facilities	St Marys Station footbridge project
Taxi		
T1	Provide 2 x taxi parking bays in Harris Street	St Marys Station footbridge project
Kiss and Ride		
K1	Provide 2 x Kiss and Ride bays for drop off in in Harris Street	St Marys Station footbridge project
K2	Provide 1 x Accessible Kiss and Ride bay for drop off in Harris Street	St Marys Station footbridge project
Operation and Maintenance		
O1	Maintain condition of footbridge for safety and efficiency	Sydney Trains
O2	Maintain escalators and lifts to ensure continuous operation	Sydney Trains

Table 11



Appendix E
CVs of key personnel

Qualifications
Bachelor of Architecture (Hons.), University of Canberra

Bachelor of Applied Science in Environmental Design, University of Canberra

Mitchell, Giurgola and Thorp Traveling Scholarship for Design 1996

Building Science Forum Prize 1994 - Award for outstanding performance in architectural design and technology

Qualified British Architect 2003, ARB UK No. 067854F

Contact
dario.spralja@architectus.com.au

Professional Experience

Dario brings more than 27 years of knowledge and experience to his work in the Commercial and Transport sectors at Architectus. A skilled architect and leader, he was the principal-in-charge of our team delivering Lendlease's 248-metre Salesforce Tower – Australia's tallest commercial building when completed. Working closely with Foster + Partners, he contributed to their competition-winning concept for the tower as well as the detail design and delivery. In parallel and as principal in charge, he led design for Sydney Metro Western Sydney Airport Concept Design in 2021, Scoping & Definition Design in 2019 and Feasibility Design in 2017 and 2018 – this work included design of underground stations, elevated viaduct stations, viaduct, tunnel dives, commercial and residential Over Station Developments and precinct design.

He is now co-leading design and delivery of 600 Collins Street, a landmark office tower in Melbourne. Architectus and WilkinsonEyre won the competition to design the skyscraper for international real estate firm Hines.

In addition to significant commercial developments, Dario has been involved in award-winning national and international projects across a wide range of sectors, including rail, aviation, residential, public, and education. His portfolio features exemplar projects such as Sydney Olympic Stadia, Heathrow Terminal 5 London, Barclays Bank London, Barangaroo Masterplan, Epping to Chatswood Rail Link, ANZ HQ Building and Vance at Harold Park.

As a graduating architect, Dario was awarded the prestigious Mitchell, Giurgola, and Thorp (MGT) Traveling Scholarship for Design, allowing him to spend six years in London working with HOK and Richard Rogers Partnership (RSHP). Shortly afterwards, he led the design and documentation for Epping Station Interchange and the line-wide underground platform elements for the Epping to Chatswood Rail Link project. He was also a lead designer on both the D+C bid win and the delivery of ANZ Bank's HQ building in Melbourne.

Significant Projects

180 George Street - Circular Quay Tower, Sydney, NSW. International design competition winner. Executive Architect working with Foster + Partners on the delivery of a 248m high commercial tower. 55 500 m² NLA, $1.6b.

600 Collins Street, Melbourne, VIC. Design competition. Premium-grade commercial office tower development, working in association with WilkinsonEyre as architect of record.

Sydney Metro Western Sydney, Concept Design, NSW. For the proposed metro from St Mary's to the Aerotropolis via the future Western Sydney International Airport, Architectus provided architecture and urban design services for concept design for metro rail stations, dive structures, service facilities, viaducts, stabling and maintenance facility, and potential OSDs. Urban design work included master plans for future town centres around the Metro stations, with consideration for interchange, public domain and character; and development scenarios for residual land parcels.

Sydney Metro USDTS, NSW. As part of the METRON consortium Architectus and Foster + Partners provided architectural design services for the Sydney Metro City and Southwest Underground Station Design comprising 65 km of new metro rail with 31 stations.

Dario Spralja
Principal

architectus™

Cambridge Street, Epping, NSW. Innovative integrated living model comprising 132 residential aged care beds, 172 independent living units with four Presbytery apartments, parish hall and 2-storey single stream school. $175m.

505 George Street, Sydney, NSW. Design competition winner. 80-storey signature mixed use tower with high quality residential, retail, community facilities, childcare and hotel. 65 000 m², $1b. In association with Ingenhoven Architects. Awards: *World Architecture Festival (WAF) Awards, Future Projects, Residential, Finalist, 2019; MIPIM Architectural Review Future Project Award, Tall Buildings, 2019.*

Harold Park "Vance" Forest Lodge, NSW (PTW). 232 Multi-unit Housing Development. Role: Design leader & Project Director for DA submission and construction documentation.

Luna, 78-90 Old Canterbury Road Lewisham, Sydney, NSW (PTW). 330 Multi-unit Housing Development. Role: Design leader & Project Director for design competition win, DA submission and construction documentation.

Epping to Chatswood Rail Link, Sydney, NSW (HASSELL). Project Architect and Design Lead responsible for Epping Station concept and detail design, including construction methodology to minimise disruption to the existing line. The design required a detailed understanding of track alignments and three dimensional placement and connection of elements to allow clinical connections between the aerial concourse and platforms below, via existing live tracks. Key innovations Dario brought to the project include maximising off-site manufacture; minimising structural support requirements for aerial concourse and main roof canopy. The projected included design for an extensive and integrated new bus stop, taxi and kiss and ride area. Dario also worked on the below ground metro stations, assisting in design of vertical circulation, cladding and lighting. $4b.

Parramatta Station, Sydney, NSW (HASSELL). Dario conceptualised and developed the detail design of the new station's façade.

ANZ Headquarter Building, Melbourne (HASSELL). (Base Building)
A new 6 Star, 85,000m² GFA 10 storey office building in Melbourne's Docklands. Role: Assistant Lead Design Architect on the competition wining scheme and building envelope design architect to tender stage and assistant overall project architect. $270m.

Heathrow Airport Terminal 5, London, UK (HASSELL). Terminal 5 is a new terminal development at Heathrow Airport. Role: Concept, detailed design and package architect for the main terminal roof cladding, services and access system and collaborating designer of the roof structure. Due to successful delivery of roof systems was invited to be lead design Architect for the facade cladding and facade structural system. Total value £3.7b , value of Central Terminal Building £874m, value of CTB: roof structural steel £38m; roof cladding £27m; Roof access system £4m; Façade Steel £8.7m; Façade Cladding £26m. Opened 2008.

Andrew Van Zanten
Associate

architectus™

Qualifications
Master of Science (Architecture), Delft University of Technology, 2006

Years of Experience:
17 years

Contact
andrew.vanzanten@architectus.com.au

Professional Experience

Andrew has engaged in a diverse array of projects throughout his career, spanning various sectors such as airports, metro stations, smart mobility hubs, football clubs, malls, and multiple residential and hospitality developments.

Each of these projects has presented unique challenges, requiring Andrew to adapt his approach and draw upon his extensive knowledge and expertise. This diverse experience has enriched his professional acumen, allowing him to gain invaluable insights and multifaceted perspectives.

Andrew's commitment to cultivating a well-rounded skill set is evident in his involvement in different aspects of architectural practice since his time at university. Over the years, he has assumed roles as a designer, project architect, and technical documenter, demonstrating his versatility and ability to excel in various capacities.

An essential facet of Andrew's success lies in his exceptional interpersonal skills, enabling him to forge strong, trusting, and collaborative relationships with colleagues, consultants, contractors, and clients alike. His capacity to foster a positive and conducive work environment has consistently contributed to the overall success of the projects he has been involved in.

Significant Projects

A-Pier, Amsterdam Schiphol Airport, Amsterdam (Cepezed Architects). The A-Pier will function as a small terminal and includes its own border control, security checks and a bus station. The pier has been designed to align with the international sustainability label LEED Gold. Role: Lead detail documentation especially in relation to facade, VDGS & bridges. Construction phase. Floor area of 57,500 square metres. Approx 350m Euro.

Smart Mobility Hub, Amsterdam (Cepezed Architects). The smart mobility hub will provide a sustainable asset to the Amsterdam parking and mobility infrastructure and integrate sports, transport and commerce. It comprises 3 parking levels for 2100 parking spaces, international touring car terminal, 50 car taxi stand and 700 bicycle parking. The roof houses a sports park with over 25 different sports and a and sports building. Role: Project lead during design development to DA. Floor area of 130.000 square metres. Approx 120m Euro.

Pitt Street Station + ISD, Sydney, NSW (Cox Architecture). Tender for Metro Station development in prominent Pitt Street location. The metro station has of a binocular station configuration, that connects through adits to two entries on street level. Above the entries, are a commercial tower on the North site and a residential tower on the South site. Role: Project architect during tender phase

Sydney Metro West, NSW. Cox Architecture in joint venture with Farrels, Woods Bagot, Aecom and WSP. A great project in scope and quality, we researched and designed a whole alignment with 12 stations along a 24-kilometre metro line. Stations now confirmed at Westmead, Parramatta, Sydney Olympic Park, North Strathfield, Burwood North, Five Dock, The Bays, Pyrmont and Hunter Street in the Sydney CBD. Role: Project architect throughout Definition Design & Value enhancement stage.

HERITAGE

Heritage is inspired by history, culture, change, creation and regeneration. The more we know about our history and heritage, the more liberated and visionary is our future.

Lynette Gurr
Senior Associate

Lynette Gurr has over 25 years' experience as a heritage consultant with a background in architecture, fine arts, history and archaeology. She has a depth of experience in the management of built, urban and landscape heritage of national, state and local significance and is well versed in heritage planning requirements at all levels.

Lynette has worked on a diverse range of heritage projects including conservation management plans, heritage planning, heritage interpretation strategies, schedules of works, and heritage impact statements. She is also experienced in the community consultation process.

Lynette's project experience is wide-ranging and includes industrial smelters, churches, botanical gardens, reservoirs, homesteads, roads, bridges and hospitals across Australia and internationally. In recent years, Lynette has presented on heritage themes at conferences and published on contemporary heritage issues.

Qualifications

Master of Heritage Conservation, University of Sydney

Bachelor of Architecture, University of Sydney

Bachelor of Science Architecture (Honours), University of Sydney

Bachelor of Arts (Honours), University of Sydney

Professional affiliations

Australia ICOMOS National Scientific Committee for Energy and Sustainability, 2019–present

Alumni Executive Committee, The University of Sydney, Faculty of Architecture, Design and Planning, 2012–2018

Documentation and Conservation of Buildings, Sites and Neighbourhoods of the Modern Movement (Docomomo), Member

Key experience

Heritage impact statements

- TAP 3 Project, Moss Vale Station, Heritage Advice for Design Development and Approvals Reporting—Client: Architectus
- Glebe Island Bridge, Heritage Advice and Heritage Impact Statement—Client: Transport for NSW
- St Mary's Footbridge, Sydney Metro, Western Sydney Airport—Heritage Advice and Statement of Heritage Impact for Design Development and Approvals Reporting—Client: Architectus.
- TAP 3 projects for various railway stations including Wahroonga, Beecroft, Erskineville, Pymble, St Peters, Bexley North, Killara and Turrella, Heritage Advice for Design Development and Approvals Reporting—Client: DesignInc
- 1–11 Oxford Street, Paddington, Heritage Impact Statement for Planning Proposal and DA—Client: CE Boston Hotels Pty Ltd + St Vincent's Private Hospital (for Urbis)
- Parramatta Aquatic Centre, Heritage Impact Statement and Heritage Advice—Client: City of Parramatta Council (for Urbis)
- Penrith Station Yard Overhead Wires Upgrade, Heritage Impact Statement and Heritage Assessment—Client: Sydney Trains (for Urbis)

Conservation management plans

- Sydney Working Harbour and Maritime Heritage Strategy, HAMS and HAAP + Heritage Disaster Risk Management Strategy and Climate Change Adaptation Plan—Client: Transport for NSW
- East Kunderang Pastoral Station, Conservation Management Plan—Client: National Parks and Wildlife Service
- Macquarie Place Park, Sydney, Conservation Management Plan and Design Advice to Masterplan—Client: City of Sydney Council
- Ivanhoe Park, Manly, Conservation Management Plan—Client: Northern Beaches Council
- Rockend Cottage, 40 Punt Road Gladesville, Conservation Management Plan—Client: City of Ryde Council
- Heritage Floor Space Applications (City of Sydney), Corporation Building, Capitol Theatre, Queens Victoria Building, Hay Street Library, Conservation Management Plan—Client: City of Sydney Council (for Urbis)
- Customs House HFS Application, Conservation Management Plan—Client: City of Sydney Council (for Urbis)
- Dalmar Children's Home, Carlingford, Conservation Management Plan—Client: Wesley Mission (for Urbis)

Chris Tidswell
Principal
M.LArch M.Arch
B. Des St Dip. PM AILA

With more than 15 years of private and public sector experience, Chris Tidswell is one of Arcadia's studio Principals, with multidisciplinary qualifications that allow him to provide extensive knowledge to create high quality designs in the public realm. He has Landscape and Architectural Masters Qualifications that are accompanied by a Project Management qualification, giving him a well-balanced and complementary skillset to deliver a market leading approach to Urban Design and Landscape Architecture

Chris' approach is always specific to the site, creating a narrative to support the place and experience - he draws on the principles for design from the site context, climate, ecology and people's use of the spaces. To achieve high quality design solutions, Chris is environmentally and socially responsible. He continuously re-evaluates the technical and detailed knowledge required for best practice design outcomes.

Experience

Current
Principal
Arcadia Landscape Architecture

Current
International Federation of Landscape Architects Asia Pacific Region Honorary Secretary

2018-2021
AILA National Director and Company Secretary

2014-2018
Associate
Hassell

2013-2014
Urban Design & Campus Portfolio Manager, Clouston Associates

2007-2013
Senior Landscape Architect
Oxigen

2006
Undergraduate Landscape Architect
Swansbury Penglase Architects

Education

University of Adelaide
Australian Institute of Management

Master Planning and Urban Design

/ Campbelltown Billabong, NSW
/ Park 4 People Northern Beaches (2 Parks), NSW
/ Tonsley Master Plan - Adelaide, SA* (UDIA National Award for Excellence 2017)
/ Kingston Foreshore - Canberra, ACT* (2009 Winner Urban Development Institute of Australia, National)(Urban Renewal Award - Kingston Foreshore Development.) (2008 Winner Urban Development mInstitute of Australia (NSW/ ACT) (Urban Renewal Award - Kingston Foreshore Development.)
/ Our River Nepean Master Plan, Sydney*
/ Victoria Park / Bakkabakkandi, Master Plan and Construction Packages, Adelaide,*
/ Rutherford Avenue Village Green, Burraneer*
/ Primrose Park Strategic Framework Master Plan, Sydney*
/ RG Menzies Walk, Canberra* (AILA SA Award 2011)
/ Queanbeyan City Council CBD Master Plan and Built Works (NSW/ACT "Park of the Year" – Parks and Leisure Australia 2017) (AILA NSW Award 2017)
/ Belconnen Skate Park*
/ Whyalla Urban Image Guide, Whyalla*
/ Showground Station Urban Design and Yield Study, Sydney*
/ LeFevre Skate Park, Adelaide*
/ Lake Ginninderra Shelters and Seating, Canberra*
/ Thomas Turner Reserve, Adelaide*
/ Weston Park Master Plan, Adelaide*
/ Victoria Park Master Plan, Adelaide*

Infrastructure

/ Explosives Ordinance Facility Northern NSW Redevelopment (EOFNNSWR)
/ Sydney Metro West
/ Sydney Metro Barangaroo Station
/ National Intercity Facility, Kangy Angy
/ Sydney Metro Barangaroo Station - Visual Impact Statement
/ The Huntley, Cessnock Stage 1- Visual Impact Statement
/ Campbelltown Hospital - South Fill Park Visual Impact Assessment
/ Wellington Station
/ Pomigalarna Regional Cycle Facility, Wagga Wagga
/ 144 Wicks Road, Macquarie Park
/ Ausgrid Alexandrina
/ Sydney Metro North West Design for NRT Consortium, Sydney*
/ Sydney Metro Central Station Bid, Sydney*
/ Sydney Metro Sydenham Bid and Project*
/ Sydney Metro Southwest Bid, Sydney*
/ Capital Metro, Stage 1, Canberra*
/ Melbourne Metro Bid*
/ Torrens Pedestrian and Bicycle Bridge, Adelaide* (Adelaide Prize, 2008)
/ Southern Expressway Duplication, Adelaide*
/ Hardened Network Army Edinburgh RAAF, Adelaide*
/ Urban Design and Landscape Plan, Sydney Metro Norwest, Sydney*
/ North-South Interconnection System Project, Adelaide, SA* (Commendation at the Engineers Australia Excellence Awards)
/ Adelaide Oval, Adelaide*
/ Penrice Mine Strategic Visual Amenity Plan (SVAP) Landscape character and visual impact assessment, Penrice Soda Products, Adelaide*

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*Undertaken prior to joining Arcadia

Chris Tidswell
Principal
M.LArch M.Arch
B. Des St Dip. PM AILA

/ Schofields Road Stage 1, Western Sydney RMS*
/ Maitland Roundabout Overpass RMS
/ Independent Reviewer of Superway, DPTI, Adelaide*
/ M12 Reference Design, Sydney*

Environmental

/ Green Infrastructure Working Paper, Adelaide* (AILA National Landscape Architecture Award 2012)

Education

/ Picnic Point High School, NSW
/ Robb and Wright College, Armidale
/ Central Coast Schools, NSW
/ Campus Improvement Plan, The University of Sydney*
/ Grose Farm Lane Upgrade, The University of Sydney*
/ University of South Australia M2 Building Forecourt, Adelaide*

Commercial

/ City Tatts, Sydney, NSW
/ Barrak Place, Sydney, NSW
/ TOGA Central, Sydney, NSW
/ Charlestown Square, Charlestown
/ 144 Wicks Road, Macquarie Park
/ Gosford Gateway

/ 28 Elizabrth Street, LiverpoolSt Peters Civic Precinct, Adelaide*
/ Aspen Roof Top, Adelaide*
/ 225-235 Pacific Highway, North Sydney Development Application, Sydney*
/ Anderson Street, Chatswood Development Application*
/ Studio Nine Architects Art and Landscape, Adelaide* (AILA SA Award 2009)

Health

/ Sutherland Hospital
/ Campbelltown Hospital
/ Susan Wakil Health Precinct
/ North Shore Health Hub, Sydney, NSW
/ Wyong Hospital
/ Majorie Jackson Hospital, Adelaide*
/ Whyalla Hospital, Adelaide*

Residential

/ Ed Park Precinct 3 and 5
/ Top-spring St Leonards, NSW
/ Precinct 75 St Peters
/ Catholic Healthcare Lewishim, Sydney
/ Mirvac Green Square
/ Newmarket Randwick
/ Hill Road, Wenworth Point, Sydney
/ Penrith Toga
/ Rocky Point, Sydney

/ The Ponds Residential Subdivision, Sydney*
/ Mayfield Site, Concept Report, Adelaide*
/ Robe Marina Landscape Concept, Adelaide*
/ Northgate Lightsview, City View Boulevard, Adelaide*
/ Northgate Lightsview, Reserve - Adelaide*
/ Andrews Farm, Adelaide, SA*
/ Orleana Waters, Evanston Gardens, Adelaide, SA*

Sydney Metro Barangraoo Station, Sydney NSW

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*Undertaken prior to joining Arcadia

Andrew Mason
Senior Associate
B.LArch AILA

Joining Arcadia shortly after its foundation, Andrew has become one of the recognised pillars of the team able to share insights developed through his work on a range of project types, scales, locations and teams over the past decade. Through this process, and building on previous international experience, Andrew has developed a natural design flair that seeks elegant design solutions and ensures outcomes of exceptional value and beauty, often inspired from or celebrating the richness and diversity of the local landscape environs.

Andrew has played a key role in the development of Arcadia's BIM strategy and implementation and has grown a reputation for rigour and attention to detail, through achieving exceptional outcomes managing large document packages and construction detailing.

Experience

2021 – Current
Senior Associate
Arcadia Landscape Architecture

2018 – 2021
Associate
Arcadia Landscape Architecture

2013 – 2017
Senior Landscape Architect
Arcadia Landscape Architecture

2010 – 2012
Landscape Architect
Arcadia Landscape Architecture

2009 – 2010
Landscape Architect
Bespoke Landscape Architects

2007 – 2009
Landscape Technician
Lanzpec Auckland

Education

Unitec Institute of Technology
New Zealand

Master Planning and Urban Design

/ Casuarina Shopping Centre, Darwin
/ DHA Crimson Hill, UTS Campus, Lindfield
/ Casuarina Square Shopping Centre, Darwin
/ Victory Parc, Rutherford
/ Sunland Kellyville Estate
/ Mangere Bridge Causeway, Auckland*
/ Manukau Tennis Centre, Auckland*
/ Porterfield Trail Whitford, Auckland*
/ Jellicoe Road Subdivision, Pukekohe*
/ Gladesville Road, Hunters Hill
/ Kiaora Lane, Double Bay
/ Friedlander Place, St Leonards
/ Rosenthal Design Ideas Exhibition, Lane Cove
/ Langston Place, Epping
/ Charles Sturt AgriScience Park, Wagga Wagga
/ Crescent Street, Holroyd
/ Charles Sturt Residences, Wagga Wagga
/ DHA National Design Guidelines
/ Newmarket Randwick
/ Campbelltown Billabong Parklands

Education

/ APS, Haberfield
/ Casuarina Student Housing, Darwin
/ Monte Sant Angelo, North Sydney
/ Australian Catholic University Courtyard, Concord
/ St Ignatius College, Riverview, Lane Cove
/ Lakes Grammar, Warnervale
/ UNSW Pavilions, Sydney
/ St Narsai Assyrian College, Horsley Park
/ Picton High School
/ Cranbrook School, Bellevue Hill
/ Barker College Maths Hub, Hornsby
/ Trinity Grammar School Renewal, Summer Hill

Environmental

/ North Ryde Residential Development, North Ryde
/ Defence Housing Australia Edgelea, Lindfield
/ Pinehill Stormwater Pond*

Residential

/ Forest Road, Hurstville
/ Defence Housing Austraila, Lindfield
/ Macquaire Park Residences, North Ryde
/ Victory Parc Estate, Rutherford
/ James Ruse Drive Apartments, Rosehill
/ Lauriston Park – Cambridge*
/ The Pheonix Apartments, Rhodes
/ Brooks Street, Linley Point
/ Marine Parade, Avalon
/ The Parc, Kellyville
/ Arthur Street, Randwick
/ Haran Street, Mascot
/ The Chatswood, Chatswood
/ East Lane, North Sydney
/ St Leonards Square, St Leonards
/ The Landmark, St Leonards
/ Olympic Drive, Lidcombe
/ Astor Apartments, Rosebery
/ Macquarie Green, North Ryde
/ New Life, Bondi Junction, NSW
/ Maynard Gardens, Bowral, NSW
/ Hill Road Wentworth Point, NSW

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*Undertaken prior to joining Arcadia

Andrew Mason
Senior Associate
B.LArch AILA

/ Ben Boyd Road, Neutral Bay

Native Revegetation

/ Pinehill Stormwater Pond, Auckland*

Hospitality

/ Dee Why RSL, Dee Why
/ Hornsby RSL, Hornsby
/ Mooney Mooney RSL
/ Nelson Bay Diggers
/ New Lambton Bowling Club
/ Moama Bowling Club
/ Canterbury League Club
/ Chinderah Tavern
/ Riverside Stables, Warwick Farm

Infrastructure

/ Sydney Metro Ancillary Buildings
/ New Intercity Fleet Maintenance Facility, Kangy Angy
/ Barangaroo Station, Sydney
/ Sydney Metro West
/ M1 Highway Service Centres

Health And Aged Care

/ Hornsby Ku-Ring-Gai Hospital
/ Hornsby Mental Health Unit
/ National Capital Private Hospital – Woden, ACT
/ Armidale Hospital, Armidale
/ Nepean Hospital, Kingswood
/ Circa Norwest, Bella Vista
/ Coombah Uniting Village, Epping
/ Hardi Aged Care, Blacktown
/ Hardi Aged Care, Seven Hills
/ Summitcare, Casula
/ Hammondcare, Cardiff
/ Summitcare, Randwick
/ Summitcare, Canley Vale
/ Wyong Hospital
/ Manly Adolescent and Youth Hospice
/ Nepean Hospital, Kingswood

Commercial

/ Next DC Data Centre – North Ryde and Perth
/ 1 Eden Park Drive – Macquarie Park
/ The Woods Leisure Park, Villawood
/ Bakehouse Quarter, North Strathfield
/ Darling Park, Central Garden, Sydney
/ Transgrid – Sydney West and Tamworth
/ Maddox Road, Alexandria
/ O'Riordan Street, Mascot
/ Makita, Greystanes
/ Mainfreight, Palmerston North and Wellington*
/ The Portal, Mascot NSW

Barangaroo Station, Sydney NSW

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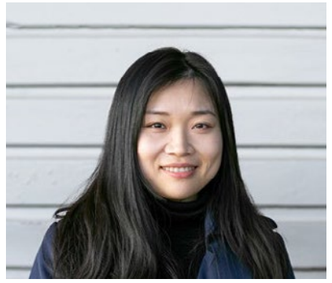
*Undertaken prior to joining Arcadia



Yiling graduated from the University of Adelaide with a Masters degree of Landscape Architecture and Bachelor in both Architecture and Landscape Architecture. Having lived in different cities in China and Australia, she has developed a strong understanding of the culture of both of the countries. Her design approach is centred on local culture and humanistic thinking.

With more than five years of work experience in Shanghai and Sydney, Yiling has developed expertise in infrastructure, having supported large infrastructure projects locally and interstate. This expertise has provided a strong foundation for Yiling to expand her skillset across all sectors.

Yiling Jiang
Senior Landscape Architect
B.LArch B.Arch M.LArch
Horti. Cert III, Dip PM
AILA

Experience

2022 - current
Landscape Architect
Arcadia Landscape Architecture

2020-2022
Landscape Architect,
Taylor Brammer Landscape Architects, NSW

2019-2020
Landscape Architect,
Hassell, Sydney

2018-2019
Graduate Landscape Architect,
Hassell, Sydney

2016
Internship
Intern, Oxigen, Adelaide

2016
Internship
Shanghai Xian Dai Architectural Design (Group) Co., Shanghai

Education

Bachelor of Landscape Architecture, Nanjing Foresty University

Bachelor of Archecture Design, University of Adelaide

Master of Landscape Architecture, University of Adelaide

Infrastructure

/ Sydney Metro West
/ Canberra Light Rail, Australia*
/ M6 Extension, Sydney, Australia*
/ Sydney Metro Line Wide, Australia*
/ Cross River Rail - CRR - TSD Project, Brisbane, Australia*
/ Sydney Metro Sydenham Junction and Station Works Bid, Australia*
/ Sydney Metro Northwest, Australia*
/ Melbourne Metro, Australia*
/ Bao'an Airport South Precinct, Shenzhen, China*
/ Landscape reconstruction of the district around the nanjing railway station Won the 2rd prize in the "yuanye" cup international design competition.(2013)*

Educational

/ St Luke's catholic college, Stage 4,5&6*
/ NEXUS10 Precinct, University of Adelaide, Australia*

Health & Aged Care

/ Bathurst Hospital
/ Manning Based Hospital
/ HammondCare Wahroonga Stage 2, NSW*
/ HammondCare Scone, NSW*
/ HammondCare Honsly, NSW*
/ HammondCare Waratah, NSW*
/ 154 Stafford Street, Penrith, Fresh hope, NSW*

Residential

/ 5 Uhrig Rd Stage 2
/ Edmondson Park Town Centre Core Stage 1 Construction, Sydney, Australia*
/ 11-13 Greenknowe Ave, Elizabeth Bay, Sydney*

Commercial

/ Atlassian
/ 197 Church Street Parramatta
/ AMP QQT Sydney, Australia*
/ Wuxi Wanda, Wuxi, China*
/ Disneyland (Adventure Isle), Shanghai, China*

Open Space

/ The Water Lane Reserve, Boxhill, NSW*
/ WuXi Ehu rose Park, Wuxi, China*
/ 10-16 Seven Hills Road, Baulkham Hills*

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*Undertaken prior to joining Arcadia

Appendix F
Arboricultural Impact Assessment