



MetCONNX

Development Application 3 Armadale Station and Public Realm

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Byford Rail Extension

Development Application 3 – Armadale Station

Document details	
Title	Development Application 3 – Armadale Station
Project	Byford Rail Extension (BRE) Design and Construction Project
Laing O'Rourke Project No.	R30
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Table 1: Revision History





Acknowledgment of Country

MetCONNX acknowledges the Whadjuk People and the Gnala Karla Booja People as the Traditional Custodians of the land and waters on which Byford Rail Extension Project is located. We pay our respects to Elders, past, present and emerging, and thank them for their continuing connection to country, culture and community.



Executive Summary and Introduction

This Development Application (DA) Report has been prepared by the MetCONNX Alliance (the Alliance) as part of the Byford Rail Extension (BRE). The Alliance was established to form a partnership with the Public Transport Authority (PTA) to design and build a range of public transport improvements in the Armadale and Byford area - including a new elevated station at Armadale, an at-grade station at Byford and related works.



The redevelopment of Armadale Station will provide important public transport and urban regeneration improvements in the Armadale Town Centre. It will help to stimulate the development of residential, commercial, and mixed-use activities, whilst providing once-in-a-generation public transport and public realm upgrades to be enjoyed by the local community. This can lead to an increase in economic and social activity and provide a variety of new and improved options for living, recreation, and employment. These upgrades create an excellent chance to attract more comprehensive investments and contribute to the creation of a lively district where individuals can opt to reside, work, and visit.



The contents of this DA Report include:

- An overview of the BRE project.
- Relationship to previous (and related) DAs for the BRE project.
- Project details.
- An overview of the context of the subject site.
- An overview and explanation of the works that form part of this DA which require approval from the Western Australian Planning Commission.
- An overview and explanation of works that are exempt from the requirement to obtain development approval.
- An assessment of the proposal against the relevant planning requirements.
- An examination of the planning merits of the proposal.

DA 3 – Armadale Station will include the following works, which are fully described in **Section 7 – Development Overview and Technical Considerations** and **Appendix D – Site Plan**.






Works	Details
Armadale Station Building and Associated Infrastructure 	<ul style="list-style-type: none"> ▪ Elevated station and facilities (e.g. vertical transport, concourse, platforms, kiosk, and associated facilities such as waste storage areas) ▪ Viaduct treatment (within the station precinct) ▪ Lighting (selected areas around the viaduct and station precinct)
Public Art 	<ul style="list-style-type: none"> ▪ Public art as per Public Art Plan (conditioned as appropriate through further development) ▪ Paint on viaduct columns, underside of viaduct in selected locations
Landscaping 	<ul style="list-style-type: none"> ▪ Landscape upgrades around Neerigen Brook ▪ Landscape upgrades to western interface along Aragon Court and Green Road ▪ PSP and paths under viaduct (further consideration under DA 5)
Public Realm Upgrades within the Station Precinct 	<ul style="list-style-type: none"> ▪ Youth zone ▪ Hardscaping ▪ Urban lounge ▪ RSL zone ▪ Junior nature scape play ground ▪ Jull Street mall connection (area on project land only)
New Bus Bays and Vehicle Parking Bays 	<ul style="list-style-type: none"> ▪ 10 active bus bays and four layover bays ▪ Park and Ride bays, Kiss and Ride Bays, other car parking bays

Table 2: Works Overview

This DA Report has been prepared to provide an overview of the subject site and the works associated against the relevant planning framework. This DA Report is also accompanied by supporting plans and technical documents, as discussed throughout this report, which includes:

- Armadale Station Final Place Plan.
- Site Plan.
- Armadale Station Development Plans.
- Urban Design and Landscape Concept.
- Tree Retention and Replacement Strategy.
- Public Art.
- Engagement Outcomes.
- Demolition and Construction Management Plan.
- Stormwater and Drainage Strategy.
- Transport Impact Assessment.
- Operational Waste Management Plan.
- Noise and Vibration Report.
- Geotechnical Report.
- Sustainability Management Plan.
- Lighting Strategy.



1. Project Overview

1.1 Structure of Development Applications for the BRE

Six DAs are proposed as part of BRE, four of which are located within the City of Armadale Town Centre and its surroundings.

The components comprising the new station building and ground level public realm improvements were originally separated to allow for the delivery of an early works package for the projects enabling infrastructure.

This approach has been supported by the WAPC and does not obviate the responsibility of the Alliance to deliver development compliant with the local and state planning framework.

DA	Name	Lodgement To	Approval Authority	Additional information / Notes
DA 1	<ul style="list-style-type: none"> Development Application 1 Viaduct for Armadale Station and Surrounds 	<ul style="list-style-type: none"> City of Armadale 	<ul style="list-style-type: none"> WAPC 	<ul style="list-style-type: none"> Simple DA material outlined by WAPC Some related items are not included in this DA (to be included in DA 3) <ul style="list-style-type: none"> Lighting Public art Façade treatment Under consideration from WAPC
DA 1.5	<ul style="list-style-type: none"> Development Application 1.5 Armadale Temporary Bus Interchange and Associated Early Works 	<ul style="list-style-type: none"> City of Armadale 	<ul style="list-style-type: none"> WAPC 	<ul style="list-style-type: none"> Approved March 2023
DA 2	<ul style="list-style-type: none"> Development Application 2 Eleventh Road Bridge 	<ul style="list-style-type: none"> DevelopmentWA 	<ul style="list-style-type: none"> DevelopmentWA 	<ul style="list-style-type: none"> Under consideration from DevelopmentWA
DA 3 (Subject DA)	<ul style="list-style-type: none"> Development Application 3 Armadale Station structures, bus interchange facilities, public realm upgrades, viaduct treatments (where applicable), related car parking, and pedestrian and vehicle access) 	<ul style="list-style-type: none"> City of Armadale 	<ul style="list-style-type: none"> WAPC 	<ul style="list-style-type: none"> N/A
DA 4	<ul style="list-style-type: none"> Development Application 4 Byford Station structures, bus interchange facilities, public realm upgrades, related car parking, and pedestrian and vehicle access) 	<ul style="list-style-type: none"> Shire of Serpentine-Jarrahdale 	<ul style="list-style-type: none"> WAPC 	<ul style="list-style-type: none"> N/A
DA 5	<ul style="list-style-type: none"> Development Application 5 Armadale Road Principal Shared Path Bridge and surrounds. 	<ul style="list-style-type: none"> City of Armadale 	<ul style="list-style-type: none"> WAPC 	<ul style="list-style-type: none"> Includes landscaping (north of Armadale Road and areas adjacent to the south) PSP bridge and treatments

Table 3: Development Applications



1.2 Relationship to Previous Approvals for Armadale

This is the third development application to be lodged, seeking the necessary approvals for the Armadale Station redevelopment. For clarity it should be noted that for program reasons DA 1.5 was lodged prior to DA 1.



Figure 1: Relationships Between DA3 and Other Related DAs

DA 3 is a crucial component of the Armadale Station development approvals process, as it brings several works components together for the station building, public realm upgrades and associated station works.

The works identified in **Table 3 – Works Integration** reflect treatment to the Armadale Station and certain aspects of the viaduct structure, tying the overall development together across DA 1, DA 1.5, and DA 5 to DA 3.

2. Project Details

2.1 Project Team

Specialisation	Responsible
Planning (Statutory Planning)	MetCONNx
Armadale Station Development Plans	MetCONNx
Urban Design and Landscape Concept	MetCONNx
Tree Retention and Replacement Strategy	MetCONNx
Public Art	MetCONNx (Apparatus)
Engagement Outcomes	MetCONNx
Demolition and Construction Management Plan	MetCONNx
Stormwater and Drainage Strategy	MetCONNx
Transport Impact Assessment	MetCONNx (Urbsol)
Operational Waste Management Plan	MetCONNx (Encycle)
Acoustic Report	MetCONNx (SLR)
Geotechnical Report	MetCONNx
Sustainability Management Plan	MetCONNx
Lighting Strategy	MetCONNx

Table 4: Project Team

2.2 Land Details

Lot	Owner / Land Status	Deposited Plan	Title	Lot area (m ²)
503	State of Western Australia	53376	LR3152/674	51,600
1091	State of Western Australia	000796	LR3136/672	206,460

Table 5: Land Details



3. Site Context

3.1 Armadale Town Centre

The Armadale Town Centre, situated 28km south-east of Perth, is a versatile strategic centre that delivers a range of economic and community services to both the local population and those residing in the surrounding catchment region.

The region is renowned for its natural attributes, notably its connection to state forests that connect into the Darling Scarp towards the east. The City of Armadale shares borders with the City of Gosnells and Shire of Kalamunda to the north, the Shire of Beverley to the east, the Shires of Wandering and Serpentine-Jarrahdale to the south, and the City of Cockburn to the west. Communities living in these areas rely on the services and facilities provided in the Armadale Town Centre.

As of 2023, the City is estimated to have a population of 103,602, this is forecast to increase to 148,346 by 2041, reflecting a 43% increase (source: profile.id. accessed on 26/05/23). This community is changing and growing. Locals can enjoy the advantages of a station precinct that is designed to create a pleasant, secure, and sustainable transportation options that are designed to be inclusive and inviting.

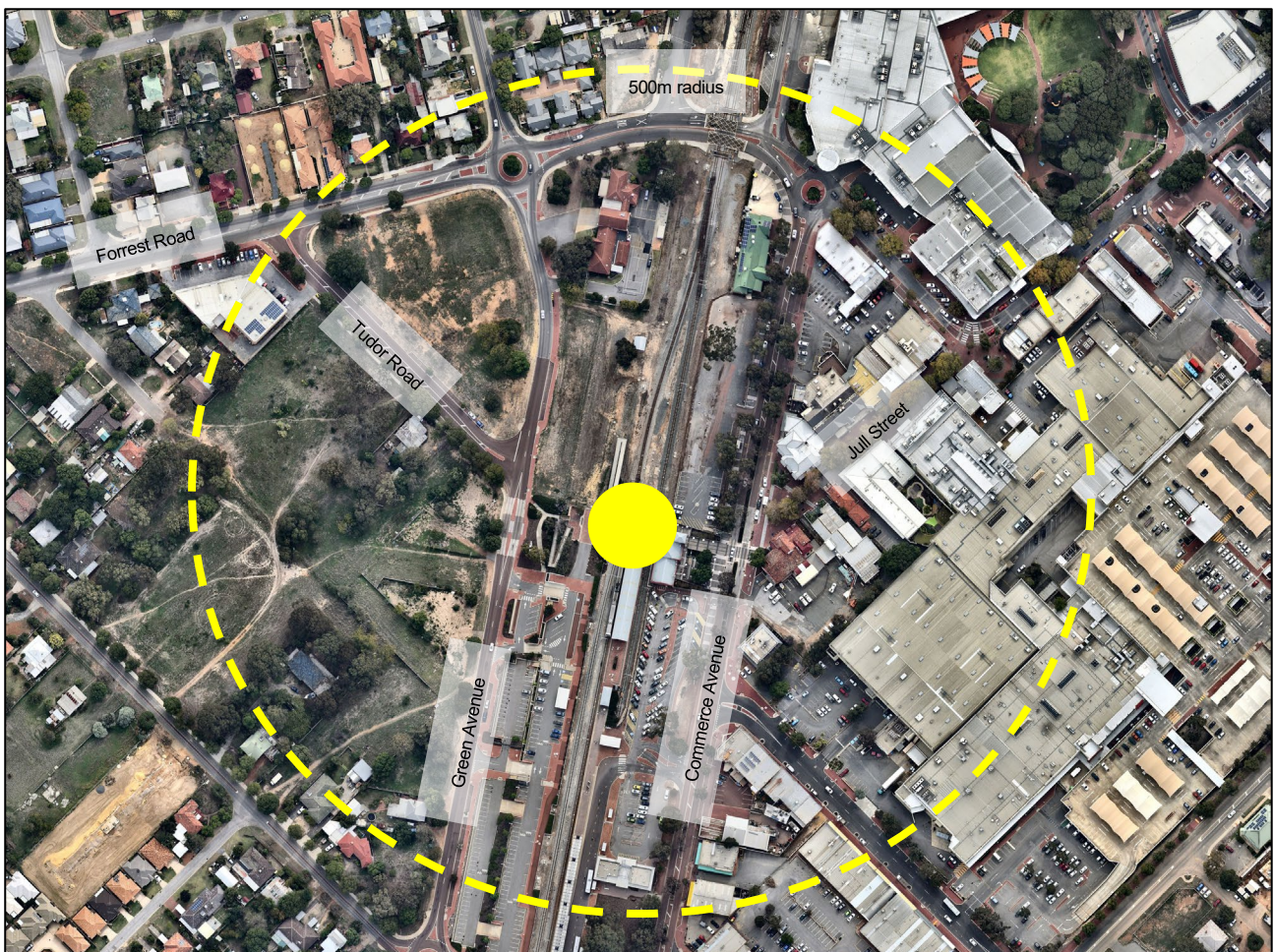


Figure 2: Location Plan

The current land use and zoning for the Armadale Town Centre indicates it's potential to become a major urban centre with a range of land uses including residential, commercial, retail, community, cultural and civic. The integration of the western and eastern parts of the station precinct, afforded by the new station precinct, will promote connectivity and integration of key pedestrian transit areas, facilitating further economic development.

3.2 Land Holdings

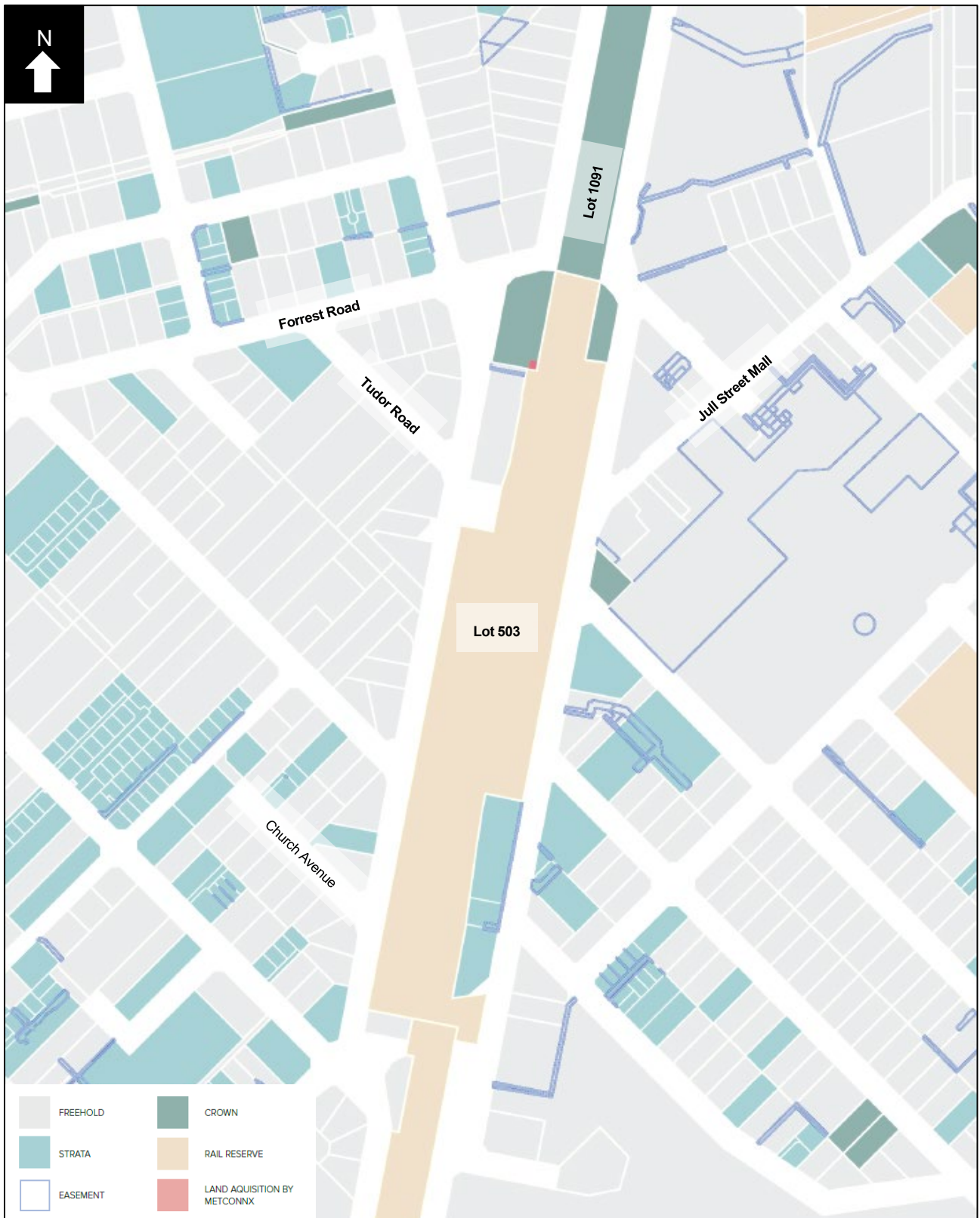


Figure 3: Land Holdings



3.3 DA 3 Works Extent

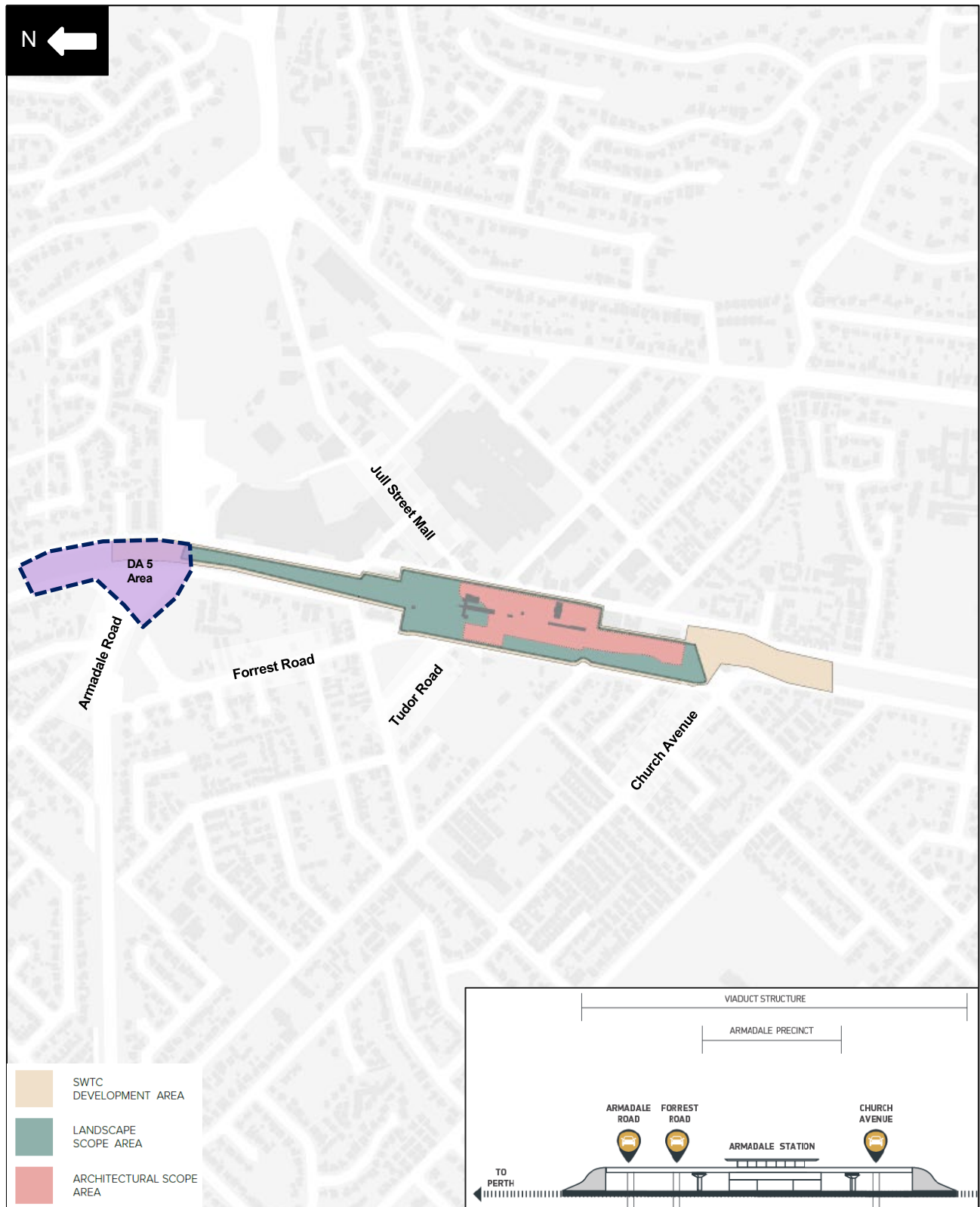


Figure 4: DA 3 Works Extent

3.3.1 Extent of Works and PSP Bridge

DA 3 and associated works are located wholly within Lot 501 and 1091 shown in **Figure 3** – Land Holdings and Planning Control Area 164 shown in **Figure 6**.

The extent of works for DA 3 extends between Armadale Road and Church Avenue. No works extending north of Armadale Road (inclusive of landscaping upgrades etc.) will form part of DA 3. These works will be subject to Development Application 5 – PSP Bridge (DA 5). At the time of writing this DA, the PSP has not yet been designed to a level suitable for assessment. This area is therefore excluded from DA 3, which has been supported by the Western Australian Planning Commission)

Please refer to **Figure 5** – Line Wide Works Extent for further detail regarding the extent of DA 3 and **Appendix D** – Site Plan for extent of work included in DA 3.

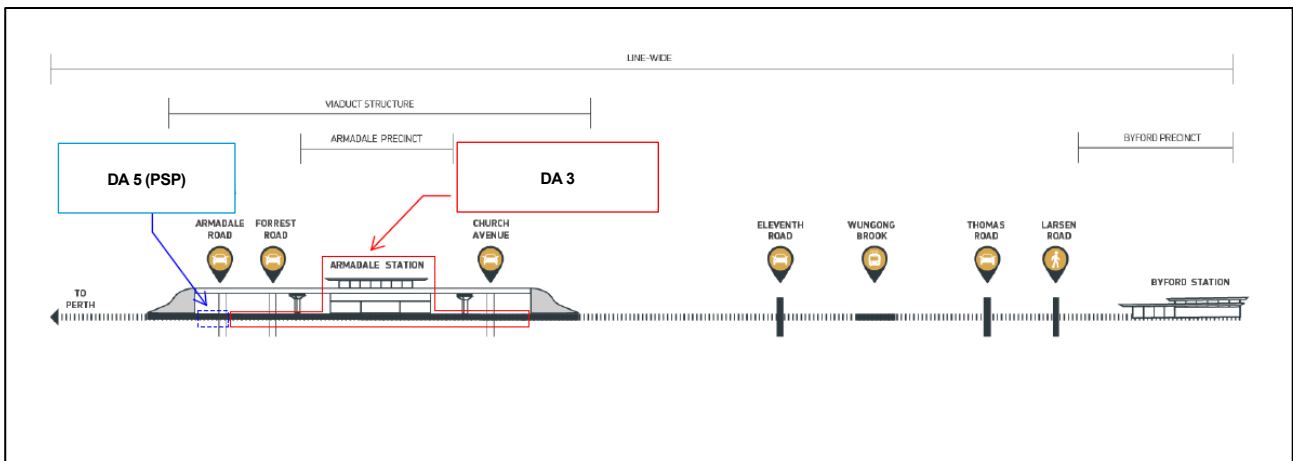


Figure 5: Line Wide Works Extent

3.4 Planning Approval Applicability

The planning approval process for BRE is informed by several legislative and regulatory provisions, as summarised below:

The *Planning and Development Act 2005* provides exemptions for 'Public Works' from the need to obtain development approval for such development under the applicable local government planning framework.

The Metropolitan Region Scheme (MRS) exempts all work for, or in connection with a railway that are located inside a designated railways reservation from the need to obtain development approval, other than for the construction or alteration of a railway station, or any related carparks, public transport interchange facilities or associated means of pedestrian or vehicular access.

Declaration of *Planning Control Area 164* (PCA) was made under Part 7 of the *Planning and Development Act 2005*. A PCA is an enabling planning mechanism that requires all development within the PCA to be considered and determined by the WAPC.

The *Railway (METRONET) Act 2018* includes BRE which means that certain METRONET works are exempt from the requirement to obtain development approval where these METRONET works are situated outside of the designated Metropolitan Region Scheme Railways Reservation.

3.4.1 *Planning and Development Act 2005 and Public Works Act 1902*

Under Section 6 of the *Planning and Development Act 2005*, there are exemptions from the requirement to obtain development approval under a local planning scheme for 'Public Works' for the Crown, the Governor, a public authority, or a local government.

Public Works are defined by the *Public Works Act 1902*. The definition of public works includes:

(b) any railway authorised by special Act or any other work whatsoever authorised by any Act;

Accordingly, the proposed works for BRE which are considered to be 'Public Works' under Section 6 of the *Planning and Development Act 2005* and do not require approval under the City of Armadale Local Planning Scheme No. 3.

3.4.2 *Metropolitan Region Scheme*

Clause 16 (1a) of the MRS states that development on reserved land that is owned or vested in a public authority, may be commenced, or carried out without approval if the development is permitted development or is expressly authorised under an Act to be commenced or carried out without the approval of the WAPC. All of the works for DA 3 falls within an MRS reserve.

Prior to the declaration of the PCA, the site was located on land zoned 'Urban' and/or reserved for 'Railways' under the MRS.

3.4.3 *Planning Control Area 164*

A Planning Control Area (PCA) prepared under Section 112 of the *Planning and Development Act 2005* (PD Act) was declared over the Armadale and Byford development sites on 22 June 2022. PCA 164 also includes additional land that was identified as being potentially required for the delivery of METRONET within the BRE development area. PCA 164 is shown in Figure 6. All of the works for this DA 3 fall within this PCA.

The purpose of the PCA is to facilitate development of the land for Railway purposes, and to allow (if required) the future reservation of land in the Metropolitan Region Scheme MRS.



3.4.4 **METRONET Act 2018**

The Railway (METRONET) Act 2018 (METRONET Act) states that METRONET works can be carried out without the approval of the WAPC despite any provisions in the MRS.

METRONET works are defined as:

“works for the purpose of, or in connection with, a METRONET railway but does not include the construction or alteration of a railway station, or any related car parks, public transport interchange facilities or associated means of pedestrian or vehicular access” [emphasis added].

Accordingly, all the railway works other than works for the new station, works in relation to car parks, bus interchange facilities and associated means of pedestrian and vehicle access are exempt works.

Development approval is generally not required for other railway infrastructure in either the existing railway reserve or on non-railway land that is outside of PCA 164. This is because the METRONET Act also exempts these works from requiring development approval under the MRS. As such, any railway works either side of the new station works beyond the bridge abutments/platforms are all works that are exempt from the requirement to obtain development approval.

Whilst some works are exempt from the requirement to obtain development approval, the plans and specialist material provided may illustrate and/or include details of the exempt works, as well as the works requiring WAPC approval. This is because this material has been prepared to inform and guide the project holistically.



3.5 BRE Exemptions Matrix

Planning approval requirements for BRE are unique, given the application of the *Railway (METRONET) Act 2018*, and various reserves and planning controls that apply to the project area. A summary of this information is outlined below.

Table 6 provides a matrix that identifies whether the works are exempt from the requirement to obtain development approval from the WAPC under Planning Control Area 164.

Works Location	METRONET Works ¹ – as defined in Railway (METRONET) Act 2018	METRONET station (Railway station; related car parks; public transport interchange facilities; means of pedestrian or vehicular access to station; public realm)
Works located: Within Planning Control Area, and Within Metropolitan Region Scheme Railway Reserve	<ul style="list-style-type: none"> Approval required for all works 	<ul style="list-style-type: none"> WAPC approval required for all works
Works located: Within Planning Control Area, and Outside Metropolitan Region Scheme Railway Reserve	<ul style="list-style-type: none"> Exempt 	<ul style="list-style-type: none"> WAPC approval required for all works
Works located: Outside Planning Control Area, and Outside Metropolitan Region Scheme Railway Reserve	<ul style="list-style-type: none"> Exempt 	<ul style="list-style-type: none"> WAPC required for all works

Table 6: METRONET Exempt Works

METRONET works means works for the purpose of, or in connection with, a METRONET railway but does not include the construction or alteration of a railway station, or any related car parks, public transport interchange facilities or associated means of pedestrian or vehicular access.

'METRONET Works' as described by WAPC as ¹:

- Early works and site establishment works.
- New drainage or alteration to drainage where associated with rail works.
- Temporary road alterations for railway works.
- Railway buildings supporting operational rail works (excluding stations).
- Demolition of existing stations.



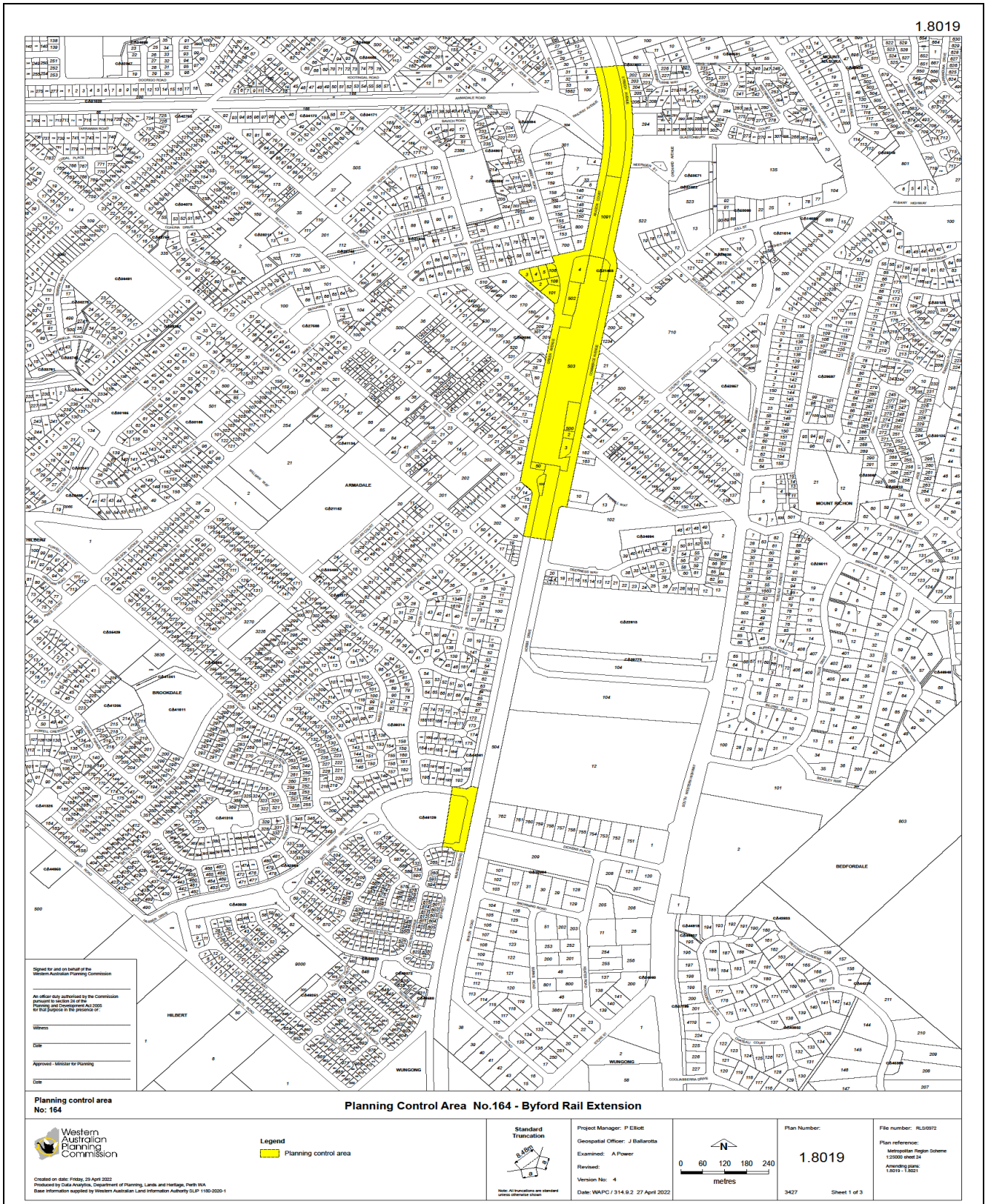


Figure 6: Planning Control Area 164



4. Engagement

The BRE engagement team has included a range of community engagement activities to improve understanding of community values and preferences to inform works and mitigate risks.

The BRE engagement activities aim to:

- Inform the public with balanced and objective information.
- Inform and consult on changes to current amenity.
- Involve and work directly with the public to resolve issues that arise through construction.
- Collaborate with key stakeholders to identify and realise opportunities or mitigate impacts.

Table 7 details at a high level the activities which have been undertaken aimed to improve place outcomes, provide accessible, clear, and timely information; create meaningful, two-way discussion, and mitigate risks.

Additionally, the Engagement Outcomes Report details the BRE engagement strategy, social needs analysis, activities to date, and engagement outcomes.

Key Theme	Description	Alliance / Project Response
Tree Retention	Tree retention is a priority for stakeholders and the community. Where impacts are unavoidable, community expectations are for the project to minimise and offset impacts.	<p>In recognition of the high importance of tree retention, a working group has been established within the Alliance to develop strategies and plans to achieve maximum tree retention, in collaboration with key stakeholders.</p> <p>The project will ensure design and construction is carefully considered to achieve optimum environmental and social outcomes. Additionally, significant changes to construction methodologies has resulted in approximately two-thirds of all existing trees being retained.</p>
Security, Safety and Surveillance	Stakeholders have expressed a desire to understand how safety mechanisms and Crime Prevention Through Environmental Design principles are incorporated into station designs.	<p>CPTED principles have been applied throughout design including:</p> <ul style="list-style-type: none"> ▪ Providing open activated areas with clear sightlines that support passive surveillance, implementing ample, well-designed lighting. ▪ Installation of active CCTV cameras in the station areas. ▪ Clear signage and wayfinding. ▪ Using materials that minimise opportunities for vandalism. <p>A security risk assessment for the project has underway to identify and prioritise security risks which will then inform the station design process. This process includes consultation with the local Council. The outcomes of this assessment will be shared with stakeholders and the community.</p>
Universal Access and Ease of Access to Public and Multi-Model Transport	Universal access is very important to the local community. Stakeholders have expressed concern that provision of a single station entrance does not best achieve universal access outcomes.	<p>Universal access has been a key consideration in design, with applications including:</p> <ul style="list-style-type: none"> ▪ Level access between platforms and trains. ▪ Stairs, ramps, lift, and escalator, providing access to the elevated platforms at Armadale Station. ▪ Paths designed to accommodate pedestrians, recreational and commuter cyclists, and people with mobility disabilities.



Key Theme	Description	Alliance / Project Response
		<ul style="list-style-type: none"> Seating for people to rest within the station and in public space areas. <p>Communication with local and METRONET facilitated Access and Inclusion Reference Groups will be ongoing to ensure feedback is incorporated into design.</p>
Placemaking and Public Spaces	<p>Stakeholder feedback has identified a desire to contribute to place-making. Early positive sentiment has been expressed in relation to opportunities for public spaces at Armadale Station. Specific feedback indicated that the local community would like to use the station public space areas to play sport and games, exercise, use play areas, have a picnic or a meal, and connect with nature, friends, and family.</p> <p>Local community feedback also indicates native and waterwise landscaping is a high priority.</p>	<p>Our collaborative process with key stakeholders in development of the design has included inputs into public realm areas, including plaza spaces and youth facilities that are being included. Some areas for activation have also been included in the public spaces, through food truck plug in locations and the incorporation of a kiosk beside the station entrance.</p> <p>Targeted consultation around placemaking in the Armadale Station Precinct included shopping centre displays, on-line surveys, small group forums and engagement with local schools, reference, and community groups to promote discussion and seek feedback on proposed public space uses.</p>
Connectivity	<p>Local community feedback has indicated that pedestrian connectivity and universal access in public spaces is important.</p>	<p>Community feedback has been incorporated into design through:</p> <ul style="list-style-type: none"> The provision of new public spaces with extensive landscaping, places to rest and meet, universal access design and pedestrian pathways. Pedestrian crossings opposite stations to allow safe access to the Town Centre east and west of the station to the adjoining neighbourhood. Acknowledgement of local and cultural history through interpretive signage, materials, flora, and art.
Sustainability	<p>Sustainable design outcomes are important to stakeholders and the local community.</p>	<p>Environmental, social, and economic principles and practices will be embedded in project planning and delivery. The Alliance has formed a Sustainability Leadership Committee that meets monthly to discuss sustainability risks, opportunities, and initiatives. The project is seeking a five-star rating under the Green Star Railway Stations rating framework as a commitment sustainability outcomes.</p> <p>Any community and stakeholder feedback received regarding sustainability is shared with this Committee for consideration.</p>
Indigenous Heritage	<p>Recognition of Indigenous cultural heritage is important to the local community.</p>	<p>Our stakeholder and community engagement approach, through the METRONET Gnarla Biddi (Our Pathways) Strategy ensures that Aboriginal voices are involved and consulted through the course of the project.</p> <p>It is integral for the project to be culturally informed, and engagement is seeking to form partnerships and have in depth conversations with the local Aboriginal community in the City of Armadale.</p> <p>The project is also regularly engaging with the METRONET Noongar Reference Group.</p>



Key Theme	Description	Alliance / Project Response
		These discussions have (and are) influencing the station design, public realm and public art program for the project.
Urban Aesthetics and Public Art	Visual amenity, station and public realm aesthetics are important to stakeholders. Feedback indicates public art is important to the local community.	<p>The landscaping and aesthetics of the station and public realm areas is conscious of the local context, drawing reference from the local geology and flora through building form and aesthetic treatment.</p> <p>Public consultation and input have been sought for public space areas and incorporated into design. Feedback and input will continue to be sought from the local community as opportunities arise.</p>
Construction Impacts	Residents and stakeholders have expressed a desire to maintain access and amenity during construction. This is particularly important to local businesses.	<p>The project will work closely with local businesses, residents, and community groups to minimise impacts to access and amenity during construction.</p> <p>Traffic management plans will also be implemented to ensure all vehicle movements are facilitated safely while maintaining access where possible.</p>

Table 7: Engagement Summary

Please refer to **Appendix I – Engagement Outcomes** for further detail.



5. Planning Considerations

To facilitate good station design outcomes, the proposed concept for the new Armadale Station utilises the principles outlined in the *METRONET Station Precinct Design Guide* and responding to *State Planning Policy 7.0 – Design of the Built Environment (SPP 7.0)*.

The design of Armadale Station and its surrounds seeks to respond to the growing needs of a key strategic metropolitan centre. The elevated nature of Armadale Station emphasises it as a focal point for the Armadale Town Centre. It will provide a meeting place for the community, creating new public spaces and facilities for locals to use and connect to the public transport network beyond.

The development of Armadale Station reflects the WAPC's intention to encourage and consolidate residential and commercial development in key strategic metropolitan centres so they can contribute to a balanced network. In particular, the design of the development is based on the following key design criteria / principles:

- Elevating the rail line to reduce the station footprint on the ground.
- Delivering public realm upgrades to facilitate safe and direct access between bus services, Kiss and Ride and pedestrian movements to facilitate ease of use.
- Improving pedestrian connectivity through the Armadale Town Centre and facilitating accessible paths of travel to Jull Street mall.
- Upgrade paving and landscaping to integrate treatments across the Armadale Town Centre promoting a consistent theme and connectivity on a precinct wide basis.

5.1 Architectural Design Statement and Scope of Works and Technical Criteria

The scope of works set by the projects Scope of Works and Technical Criteria (SWTC) includes a number of qualitative design measures which must be met in the design of Armadale Station. These requirements have been interpreted and applied by the Alliance, which has resulted in common line-wide architectural themes and site-specific considerations. The final design was presented to the State Design Review Panel; three times formally (refer **Section 6** – State Design Review Panel) who undertook a review in accordance with the SPP 7.0 Design Principles. The architectural designs have been consistently refined to respond to SDRP comments, acknowledging the long-term success of Armadale Station will be its integration with the existing neighbourhood and a provision of a safe, reliable, and amenable travel experience for patrons.

5.2 Final Place Plan

As part of the BRE project, the Armadale Station Final Place Plan sets out the place planning, public art and landscape concept for the Armadale Station and its surrounds. The plan focusses on the METRONET deliverables within the project boundary in the area of 500m around the train station at 'day one' of opening, with some considerations for these station surrounds to adapt to future built form as the likely need for Park and Ride spaces is reduced.

The report summarises the METRONET objectives and translates these into three tangible touchstones to achieve in the station precinct: a smooth and comfortable transfer, pleasant and meaningful time spending and embedding in the community.

Analysis of the current context, station precinct users, the planning framework, together with the station access strategy, form the base for the Final Place Plan. At the core of the plan sits the site-specific Sense of Place Statements. These guide the place planning, public art and design of the architecture and the public realm.

Please refer to **Appendix C** – Final Place Plan.



6. Design Evolution

6.1 State Design Review Panel

The SDRP provides independent, expert advice to Government agencies, decision makers and proponents regarding the design quality of different projects of all scales. The SDRP helps to improve design quality and were engaged as an important stakeholder on the BRE Project.

Three reviews were undertaken for the BRE Project:

- **Design Review 1** – completed on 27 October 2020, with additional Office of Government Architect (OGA) Interim Advice completed 7 May 2021.
- **Design Review 2** – completed 16 June 2022. This is a review for the reference design of Armadale Station.
- **Design Review 3** – SDRP completed 7 March 2023. This was the review for the reference design of Armadale Station (that focuses on the architecture and ensures PPP outcomes are deliverable). This review occurs during design development and/or prior to the proposal being submitted to development approval. The SDRP confirmed that no follow up review was required.
- **Office of Government Architect Follow Up Review** - Completed 24 May 2023. This review was to discuss comments raised by the SDRP presentation held on the 7 March 2023 and to discuss and confirm matters related to the architectural response.

SDRP Summary

The design approach is generally supported by the SDRP, however, the areas identified in **Table 8** require further consideration. Refer to the 'Design Response' to understand how the recommended changes have been implemented into the final design for DA.

The scale of this project is both a challenge and opportunity. The proposed station includes generous areas of public realm, which will need to optimise user comfort, safety, amenity, and public realm activation, which will be crucial to project success. A design outcome that reflects the character and identity of Armadale is crucial, and Aboriginal engagement, public art, and wayfinding should be integrated into a powerful, singular response. The simple, refined contemporary architectural approach that has developed is generally supported by the Panel.

Provision of a greater tree canopy is critical to ensuring that this a successful, attractive, site responsive and well-utilised station precinct, and all efforts should be made to optimise mature tree retention on site, in conjunction with a genuine and generous replacement and supplementary strategy. Such efforts will not only contribute to an appropriate response to the physical landscape and character of Armadale but offer enormous economic and amenity benefits from Day 1.



Principle	SDRP Comment
Context and Character	<ol style="list-style-type: none"> <i>The Panel supports the emerging design narrative reflecting the Armadale character and identity. The Panel recommends that Aboriginal engagement, public art, and wayfinding be integrated into a powerful, singular response, and that artists are engaged promptly to ensure a sophisticated and nuanced approach to public art that can be enjoyed at various scales and distances.</i> <i>The Panel urges integration of authentic Aboriginal histories and stories prior to lodgement of the Development Application to ensure these are coherently integrated into all aspects of the project design.</i> <i>The northern entrance to the station represents the arrival point for the City of Armadale and should be generously expressed and celebrated to indicate its importance. A sophisticated and legible response, such as a vertical element or sculptural public art component, could be considered as the viaduct treatment does not continue beyond the station itself to the south.</i> <i>The Panel seek further clarity regarding the active recreation areas east of the station (such as the playground and Youth Hub), which should be a high quality, well-designed collection of components that are integrated and contribute to the greater Town Centre. A strong concept, a high-quality design, and an appropriate budget are required to deliver the vision for this important interface with the existing Town Centre. This is especially important given that the colonnade will move to the west in the future.</i> <i>The station precinct serves as a crucial linkage between the eastern and western sides of Armadale. Ensure this connectivity is genuine and generous so that the station can perform this critical function.</i> <p>Response</p> <p>The design will continue to refer to the character and identity of Armadale. The Alliance have also engaged with local Aboriginal representatives to make sure that the stories of the site and people that lived around Armadale are kept and translated properly into the design.</p> <p>Public Art could become the canvass to foster these stories and integrated within the design. The BRE Public Art Programme has been signed off and we look forward to start collaborating with the artists to develop and integrate the design with public art.</p> <p>The recreational area on the eastern side of the station will continue to be implemented into the design. The Youth Hub will be designed to be high in quality, accessible and usable and forming an important interface with the Armadale Town Centre. The design team will work closely with the City of Armadale to further refine this area.</p> <p>The eastern-western linkages have been increased not just in quantity but also in quality. They are generous in space but not over-designed. The main link adjacent to the Station entry will serve as the main east-west link connecting Green Ave to Commerce Ave maintaining the 35m wide plaza link and 6m clearance in height. Opportunity for additional public art under the viaduct is currently being explored.</p>
Landscape Quality	<ol style="list-style-type: none"> <i>The Panel commends the addition of the green frame on the western side of the station, as a strong response to place. Further work is required to ensure it engages with the numerous opportunities to create ecological linkages to urban areas and does not exist as an isolated island of landscaping.</i> <i>A greater tree canopy is critical to the success of this project, and all efforts should focus on utilising the significant contribution of metrics and data being progressed by arborists to retain and replace as many large trees as possible, which will provide economic and amenity benefits from Day 1.</i> <i>The extensive hardscape throughout the precinct offers no ecological or environmental benefit, or amenity for users, and should be reduced wherever possible, or better supplemented with landscape and trees to reduce the heat island effect.</i> <i>The tree procurement strategy is important and should focus on large trees to provide most benefit to this site.</i> <p>Response</p>



	<p>The green space on the western side of the station provides new planted trees to replace some trees being cut along the rail corridor. This area expands on the north-south axis and provides ecological links for the local fauna, including endangered species of birds.</p> <p>Tree canopies will form part of the design response to retain as many trees as possible. A thorough Tree Retention Strategy has been implemented and closely monitored throughout the design and construction phase.</p> <p>The hardscape will be further reviewed in the final design to minimise the heat island effect and provide more soft landscape if possible.</p> <p>Tree procurement strategy is currently under review and the right balance between 5L and 45L trees has also been investigated.</p>
Built Form and Scale	<ol style="list-style-type: none"> <i>The scale and composition of the building, and the public realm in which it sits, is large and dominating, however careful consideration of materiality can help soften the façade.</i> <i>The Panel request that all other options to mitigate noise are carefully explored with the objective of minimising the use of noise walls. If required, all efforts should be made to reduce their height, extent, and length.</i> <p>Response</p> <p>Natural stone has been used to soften the impact of the façade of the station, the colour of the stone has been carefully selected to create a naturally lit environment, especially underneath the viaduct. Please refer to Appendix E – DA Drawings for a copy of the Material Board.</p> <p>Noise walls have been minimised where possible in areas mostly impacted, mainly towards the bookend of the viaducts which are not subject to development approval or DA 3. Also, the noise dumpers on the railway have been implemented to minimise the use of noise wall along the corridor.</p>
Functionality and Build Quality	<ol style="list-style-type: none"> <i>The Panel acknowledges the positive and responsive moves for the key infrastructure components – the bus interchange and carpark. A broader transport plan clearly illustrating how different modes will access and move to and from the precinct is required.</i> <i>Further investigation into conflict points between differing modes of transport is required. This includes detailed consideration of the conflict risk noted at the top of the stairs adjacent to Green Avenue between cyclist/ wheeled modes (e-scooters for instance) and pedestrians.</i> <i>As a critical component of overall legibility, ensure alternative movement routes are provided through the station precinct, that are legible and with clear sightlines of movement decision points to allow for their effective use. For example, provide path choice for cyclists to use Commerce Avenue or Green Avenue rather than the through the station forecourt.</i> <i>The Panel recommends further investigation of the alignment of the Principal Shared Path and the crossing point within the 40km/h zone at Forrest Road.</i> <i>The Panel supports the move to incorporate the escape stairs within the building, allowing a clearer escape route.</i> <p>Response</p> <p>Conflicting points amongst different modes has been investigated through Safety in Design and Human Factor workshops and highlighted into the Project Hazard Log. The design team is further investigating solutions to mitigate conflict risk at the top of the stairs adjacent to Green Avenue between cyclist/ wheeled modes.</p> <p>Legibility throughout the precinct has been considered and is currently under review with wayfinding and signage specialists. Alternative movement routes are provided through the station precinct and will be, clear and legible with sightlines of movement decision points to allow for their effective use, that will include the option of using one either Commerce or Green Avenue as an alternative route for cyclists.</p> <p>The design team is also investigating the crossing point between the Principal Shared Path and the crossing point within the 40km/h zone at Forrest Road. Risks mitigation will be implemented and coordinated with Main Roads, PTA, and Local Government.</p>
Sustainability	<p>The Panel has not yet seen sufficient detail on how the stated sustainability objectives will be achieved.</p>



	<p>Response</p> <p>A Sustainability Management Plan has been prepared to support this DA. Please refer to Appendix P – Sustainability Management Plan.</p>
Amenity	<ol style="list-style-type: none"> <i>The Panel has concerns regarding pedestrian comfort as they move through large and unsheltered hardscaped areas. The addition of a connected canopy or shade structure – such as a sculptural extension of the ‘ribs’ to provide shelter to the east – will offer incentive to pedestrians in what otherwise appears an exposed journey.</i> <i>The heat generated from the extent of hardscape will have a significant impact on pedestrian comfort, and efforts should be made to minimise and mitigate where possible.</i> <i>Further consideration and clarity are required with regards to the Youth Hub and Playground, as it is not yet evident what quality and amenity is being provided to activate and invite community.</i> <i>Wind modelling should occur regarding the level of exposure for pedestrians, particularly the east-west link associated with the main entrance.</i> <p>Response</p> <p>Shaded area to increase pedestrian amenities are considered and provided by using the space under the viaduct as main pedestrian artery to move through the precinct. Additional shading will be provided by the trees. Additional shelter structures on the eastern side of the precinct are currently being investigated.</p> <p>In addition to the above, the viaduct has moved slightly towards the west to provide additional shelter for pedestrian movements between the park and ride, and station entrance.</p> <p>The Youth Hub will continue to be discussed with the local government and PTA and further defined to meet the quality expectations.</p> <p>Wind modelling is to be undertaken and can be conditioned as part of the development approval.</p>
Legibility	<ol style="list-style-type: none"> <i>The Panel recommends a well-designed and integrated wayfinding and signage strategy be developed as soon as possible.</i> <i>The building entry requires further attention to ensure clear legibility. Creating a distinctive vertical element at the main northern entrance plaza of the station will provide clarity as to the entry point.</i> <i>While the larger glazing areas on the long east and west elevation are supported, ensure legibility is not diminished by being mistaken as an entrance. Further information is required for any screening or security treatment to these windows to ensure their benefit is realised internally, externally, and aesthetically.</i> <p>Response</p> <p>Please refer to Section 7.1.6 - for further details on the Wayfinding and Signage which will be implemented.</p> <p>The station building has been designed to enhance the intuitiveness of wayfinding, with clear signage and super graphic to draw passengers toward the northern entry. The design team will engage with the artists to explore opportunity to further emphasise the entrance.</p> <p>The glazed panels/windows on the station façade are currently under review with the operational team in the PTA. Alternative screening or security treatment will take into consideration the balance between functionality and aesthetics.</p>
Safety	<ol style="list-style-type: none"> <i>The station precinct includes, and sits within, large areas of public realm, which will require significant activation to ensure usage and safety. Opportunities to create smaller scale spaces and a variety of active uses will assist with maximise this sense of security.</i> <p>Response</p> <p>Please refer to Section 7.2 – CTPED Considerations for further details on how landscape and urban design treatments have been prepared to minimise safety concerns for areas within the public realm.</p>



<p>Community</p>	<p>1. <i>The Panel questions whether two kiosks at the main entrance will be viable. With consideration of the plans for the future rail, this is likely to be the kiosk on the northeast. Efforts should be made to ensure this retail space is occupied by a motivated tenant to fully activate the station entrance and related public realm. Should a second tenant not be initially viable, consider alternative or temporary uses that will activate the important northwest corner of the station, until a time when there is demonstrated demand for both tenancies.</i></p> <p>Response</p> <p>The design team upon several engagements with the PTA, METRONET and City of Armadale have agreed that only the Kiosk on the north-east will be retained. The design of the kiosk will consider the natural light exposure and preferred orientation towards Jull Street and Commerce Avenue, as well as the size the shop frontage and glazed windows to increase the chances of a better tenancy. This space can be also used for other purposes in case a tenant will not be available at day 1.</p>
<p>Aesthetics</p>	<p>1. <i>The Panel supports the overall contemporary design approach for the station building, including the simplified and refined architectural language.</i></p> <p>2. <i>The Panel understands the intent of the functional balustrade to recede behind the 'ribs', which form the main aesthetic component above the viaduct. The Panel also supports the intent to detach and move the ribs to the western side once the future eastern viaduct is constructed.</i></p> <p>3. <i>The use of local Western Australian stone is supported, noting that although it can be treated for graffiti, it can be a porous material and difficult to clean.</i></p> <p>4. <i>The Panel supports the overall neutral palette if it forms a backdrop to a vibrant public art and landscape strategy.</i></p> <p>5. <i>Ensure that the palisade fencing for the PTA secure parking has aesthetic quality, beyond the merely functional.</i></p> <p>Response</p> <p>The design team have worked to allow the detached option of the viaduct treatment, aka 'ribs' on the eastern side of the viaduct. This will allow the re-use of the treatment in the future when the additional rail line is constructed.</p> <p>Local Donnybrook Stone will be used on the exterior of the façade on concourse level.</p> <p>Design team to provide a high-quality palisade fencing for the PTA secure parking to be better integrated with the overall architectural and landscape design.</p>

Table 8: SDRP Summary



7. Development Details and Technical Considerations

7.1 Armadale Station

Armadale Station and surrounds is one of two new station areas proposed as part of BRE and will be a long-term asset for the State Government and the City of Armadale. As a once-in-a-generation investment, the design focuses on simple and durable construction. The station precinct is designed as a multi-modal transport hub, balancing the functional requirements of all users. The elevated rail introduces the efficiency of activities in overlapping spaces, with new public uses under and beside the elevated rail.



Render 1: Armadale Station (facing south east)

Improved Experience

- Considered positioning on-site to preserve as many existing pedestrian desire lines as possible for a seamless community legibility.
- Western Welcome Plaza.
- Curated views from new elevated platforms to the Town Centre and the Darling Scarp.

Improved Safety

- Respecting and maintaining PTAs movement hierarchy with pedestrian priority.
- CPTED principles in mind when designing building line interfaces and nodes-maintaining clear passive surveillance throughout the station precinct.

Optimisation

- Employ kit-of-parts approach to streamline construction process.
- Efficient design to reduce the need for maintenance and cleaning of the building envelope.

The station precinct is envisioned as a dynamic multi-modal transport hub, accommodating the functional needs of various users. By integrating different modes of transportation, such as trains, buses, and potentially other means of transit, the design aims to create a seamless and efficient transportation experience for commuters and visitors.

One of the key features of the design is the elevated rail system. This elevated rail brings the advantage of optimising the use of overlapping spaces, enhancing efficiency, and maximizing the available area. Additionally, the elevated rail introduces opportunities for new public uses beneath and adjacent to the rail infrastructure. This innovative approach ensures that the station precinct not only serves as a transportation hub but also offers additional amenities and public spaces for the benefit of the community.

The emphasis on simplicity and durability in the construction of the station aligns with the intention of creating a long-lasting and resilient infrastructure. By selecting materials and designs that age well, so the station can maintain its quality and functionality over time.

Armadale Station will form part of the Armadale Strategic Centre long into the future. While the design of the station and the public realm is kept simple, it maintains a key emphasis on functionality and space flexibility, to reflect the look and feel of the place. The architectural design of Armadale Station has carefully considered the locality, key movement routes, and overall a holistic approach whereby the station building itself forms an integral part of the Armadale Town Centre and surrounding context.

The following provisions have been incorporated into the design of the Armadale Station:

- Bike storage.
- Four lifts (two to each platform).
- Electrical services, communications, and store rooms.
- A kiosk which is located on the north-eastern corner of the building, facing into the public realm and towards Jull Street Mall, providing activation and passive surveillance.
- Staff crib room and staff toilets.
- Universally accessible toilet for the public, accessible from within the station building.
- Public toilets, accessible from within the station building.
- Electrical, services, communications, and store rooms.

Please refer to **Figure 8 - Concourse Level (axonometric)** and **Render 2 - Concourse Level (artists impression facing north)** for further detail of the internals related to Armadale Station.

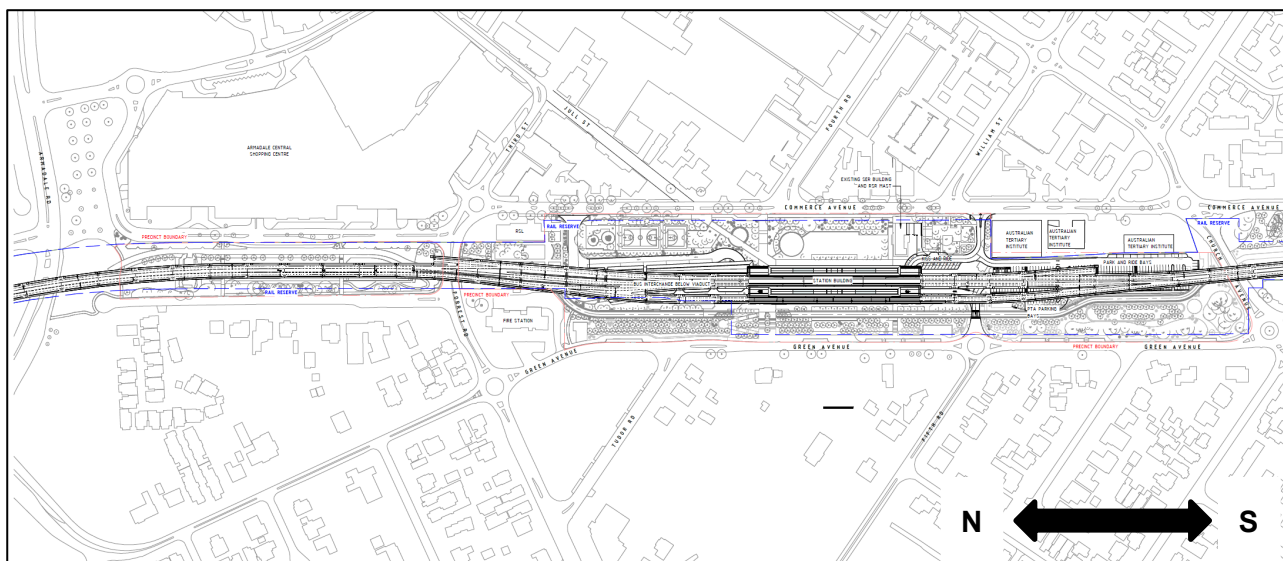


Figure 7: Site Plan

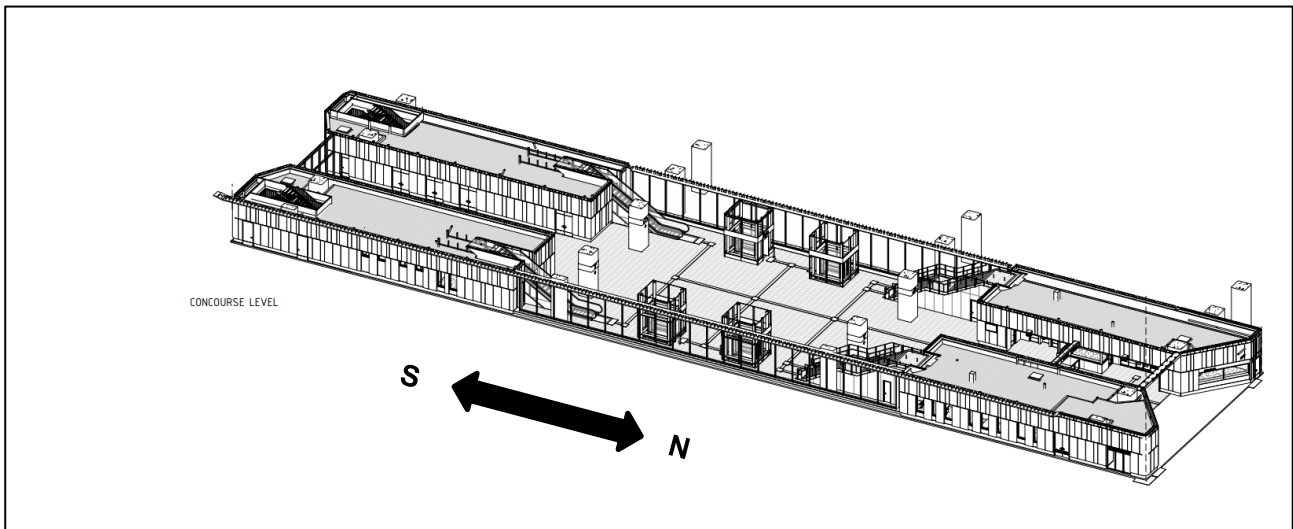


Figure 8: Concourse Level (axonometric diagram)



Render 2: Concourse Level (artists impression facing north)

7.1.1 Architectural Treatments, Materials and Finishes

The material selections have developed in accordance with the requirements of the Scope of Works and Technical Criteria provided by the PTA, National Construction Code (NCC), Disability Discrimination Act (DDA) as well as the PTA Specification 8803-000-002 – Maintenance and Constructability.

All materials, fittings, fixtures, and finishes have been selected to be of high quality with robust and hard-wearing surfaces, low maintenance and durable anti-vandal qualities, with selections in accordance with the relevant PTA standards.

Material selections are governed by several high-level criteria with the overall aim of achieving high-quality user experience while simultaneously addressing the durability, maintenance, operational, life cycle costing, sustainability and DDA requirements.

A summary of these criteria, as defined by the specification are outlined below:

- Consideration of design life and durability requirements.
- Material selection that provides a high-quality user experience.
- A material palette that reflects the surrounding context and helps to enhance the sense of place.
- Consideration of the vandal risk and anti-vandalism properties of the material.
- Utilisation of local materials when possible and consideration of material origins.
- Consideration of construction methods and ease of installation, considering the kit of parts approach throughout the project.
- Consideration of life cycle costing.

It is expected that material selections may continue to evolve throughout detailed design stages of the project in order to meet the criteria outlined above.

Please refer to **Appendix E** – Armadale Station Development Plans which includes a Material Board.



Canopies and Soffits

The canopies and soffits of the station building and below viaducts are designed to enhance the quality of the experience for users. Some features included in **Appendix E** – Armadale Station Development Plans incorporate:

- Soffits of the platform canopies are made of aluminium panels with a colour pallet of earth tones that suit the surrounding Armadale context and reflect the Darling scarp. They conceal services and form a tapered shaped canopy that enhances the elegance of the roof structure to elevate the experience from the ground at platform level.
- Soffits underneath the viaduct will be finished in a way that creates visual interest, as a ‘canvas’ to feature public art that draws in local stories and influence of the natural context. Subject to confirmation, this may be painted onto the concrete underside or include composite panels that conceal services to ensure clean and consistent integration.
- Inside the station building, ceilings at concourse level are made of aluminium panels that incorporate acoustic insulated treatment. This ensures appropriate sound insulation to assist in understanding station audio announcements and minimise noise disturbances allowing passengers to enjoy a quieter and more tranquil experience



Render 3: Canopies and Soffits

Louvres

A powder coated aluminium louvre system is proposed to enhance natural ventilation into station buildings. The design proposes a bronze colour scheme which contrasts with the light stone façade. The louvres provide a functional purpose to assist with passive cooling whilst also breaking up the façade and allowing for a mix of materials.



Render 4: Louvres (From Jull Street mall)

Glazing

Laminated safety glass is used at select locations in the design to enhance the user experience and where passive surveillance is required.

The primary advantage of using laminated safety glass is its enhanced safety features. It is designed to withstand impact and prevent shattering upon breakage, reducing the risk of injury to occupants. This feature is particularly important in areas where the glass is exposed to potential hazards or where increased security measures are necessary.

In addition to its safety properties, laminated safety glass also offers improved acoustic insulation. It helps reduce external noise transmission, creating a more peaceful and comfortable environment for users. This is especially beneficial in areas that may be prone to high noise levels, such as busy urban settings or transportation hubs.

Moreover, the use of laminated safety glass can enhance the overall aesthetics of the design. The transparency of the glass allows for natural light to penetrate the space, creating a bright and inviting atmosphere for users.

Please refer to **Appendix E** – Armadale Station Development Plans which include a Material Board.

Walls and Stone Panels

The use of Donnybrook Sandstone panels with a clear-anti graffiti coating will be used for the external fabric. The selection of local stone pays homage to the context of the area, connecting to the region's geological and cultural identity.

From the concourse level to the platform level, there is a generous height of approximately 9.26m, with an additional 4m to the platform roof.

The clear anti-graffiti coating applied to the sandstone panels serves a practical purpose. It acts as a protective layer, making it easier to remove any graffiti or unwanted markings from the surface. This coating helps maintain the aesthetic integrity of the building, ensuring that it remains visually appealing and well-maintained over time.

This choice not only provides a visually appealing exterior but also fosters a connection between the building, its surroundings, and the community it serves.

Please refer to **Appendix E** – Armadale Station Development Plans which include a Material Board.

Floors

For the platform and concourse levels, a terrazzo floor tile has been selected. The finished platform surface will be integrated with PTA standards and provide sufficient luminance contrast for patrons with visual impairments. Terrazzo is known for its exceptional durability, making it suitable for high-traffic areas such as platforms and concourses. Its robustness ensures that the floor surface can withstand heavy footfall and maintain its quality over time, reducing the need for frequent maintenance or replacement.

In addition to its durability, terrazzo also offers a visually appealing and elegant finish. The variety of colours and patterns available allows for customisation to match the desired aesthetic of the space. This versatility in design ensures that the flooring contributes to the overall visual appeal of the platform and concourse areas.

In public amenities:

- Terrazzo tiles provided for concourse area (front of house)
- Ceramic tiles for public toilets (front of house)
- Carpet for office space (back of house)
- Concreate (equipment rooms and back of house)

Please refer to **Appendix E** – Armadale Station Development Plans which include a Material Board.



7.1.2 Platforms

Three platforms are proposed as part of Armadale Station, with additional future proofing for a future track provided beside the eastern rail track (to accommodate a potential future Faster Bunbury Train service).



Render 5: Platforms (facing south-west)

To ensure the comfort of passengers, the platform canopies have been designed to cover slightly over 80% of the length of the platforms. There is ample protection from inclement weather conditions, such as rain or intense sunlight. The provision of sufficient weather protection enhances the overall passenger experience, encouraging usage and providing a more pleasant environment for commuters.

The design incorporates future-proofing measures for potential expansion beside the eastern rail track. By considering the possibility of future lines, the station design considers the anticipated growth and evolving needs of the transportation system. It ensures that station infrastructure can be easily adapted and expanded in the future, minimising disruptions, and maximising the efficiency of the overall rail network.

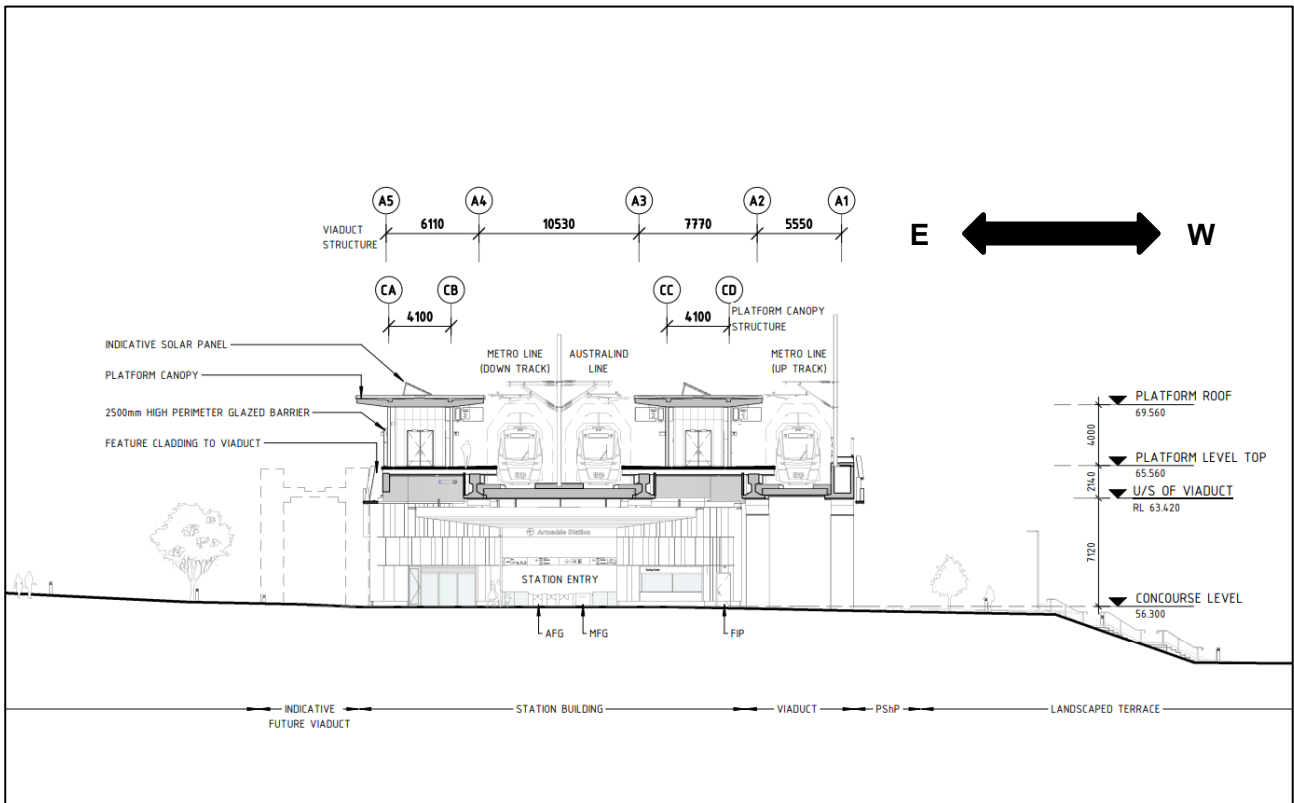


Figure 9: Station Cross-Section (entrance facing south)

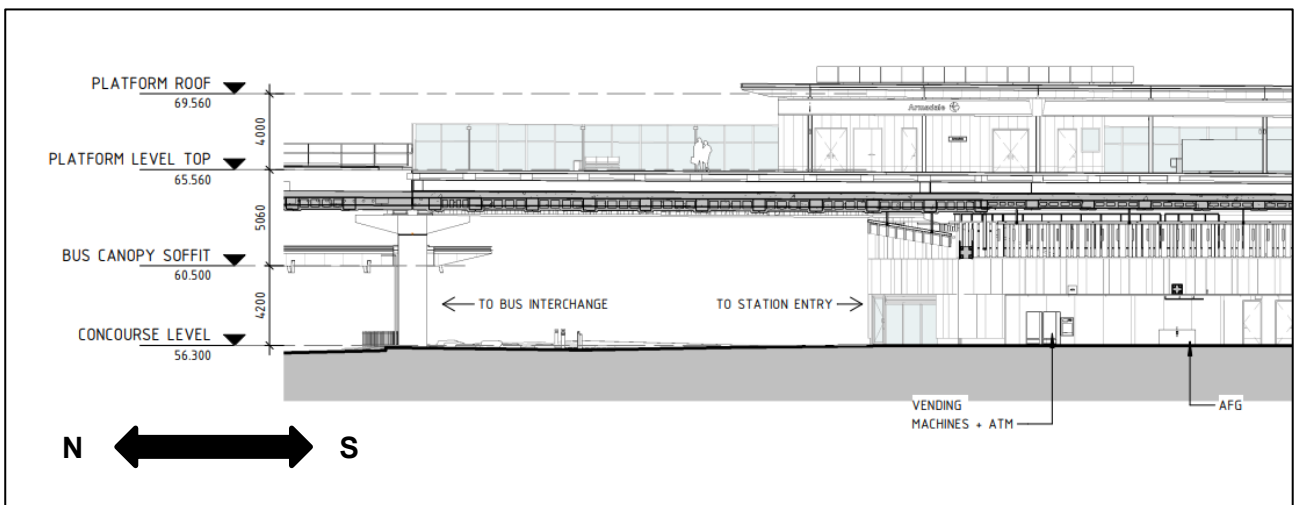


Figure 10: Station Elevation (northern end)

7.1.3 Station Entry

The entrances to Armadale Station have been discussed during the design phase in collaboration with the PTA, Transperth, City of Armadale, and the OGA. There has been a need to balance operational requirements of the facility with clear ways to connect users who walk, ride, drive or catch a bus to the station.



Render 6: Station Entry (from Jull Street mall)

Armadale Station will have the entrance a single entry at the north of the station. This entrance is places along the main pedestrian link to the station and Jull Street Mall, which also connects to the eastern side of the Centre. Careful consideration has been given to the design and layout to ensure the objectives of wayfinding is successfully met. Wayfinding aims to provide clear guidance and navigation for users of the station, ensuring they know where the entrance is.

Efforts have been made to optimise the visibility of the entrance, ensuring it stands out and is easily identifiable to commuters and visitors. Signage, architectural features, and visual cues have been strategically incorporated to guide individuals towards the entrance and help them navigate the station effortlessly. This is achieved through the use of signage and design treatments to create a 'portal' like entrance, drawing people in from Jull Street Mall and beyond. Additionally, the station entrance includes a kiosk, signage "Armadale Station" located on the east and west facade of the station building.

Please refer to **Appendix E** – Armadale Station Development Plans which include a Material Board.

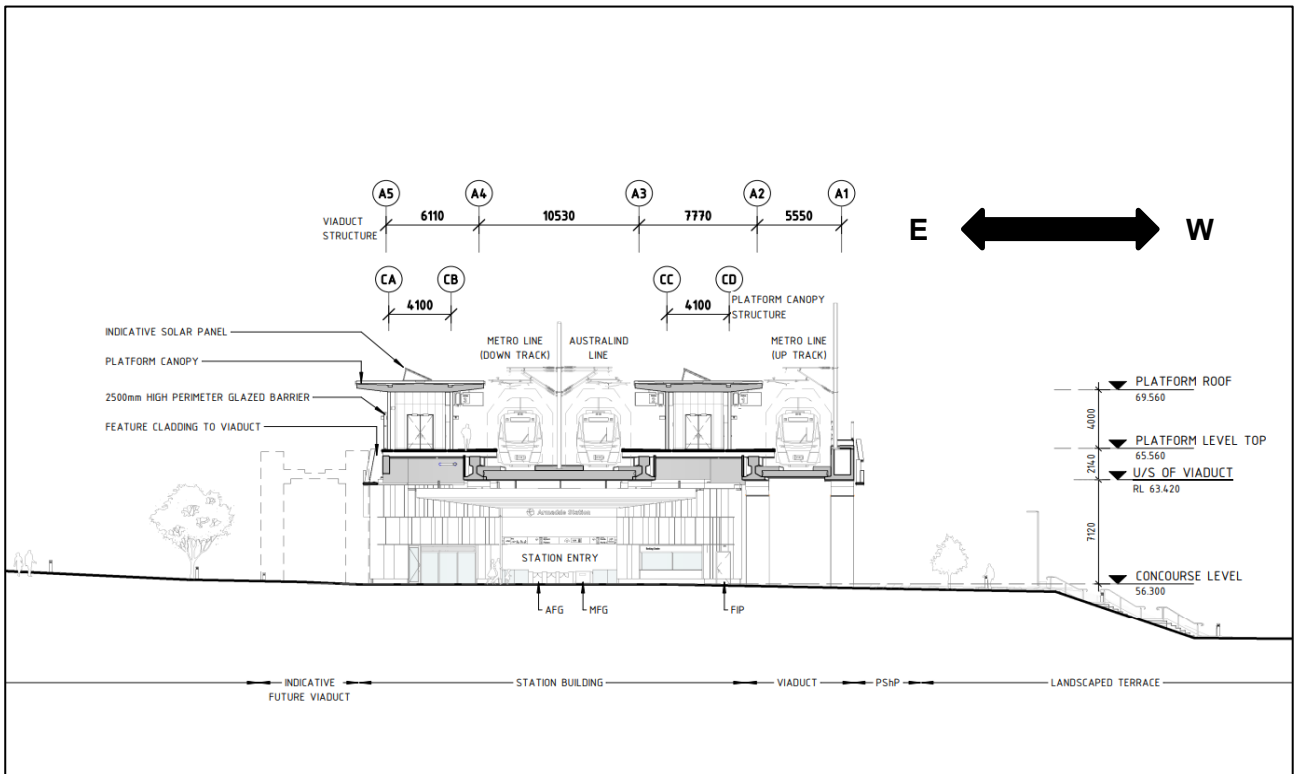


Figure 11: Station Cross-Section (entrance facing south)

7.1.4 Viaduct Treatment

Treatment to the viaduct is proposed for up to and including the 'station precinct' of approximately 150m between Forrest Road and Church Avenue.

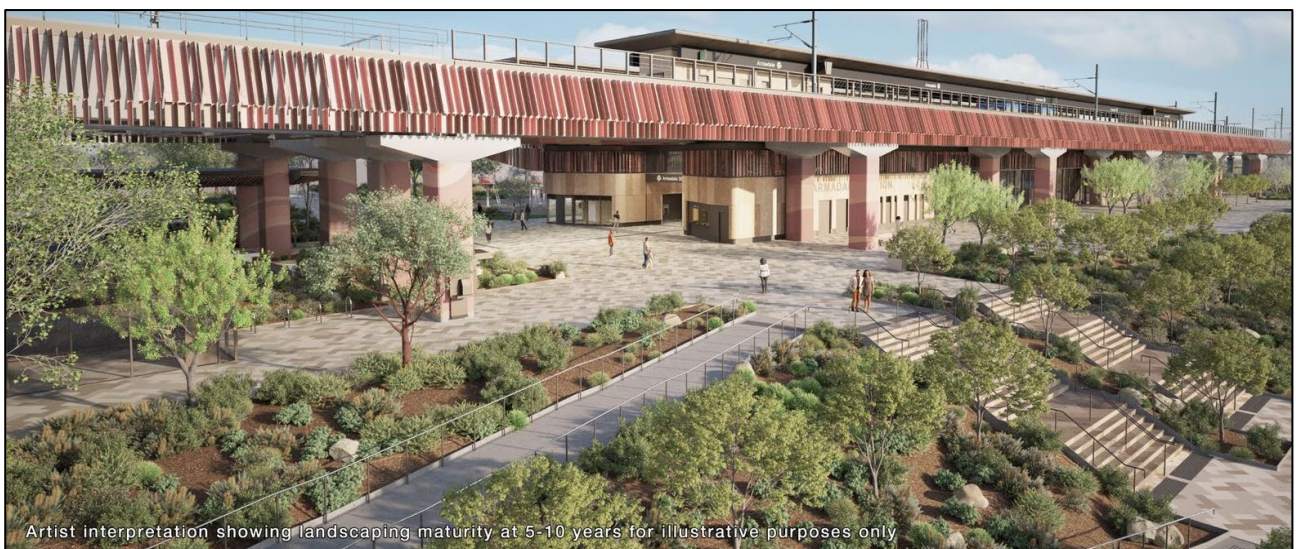


Render 7: Viaduct Treatment (station precinct from Jull Street mall)

These enhancements can help integrate the viaduct into the overall design concept of the station precinct, creating a more seamless and unified visual experience for users and passers-by. The treatment plan may also incorporate landscaping and greenery to add natural elements and soften the viaduct's presence. The strategic placement of trees, shrubs, or climbing plants along the viaduct's edges will create a greener and more inviting environment.

It is important to note that the specific details of the viaduct treatment plan may be subject to further design development and consultation, ensuring that it aligns with the overall vision and objectives of the station precinct.

Please refer to **Appendix E** – Armadale Station Development Plans and **Appendix H** – Public Art for further details regarding potential treatment to the viaduct structure.



Render 8: Example Paint Finish to Viaduct Columns (station precinct) - Subject to etailed design

7.1.5 Wayfinding

Clear view 'line of sight' to and from the station, and beneath the viaduct are at the core of intuitive wayfinding, supported by comfortable and logical pedestrian routes. A de-cluttered 'Welcome Place' provides clear views to all surrounding destinations with a direct view line to the old post office and Jull Street Mall, the main connection into the Armadale Town Centre.

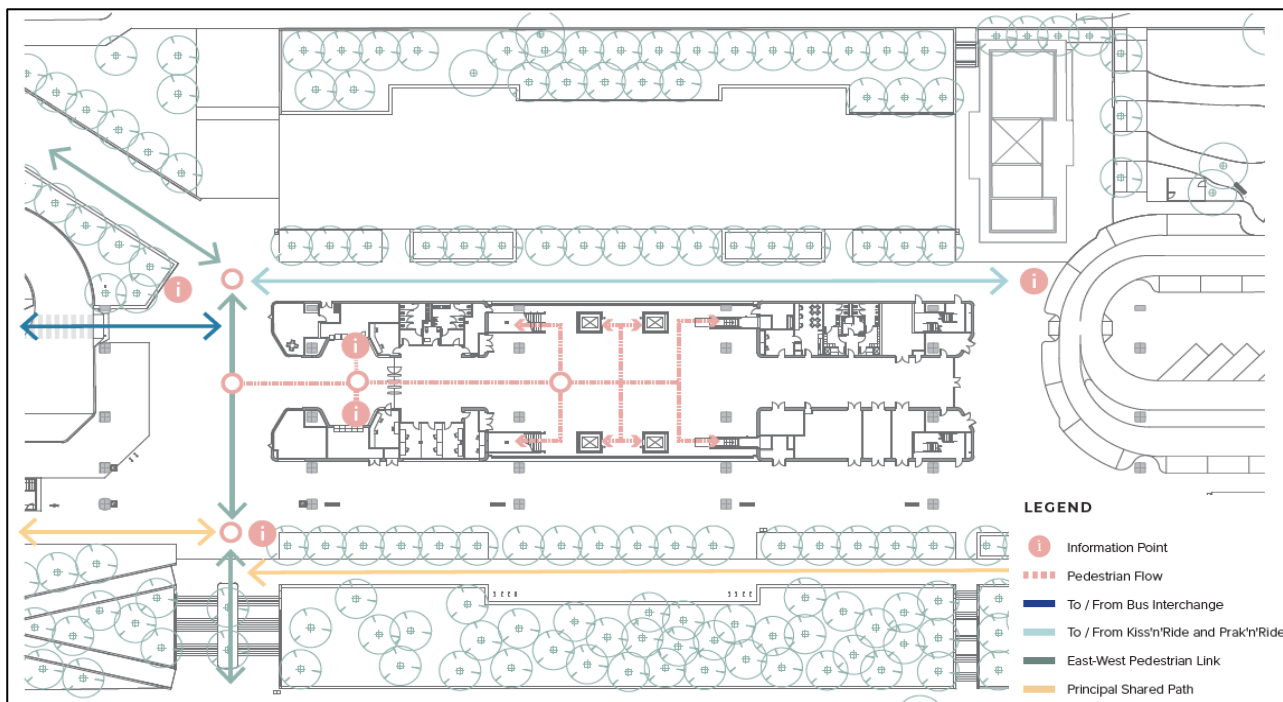


Figure 12: Wayfinding Diagram

The design encourages easy movement between train station platforms, the public realm, bus interchange facilities, Park and Ride areas and the Town Centre through:

- Providing clear lines of sight from the entrance of the station to Jull Street Mall.
- Providing permeable station buildings with attractive and safe transition spaces with legible entrances that connect to the corridor/public realm.
- Providing expansive open concourses around the station entries.
- Providing recreation paths which lead to station plazas and forecourts with a PSP (DA 5) which diverts past the station entrances.
- Designating pedestrian crossings.

Please refer to **Appendix C – Final Place Plan** which includes additional diagrams that demonstrate paths to and through the station area.

7.1.6 Public Realm

Public realm areas are designed with the objective of creating an expansive series of open spaces over approximately eight hectares, between Armadale Road and Church Avenue.

These spaces are expected to provide active gathering areas that foster social interactions and community connection. Locals will be encouraged to enjoy a range of amenities such as active leisure, youth and play areas, to places of quiet contemplation and connection to nature.



Masterplan Figure 1: Public Realm Masterplan (Refer **Appendix D** – Site Plan)

With a thoughtfully designed layout and strategic placement of pedestrian walkways, seating areas, and green spaces, the public realm areas also connect users to essential train and bus services beside the welcome plaza.

The concept for the Armadale Station focuses on creating a public place for people, that reconnects the precinct to its surrounding landscape. Increased planting and tree canopy creates a naturally shaded and cooler environment. New paths and pedestrian-friendly crossings connect the station precinct with its surroundings.

Landscaping and urban design upgrades include the following:

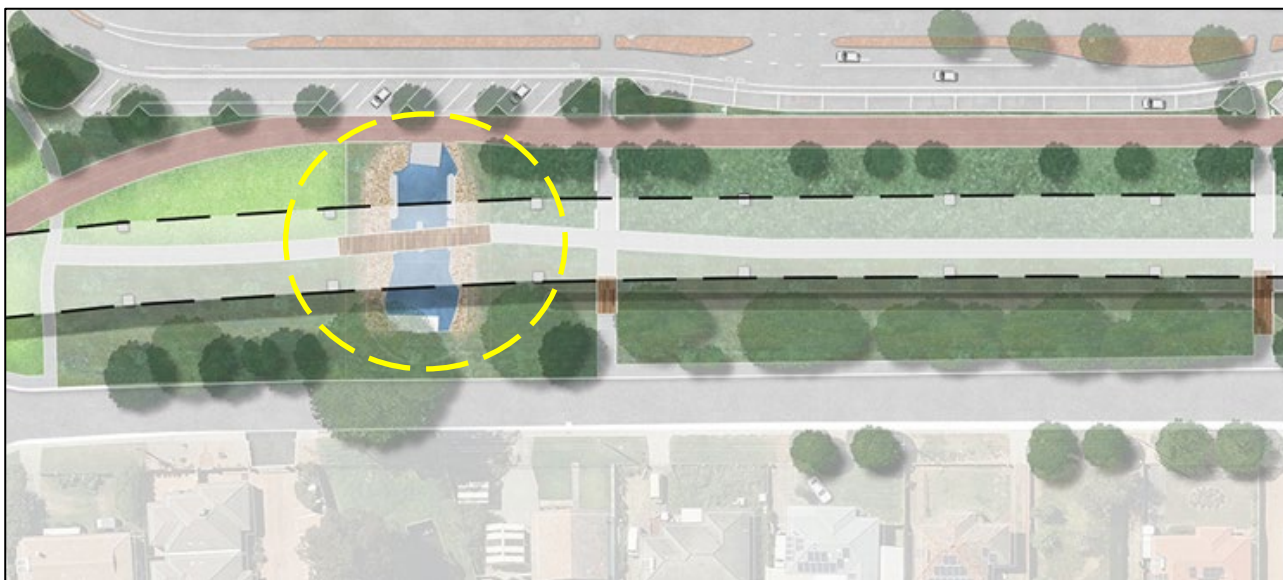
- Retaining of as many trees as possible with priority placed on heritage based trees and enhancing the aspect with increased tree numbers for greater natural shade and canopy over the site.
- Providing diverse plant species and variety of native wildflower colour.
- Aligning tree selection with the City's Urban Forest Strategy in providing a botanically rich and diverse urban forest. The provision of a large species diversity (native and exotic) is important in limiting disease and pest damage. Current threat is by the Polyphagus-Shothole Borer that is known to attack a variety of native trees. The aim is to reduce the risk to retain all trees.
- Utilising water wise native planting and focus on reducing irrigation needs via hydrozoning principles where appropriate.
- Manage the treatment of stormwater from the rail structure's into vegetated basins and swales.
- Incorporating Water Sensitive Urban Design Principles to locally treat stormwater from the viaduct structure, built form and from overland flow. Capture points are a series of bio-retention basins, swales, and rain gardens.
- Soft landscaping elements soften essential functional hardscaping elements such as basketball fencing. Landscaping elements have been selected to promote sightlines and permeability.
- Facilitating flexible community spaces to promote and program events and activities such as weekend farmers markets, arts and crafts, food truck events, etc.
- Provide essential east – west connection from Wungong Road to Hobbs Drive for the community accessing the school.

- Mitigating conflict points with cyclists (and the likes) and pedestrians by providing landscape treatments that incorporate separation and to signal users to slow down, be wary and alight where appropriate.
- Incorporating Noongar culture context, themes and narrative specific to the site location and Armadale heritage. These being derived from the Local noongar Elder Reference Group, METRONET Noongar Reference Group, METRONET Noongar Culture Context Document and the METRONET 'Gnarla Biddi – Our Pathways" Strategy.
- Enhancing natural systems with an improved ecological corridor north/south throughout the site that also encourages connection with nature, country and embellishes a sense of place.
- Considering robust quality materials that are sourced responsibly and enhance location and sense of place.

A summary of the key public realm upgrades to be introduced are provided below.

Neerigen Brook Crossing

A boardwalk crossing is proposed over the existing Neerigen Brook between Neerigen Street and Aragon Court. This utilises the existing rail bridge footing structures.



Masterplan Figure 2: Neerigen Brook Crossing

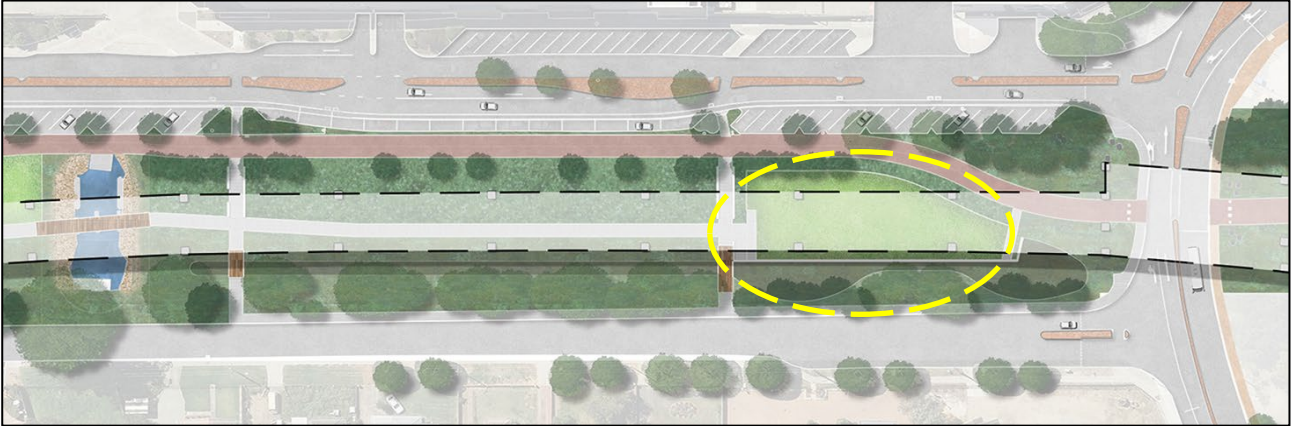
Educational signage to inform the significance of this water connection is included, to describe the importance of its role in the wider water ecosystem for Armadale.

By explaining the brook's function as a natural waterway and flood management system, visitors will gain a deeper understanding of its value within the local ecosystem. Additionally, the signage will provide insights into the cultural and historical context of the area, highlighting any significant events or landmarks associated with the Neerigen Brook. This information serves to foster a sense of place and encourage a connection to the community's heritage, creating a more enriching experience for those utilising the boardwalk.

Please refer to **Appendix F – Urban Design and Landscape Concept** for further information regarding specifics around landscaping upgrades.

Dog Off-leash Park

The Dog Off-leash Park will feature dual safety gate entry points to ensure the secure containment of dogs within the designated area. It will feature dual safety gate entrances, dog agility items, seating, and drink fountains with dog water bowls.



Masterplan Figure 3: Dog Off-leash Park

Entry gates will provide a convenient and controlled access point, allowing owners to enter and exit the park without the risk of dogs escaping. Agility items, such as ramps, hurdles, and tunnels offer opportunities for dogs to engage in physical activities, promoting exercise and mental stimulation. They also provide a platform for dog owners to interact and bond with their pets through play and training exercises.



Artist interpretation showing landscaping maturity at 5-10 years for illustrative purposes only

Render 10: Dog Off-leash Park

The Dog Off-leash Park aims to create a public space where dog owners can safely enjoy outdoor activities with their pets. By providing essential amenities and recreational features, the park encourages responsible pet ownership, promotes physical well-being for both dogs and owners, and fosters community connection.

Urban Lounges

Urban lounges provide comfortable, welcoming spaces to sit, read, relax or to simply enjoy lunch and meet a friend. These relaxed seating spaces are set amongst trees and planting and occur in three places across the site - behind the RSL Club, in the Youth Area and adjacent the Kiss and Ride area (south of the station).



Masterplan Figure 4: Urban Lounges

One of these urban lounges will be located behind the RSL Club, providing a serene and tranquil atmosphere for visitors to unwind. Surrounded by trees and greenery, this lounge will offer a peaceful retreat where individuals can escape the hustle and bustle of the surrounding area.

Another lounge will be situated in the Youth Area, catering specifically to younger visitors. This vibrant space will be designed with a contemporary and dynamic ambiance, offering comfortable seating arrangements amidst the youthful energy of the surroundings. It will provide a place for young people to socialise, relax, or engage in recreational activities.



Example Image 1: Urban Lounges

Adjacent to the Kiss and Ride area, just south of the Armadale Station, another urban lounge will be available for commuters and visitors alike. This lounge will serve as a convenient spot for individuals to rest or enjoy a quick meal before or after their train journeys. Positioned amidst a landscape of trees and plantings, it will create a protected and inviting atmosphere.

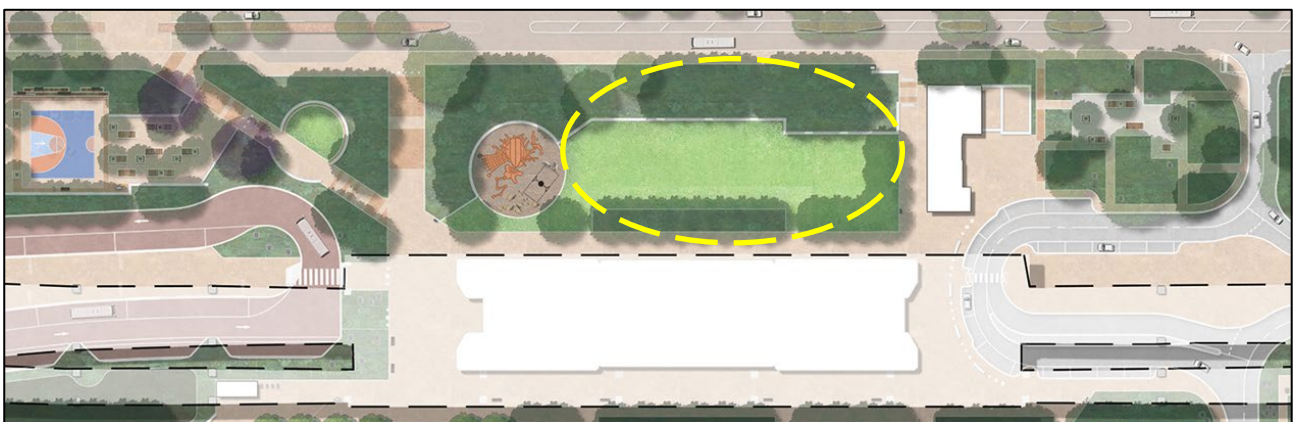
The urban lounges are thoughtfully incorporated into the site, allowing people to embrace moments of relaxation and social interaction. By providing comfortable seating areas amidst nature, individuals can enjoy a relaxing experience while immersing themselves in the vibrant surroundings. Whether it's behind the RSL Club, in the Youth Area, or adjacent to the Kiss and Ride, these lounges aim to enhance the overall experience of the site, encouraging visitors to find solace, connect with others, and enjoy their time in a welcoming and comfortable environment.



Render 11: Urban Lounges (youth area)

Turfed Areas

Generous turfed areas throughout the public realm create places for picnics and temporary activation, reducing the use of hard paved surfaces. The larger turfed area adjacent to the east of the station is proposed for larger more formal events and community-based activities.



Masterplan Figure 5: Turfed Areas (station zone)

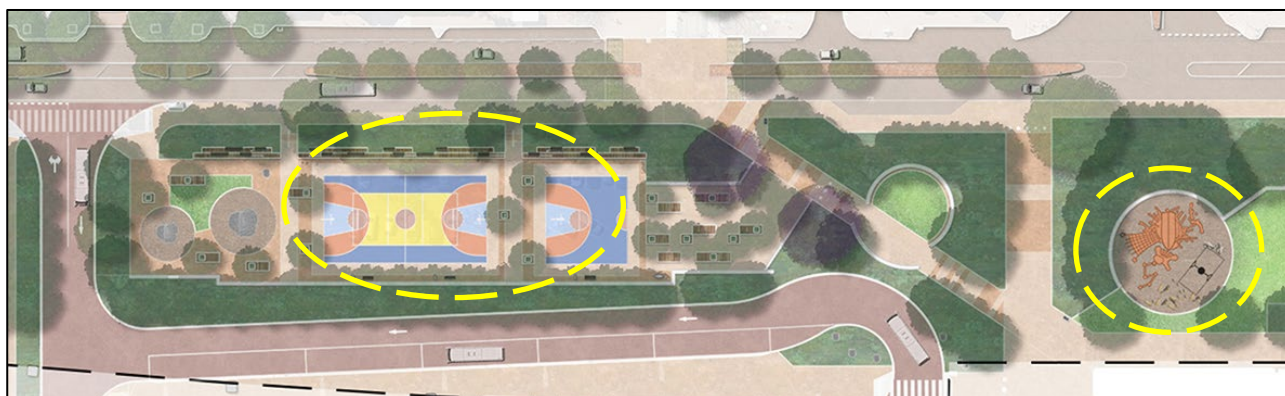
The turfed area located to the east of the station building, is designed to accommodate larger and more formal gatherings. This space can host community events, performances, markets, or other public activities, creating a sense of community engagement and fostering a lively and inclusive atmosphere.

In addition to their aesthetic and functional benefits, the turfed areas contribute to the overall sustainability and environmental aspects of the precinct. By reducing the amount of hard paved surfaces, the reliance on impermeable materials is minimised. This allows for improved water infiltration and reduces the heat island effect, creating a more environmentally friendly and sustainable design.

Youth Area

A Youth Area is proposed to the east of the Bus Terminal, provides spaces and facilities for a variety of skill, strength, and sports-based activities as well as relaxation zones between. The space provides for:

- Bouldering (for varying levels of skill and strength).
- A full-size basketball court with multi-use line graphics.
- A half-size basketball court.
- A junior nature-based playground with inclusive play elements that includes (subject to approval from the City of Armadale) the following:
 - Basket swing
 - Tower with slide
 - Timber steppers and balance logs
 - Local granite boulders
 - Stone 'moss rock' steppers
 - Sand play-based elements
 - A net climber.
- Terraced seating east of the courts to give elevated 'grandstand like' viewpoints.
- Chain-link rebound fencing west of the courts to protect ball and people from straying across into the path of buses at the adjacent bus terminal.
- Urban lounge seating to provide a relaxation or 'chill zone' for youth under the shade of trees.
- Bicycle racks.
- Drink fountain.
- Bench and seating walls that include sections with back and arm rests.



Masterplan Figure 6: Youth Area



Render 12: Youth Area and Basketball Courts

7.1.7 Station Lighting and Surrounds

Lighting plays an important role in enhancing the sense of safety within the public realm and internally and externally around new station, and can assist in reducing antisocial behaviour, improve visibility and therefore increased use of patronage and use of the public realm by the community.

High quality lighting design plays a significant role in promoting the use of public spaces by the community. Well-lit areas are more inviting, creating a welcoming atmosphere that encourages people to gather, socialise, and utilise the public amenities available. It also extends the usability of these spaces into the evening, enhancing their accessibility and promoting community connection.

Lighting for the area has been developed with the following design principles in mind: Daylight; Environment; Safety; Flow and Wayfinding; and Maintenance.

While lighting requirements have been informed by the SWTC as *PTA Specification 8803-900-003 – Lighting Design, Installation, and Maintenance*, other important lighting features to note include:

- Within the station building, lighting will be strategically placed to provide clear visibility for commuters, including platforms, waiting areas and walkways. The station entrance will feature brighter lighting to facilitate wayfinding, while the concourse lighting seamlessly integrates with the entry lighting and aids in guiding patrons towards the platforms.
- Beyond the station building, lighting will be designed to illuminate pathways, entrances, parking areas, and surrounding public spaces, ensuring safe navigation for pedestrians and vehicles alike.
- For landscaped areas, dynamic lighting solutions will allow illumination levels to adjust based on natural daylight conditions.
- Shared use pathways are equipped with lighting solutions that prioritise safety, comfortable visibility, and an overall perceived sense of safety for pedestrians and cyclists.

It is important to note that the specific details of the lighting plan may be subject to further design development and consultation, ensuring that it aligns with the overall vision and objectives of the station precinct.

Please refer to **Appendix Q** – Lighting Strategy for further information regarding lighting for Armadale Station and surrounds.



7.2 Crime Prevention Through Environmental Design (CPTED)

Safety has been a primary consideration for Armadale Station, given its location within a highly central area with high foot-traffic. The fundamentals of CPTED have been integrated into the design, including lighting, clear sightlines, elimination of entrapment spots, legible wayfinding, landscaping, and activation.

Natural / passive surveillance and unimpeded views across the precinct and station areas has been considered by:

- Providing a range of spaces that can accommodate a variety of users and number of attendees for both formal and informal gatherings.
- Strengthening connection through the site north/south and across the corridor east/west under the viaduct nor unhindered by 'at grade' fencing allowing stronger utilisation and activation opportunities and connection with the City centre.
- Providing passive surveillance and safe journeying through the site implementing CPTED principles with clear sightlines, good lighting, and intuitive wayfinding.
- Providing clear, direct, and safe movement to the station entry, bus terminal and carparking.
- Encouraging activity within the precinct with walking, play and resting points throughout with formal and informal seating nodes with universal access.

Further consideration to CPTED principles associated with key pedestrian movement and activation areas will be undertaken through the detailed design process. Additionally, the precinct is monitored by 24/7 CCTC surveillance to ensure sufficient surveillance coverage is offered to PTA staff and users of the precinct facilities.

7.3 Movement Network

UrbSol was commissioned by the Alliance to prepare a Transport Impact Assessment (TIA) in support of DA 3. The TIA was prepared in accordance with the Transport Impact Assessment Guidelines, Volume 4 – Individual Developments (WAPC, August 2016) and builds upon previous planning phase investigations for the BRE project.

In relation to station access, the proposed station layout intends to rationalise the number of existing access points (seven in total) to three. This reduction in the total number of access points is expected to reduce crash risks by reducing the number of potential conflict points, whilst still accommodating traffic in and out of the station at an appropriate level of service. It will also be simpler for patrons with access to a single parking area, separate from the bus interchange.

In the context of the TIA, the operational assessment of the access points was undertaken for the critical combined network/station peak. Traffic generated at the station was estimated by factoring up existing traffic at the station in the same proportions as passenger projections. The result was minimal additional traffic generated at opening (2026), and approximately 60 trips (AM peak) and 100 trips (PM peak) additional trips in 2036 compared to 2022.

The operational assessment undertaken indicated that the proposed access points are expected to operate well, with low degrees of saturation, minimal delays, and minimal queueing. The 2026 and 2036 assessments indicated little change from the assessment that used 2022 traffic volumes. Due to the low traffic generated by the proposed redevelopment, it is not expected that the redevelopment will contribute to any operational issues at surrounding roads, nearby intersections, or neighbouring areas.

In relation to pedestrian/cyclist amenity, there are significant enhancements and opportunities created with the redevelopment, including the extension of the PSP to Byford and grade separation of the rail operations. Consideration has been given to areas where potential difficulty in crossing roads or undesirable conflict has been identified, and appropriate treatments incorporated into the design.



Public transport access is largely unimpacted by the proposed redevelopment, apart from minor route alterations to the location of the proposed access point (to the bus interchange area) at the northern end of the site on Commerce Avenue. The operational assessment indicates that the access point is expected to operate efficiently upon opening and into the future.

The assessment undertaken with consideration of the objectives of the TIA, it can be summarised that the proposed development:

- Provides safe and efficient access for all modes of transport to the subject site.
- Is well integrated with surrounding land uses.
- Does not adversely impact on the surrounding land uses.
- Does not adversely impact on the surrounding transport network or its users.

Please refer to **Appendix L** – Transport Impact Assessment.



7.3.1 Pedestrian Movement

The elevated rail provides important opportunities to improve the pedestrian linkages in the Armadale Town Centre. The limitations of existing rail crossings are removed and replaced by uninterrupted pedestrian connections from east to west.

A new 'Welcome Place' connecting Jull Street Mall to east and the new neighbourhood plaza to the west and will provide an activated public place, connecting the east and west.

Additional connections north of Forrest Road will further improve the pedestrian permeability around the Armadale Town Centre, whilst new parkland underneath the elevated rail continues the green space (to the north) all the way to the station.

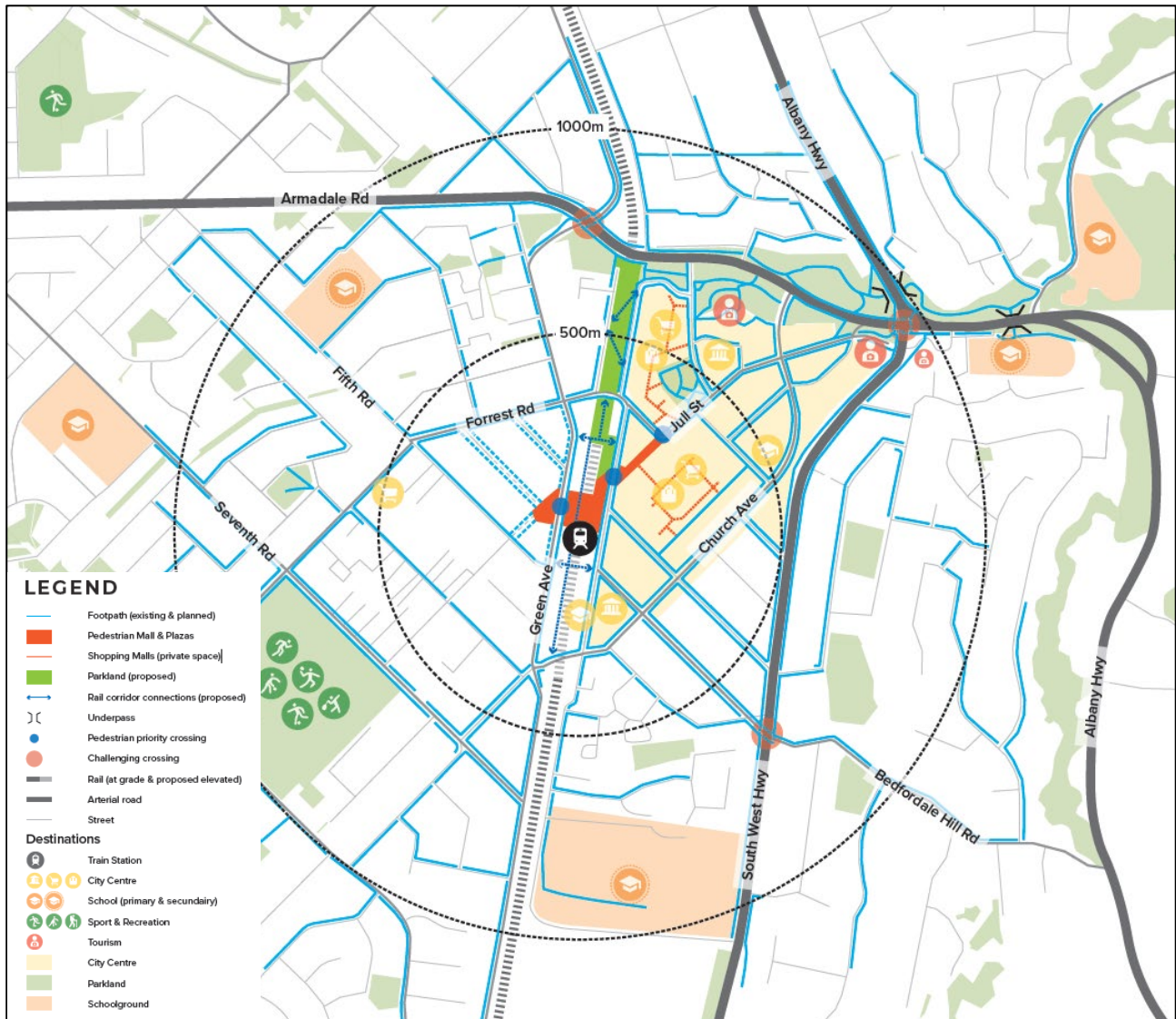


Figure 13: Pedestrian Network

7.3.2 Bus Interchange

The Bus Interchange is located to the north of the Armadale Station building, positioned under the viaduct with direct access from Green Avenue.

10 bus stop bays and four bus layover bays are proposed.

7.3.3 Kiss and Ride

The Kiss and Ride is located to the south of the Armadale Station building, positioned under the viaduct with direct access from Green Avenue.

Four Kiss and Ride Bays are proposed.

7.3.4 Park and Ride

Park and Ride Bays are located to the south of the Armadale Station building, positioned under the viaduct with direct access from Green Avenue.

170 Park and Ride Bays are proposed.

7.3.5 PTA Parking

PTA Parking is located to the south of the Armadale Station building, positioned under the viaduct with direct access from Green Avenue.

14 PTA / Staff Parking Bays are proposed.

7.3.6 Bicycle Parking

Secure bicycle parking is provided through a SmartRider accessible shelter that is placed in a convenient location adjacent to the PSP and station entrance.

96 secure bicycle parking bays are proposed.



7.4 Inclusive Practices and Design

The introduction of a new elevated rail in Armadale has brought about significant improvements in disability access and inclusion for the residents who may experience some form of mobility issues. A range of positive changes in both the station and the surrounding public realm are designed to enhance this experience for those with disabilities or impairments.

Enhanced Station Accessibility

The station has been designed with careful consideration for individuals with disabilities. Accessibility features such as wheelchair ramps, elevators, and widened platforms have been incorporated to ensure easy access for people with mobility challenges. These improvements enable individuals using wheelchairs, walkers, or other mobility aids to navigate the station safely and comfortably.

Inclusive Station Design

The station design prioritises inclusivity by incorporating various features to cater to people with different disabilities. For visually impaired individuals, tactile paving, braille signage, and auditory announcements have been installed to assist with navigation and wayfinding. Additionally, the public realm upgrades include ample seating areas for individuals with mobility limitations and who may require rest or have difficulty standing for extended periods.

Seamless Transition within the Station

The station offers seamless transitions for individuals with disabilities, through an upgraded public realm, featuring even and smooth surfaces. Clear wayfinding signage and strategically placed handrails are provided to ensure convenience and ease of use for people with all abilities. Additionally, PTA staff are trained to assist individuals with disabilities, offering support and guidance whenever needed.

Improved Public Realm

The enhancements brought about by the new elevated rail project extend beyond the station itself. The surrounding public realm has been upgraded to foster inclusivity. Pathways have been widened to accommodate wheelchair users and pedestrians with limited mobility. Elevation changes through the public realm have been managed, to provide gentle and accessible grades so patrons can access comfortably throughout the station. Public seating is placed throughout these spaces at regular intervals, ensuring that people with disabilities have ample opportunities to rest and enjoy their surroundings.

The new elevated rail project in Armadale has made significant progress in promoting disability access and inclusion. By prioritising accessibility features within the station and improving the surrounding public realm, individuals with disabilities will be able to navigate the area more easily and enjoy a greater sense of inclusion and independence.



7.5 Tree Management and Retention

Trees support and enhance Armadale's existing sense of place. They provide practical amenity and ecological benefits to the area too, offering shade and amelioration of the urban heat island effect.

The Alliance appreciates the benefit that tree retention has, combined with the aesthetic and environmental outcomes that benefit the broader Armadale community. This, however, has required balance with the practicalities of construction of many new structures including the viaduct, station buildings and surrounding infrastructure.

In consultation with the City of Armadale, a Tree Retention Strategy has been developed to guide the retention, protection, and proposed planting to provide a strong legacy.

"Build on and enhance the City's botanic heritage and landscape character with a legacy of strong retention and protection of existing trees. Expand the City's urban forest with a significant and diverse range of tree species."

It was identified that the original feature surveys undertaken did not collect information on trees with trunks less than 300mm in diameter. In accordance with the SWTC for all retained vegetation to be surveyed an additional feature survey and visual tree assessment has been undertaken to collect information on trees not originally surveyed.

Further details regarding this information has been included in the Tree Retention, Removal and Pruning plans detailed in **Appendix G**, to provide greater clarity and certainty.

Trees scheduled for removal are required to be removed to accommodate:

- Construction methods (noting that changes to construction methods have led to saving a significant number of trees that were originally anticipated for removal).
- New station and associated infrastructure.
- Minimum setback design parameters set by the PTA for safety or maintenance.

The design has accommodated retention of all heritage trees identified by the City of Armadale, and these will be retained as part of the works. It was identified that some established trees would require removal.



7.6 Public Art

The public art opportunities associated with the Byford Rail extension are being developed to align with the strategic objectives of METRONET and the City of Armadale. The approach draws inspiration from Noongar and post-colonial culture, history, and landscape.

The purpose of the Public Art Plan is to:

- Inform cultural and creative considerations for contractors delivering design and construction activities associated with BRE.
- Confirm PTA and METRONET expectations for integration of creative practice into the planning and delivery of BRE.
- Provide a curatorial framework to assist contractors and delivery partners in the preparation of pricing for artwork commissions.
- Ensure a consistency across the whole creative program.
- Ensure the design and delivery of permanent works are of consistent high quality.
- Collate project specifics on art, process, and funding into one document.
- Information on stakeholder involvement into public art outcomes.

Other important considerations for the Alliance in relation to public art include:

- The timing of artwork installation which will need to fit with the overall construction program.
- Sustainability of the finished piece. This may include, but not be confined to, the environmental costs associated with light, sound, motion, micro-climate installation, maintenance, and lifespan.
- The design and engineering methods will take into consideration the complexity of fabrication and assembly of the carbon emissions through energy intensity or efficiency.

The integration of public art will be further development through the detailed design phase of the project, and it is expected that an associated standard condition of approval will be applied.

Please refer to **Appendix H** - Public Art for more information on the project approach to public art.



7.7 Stormwater and Drainage Strategy

The preliminary stormwater design is provided to indicatively demonstrate water management design principles. The final stormwater design is expected to be delivered as a condition of development approval, similar to other METRONET station projects.

The project interfaces with multiple regulatory authorities and as such the design is required to comply with several design criterion as listed below. The project design criteria and specifications are principally detailed for 'on-grade' drainage systems.

At the time of commencing design, there were no specific drainage requirements within the SWTC for viaduct drainage and no specific PTA specifications. The PTA have subsequently released design requirements for viaduct, though the criterion for design is yet to be confirmed. Discussion with the PTA is ongoing to develop suitable drainage design criteria for the detailed design phase.

The overarching strategy has the following primary objectives:

- Apply Water Sensitive Urban Design (WSUD) principles where applicable within the 'on-grade' drainage design network.
- Limit post development discharge to predevelopment flow rates, matching existing peak flows at select discharge locations from rail corridor to external local government drainage network.
- Promote use of open channel drainage over use of pit and pipe infrastructure where possible.
- Meet the PTA SWTC requirements.
- Meet the design criteria for viaduct drainage as agreed with the PTA (yet to be formalised, discussions ongoing).
- Meet the *PTA Specification 8880-450-090: Design of Drainage for PTA Infrastructure*.
- Maintain the existing drainage regime within and outside of the rail corridor, including maintaining major event flow paths across the corridor and replicating pre-development hydrology for flood protection of the surrounding environment and rail infrastructure.

Please refer to **Appendix K** - the Stormwater and Drainage Management Strategy for more information on the project approach to public art.



7.8 Noise and Vibration

The Noise and Vibration Report for Armadale Station, detailed in **Appendix N** of the DA Report, highlights several key points from the Acoustic Report. Here are the key points identified within the report:

- **Environmental Rail Noise Levels:** The assessment indicates that the environmental rail noise levels, when evaluated at nearby potential noise-sensitive premises, are expected to meet State Planning Policy 5.4 Road and Rail Noise (SPP 5.4).
- **Rail Vibration Levels:** The Noise and Vibration Report states that the levels of vibration caused by the rail operations are expected to be compliant with the recommended levels.
- **Road Transport Noise from Car Parking Areas:** The predictions suggest that the noise generated by road transport activities, specifically from the car parking areas, will not exceed the environmental noise criteria during both day and night time periods.
- **Noise from New Car Parks and Bus Interchange:** The Noise and Vibration Report indicates that the noise emanating from the new car parks and the bus interchange is expected to achieve compliance with SPP 5.4. The noise levels from these areas are expected to meet the requirements outlined in the SPP 5.4.
- **Overall,** based on the information provided in the Noise and Vibration Acoustic Report, the noise and vibration impacts associated with the Armadale Station development are expected to be within acceptable limits and compliant with SPP 5.4.

7.8.1 Noise

With the noise wall extents, it is predicted that:

- Noise levels are not predicted to exceed the day-time threshold values (LAeq, day 60 dB) at any of the sensitive residential receivers.
- Noise levels are not predicted to exceed the night-time threshold values (LAeq, night 55 dB) at any of the sensitive residential receivers.
- Noise levels are not predicted to exceed the maximum pass by target (LAmax 80 dB) at any of the sensitive residential receivers.
- The predicted noise and vibration exceedances are based on 95% certainty of outcome and will be further investigated during detailed design.

7.8.2 Vibration

With the vibration mitigation extents, it is predicted that:

- Ground borne vibration levels are not predicted to exceed the corresponding threshold values at any of the sensitive receivers.
- Ground borne noise levels at majority of the receivers are not predicted to exceed the corresponding threshold values (LAmax, night), except 3 residential receivers at 59 Eleventh Rd (+1 dB), 11 Woodstock Pl (+2 dB), 2123 Thomas St (+3 dB), Darling Downs.



7.9 Demolition and Construction Management

A Demolition and Construction Management Plan (DCMP) has been prepared to support this DA which is detailed in **Appendix J – Demolition and Construction Management Plan**.

7.9.1 Demolition and Construction

The Demolition Plan:

- Describes the scope of works to be undertaken including types of activities, work areas and stages.
- Includes construction related sub-plans (i.e. Construction Staging drawings & Site Management Plan).
- Details how the Alliance will manage interactions with surrounding key stakeholders and construct the viaduct structure with the least impact to surrounding stakeholders as possible.
- Determines effective construction staging that will ensure current rail operations and the associated transport facilities' operational requirements are maintained, and impact to these is minimised during construction.
- Describes procedures for the management of subcontractors and their plans and work method statements.
- Describes the processes to ensure the compatibility of any necessary temporary works with each other and with the works.
- Describes procedures to demobilise activities and the Works, including demobilisation of personnel, plant and equipment and closeout of stakeholder communications.
- Addresses the management of interfaces with all authorities and other contractors.

7.9.2 Working Hours

Construction works shall generally be between 0700 hours and 1900 hours Monday to Saturday (excluding public holidays). However, to enhance public safety, minimise disruption to peak hour traffic, and meet the required programme, certain works may be required beyond these hours.

The works will be carried out in accordance with noise control practices set out in Section 4.5 of AS 2436-2010 'Guide to Noise Control on Construction, Demolition and Maintenance Sites' and section 6 of the SWTC.

The Community Engagement Plan details the notice to the PTA's Client Representative for approval before issuing notice to local government authorities (LGA), affected residents and/or businesses of construction works hours and any out of hours applications.

These works will be managed as out-of-hours works applications in accordance with Environmental Protection (Noise) Regulations 1997 WA for the approval of the local government authority, and the PTA's Client Representative.

An Out of Hours Noise and Vibration Plan application will be submitted to the LGA seven days prior to the works being proposed to be undertaken and will include the following:

- Reasons for the work to be completed out of hours.
- Proposed noise and/or vibratory activities.
- Predictions of noise levels from the site.
- Predictions / assurance of vibration levels from the site.
- Predictions/assurances of vibration levels from the site.
- Proposed measures to control noise and vibration.



- Monitoring of noise and vibration.
- Notifications to residents and stakeholders of upcoming out of hours work.
- Complaint response procedure.

An Out of Hours Public Notification as part of an Out-of-Hours works application for the predictions of noise will provide an estimation of the potentially impacted premises. Occupants of nearby affected buildings likely to receive noise levels in excess of Assigned Noise Levels defined within Environmental Protection (Noise) Regulations 1997 (WA) must be advised (i.e. letter drop) at least 24 hours prior to work commencing. The notification must provide reasons as to why the work is necessary, reference to the LGA approval and contact details to register complaints.

7.9.3 Construction Management

All work will be undertaken in accordance with the Alliance Safety Management System and project safety management plans.

Each construction work area will have a detailed assessment undertaken that considers site-specific requirements for safety, worksite protection including demarcation and signage, particular site risks, community impacts, environmental impacts, local traffic management, live rail interfaces, other contractor interfaces and dependencies, and allocation of overall site responsibilities. Work activities will be undertaken following a risk assessment and described in the SWMSs. These risk assessments will mitigate all known risks relative to the site and work activity and will be included in the work packs.

All construction work will first be digitally engineered and managed via the work packs which contain all input information such as drawings, permits, ITPs, program, safety requirements, risks, and engineering studies. This allows management and control of lots and maintains overall quality assurance. No construction work will start without a work pack.

The main construction areas are Station Concourse and Platforms; Bus Interchange; Park and Ride; and Surrounding Public Areas.

7.9.4 Dilapidation Survey

Properties located within 100m of the construction areas for the project will be offered a precondition survey. This is part of our commitment to supporting communities in the project area and minimising any adverse impacts from works.

The Alliance is responsible for identifying and recording any third-party property, including public amenities, located within the 100m zone and/or that may be affected by the works.

In cases where third party assets such as reticulation, bores, drainage, and garden fixtures that may be temporarily impacted, agreements will be made with the property owner to protect or replace them to an equivalent standard to that existing prior to the commencement of the works.

7.9.5 Access and Approvals

The Alliance will obtain permission for site access to all work areas from the relevant stakeholders prior to commencing construction works. All environmental, LGA and rail authority approvals (outside of what PTA are obtaining) shall be gained prior to construction works commencing on-site. All relevant stakeholders will be kept up to date with progression of and any planned changes to the design or works.

7.9.6 Traffic Management Plan

A Traffic Management Plan is an ongoing task and is expected to be conditioned as part of the decision notice.

It is expected a final DCMP will be conditioned as part of the Development Approval.



7.10 Sustainability

The METRONET Sustainability Strategy aims to create a sustainable legacy by developing and through planning, design, procurement, and construction of transport infrastructure, train station and precincts.

The objectives of the Sustainability Management Plan are to outline how the Alliance will consider and implement social, environmental, and economic considerations into the project works across the assets life.

The design of Armadale Station has been developed in accordance with the sustainability framework outlined in the METRONET Sustainability Strategy. The intention is to comply with the Green Star target requirements specified in the SWTC applicable to all METRONET projects.

Specifically for Armadale Station, the development aims to achieve a five-star rating under the Green Star Railway Stations rating framework, with the potential for reaching a five-star rating being explored through ongoing efforts. The station's Sustainability Management Plan, outlined in **Appendix P**, outlines the measures in place to achieve these goals.

Passive design measures, such as natural ventilation, shading, weather protection, and thermal performance, have been considered in the design of the station and precinct. Additionally, sustainable construction materials sourced locally will be utilised, recycling facilities and effective waste management strategies will be implemented, and water-sensitive design outcomes will be incorporated into the station and precinct buildings.

Energy efficiency and operational costs over the station's life cycle have been integral aspects of the design process. The selection of materials and finishes has been carefully considered to meet the requirements of the PTA while prioritising energy conservation. For detailed information, please refer to the included Sustainability Management Plan

The commitment to sustainability in the design of Armadale Station showcases a comprehensive approach to environmental responsibility, fostering a more sustainable and resilient future for the station and its surrounding area.

7.11 Geotechnical

The Geotechnical Report provides an updated ground model for the Armadale Station precinct incorporating historical investigation and Stage 1 supplementary geotechnical investigation data. As part of the geological and geotechnical interpretation to update the existing ground model, two engineering geological long sections along the eastern and western sides of the Armadale Station precinct have been produced.

These two geological long sections show the shallow ground conditions in greater detail compared to the viaduct geological long sections that show the deeper geology, however, the two sets of sections should be read in conjunction if a greater overview of the site geology is required.

7.12 Project Delivery / Shutdown

The BRE project is to be constructed predominately during the 18-month shut down period which is anticipated to commence in late 2023. The 18-month shutdown was carefully considered by the PTA along with several alternative options to minimise disruption to existing public transport users, and local residents and visitors in the Armadale area.



8. State and Local Planning Framework

8.1 State Planning Framework

8.1.1 Perth and Peel @3.5 Million

The Perth and Peel @3.5 Million strategic planning framework seeks to accommodate 3.5 million people by 2050. The aim of the framework is to achieve greater urban consolidation by maximising the use of existing land near existing transport infrastructure and activity centres. To accomplish this goal, there will be a focus on developing and evolving new and existing activity centres into vibrant, mixed-use community hubs that are connected to high-quality public transport links.

The DPLH, in collaboration with other State Government agencies, developed the Perth and Peel Subregional frameworks, with the aim of improving connectivity in the Perth and Peel Regions. The frameworks take into consideration a range of important initiatives that aim to enhance connectivity in these regions.

The sub-regional frameworks aim to accommodate future population growth while ensuring the efficiency of the transport system is not compromised. To achieve this goal, the frameworks emphasise the integration of urban and employment nodes with transport infrastructure and services. This includes upgrading and adding new transport infrastructure to the network as needed. The transport network proposed in the Perth and Peel @3.5 Million document includes the extension of the Armadale Rail Line to Byford.

The METRONET strategic plan for the South Metropolitan Peel Sub-region includes plans to extend the Armadale Rail Line to Byford to improve connectivity in the southern region. BRE is a significant component of this plan and involves major works to upgrade the passenger rail line. The project aims to improve the public transport experience for Western Australians and promote urban renewal in the areas surrounding the upgraded rail infrastructure.

BRE aims to upgrade the Armadale Rail Line significantly, introducing new modern rail infrastructure, train stations, and public amenities to improve the overall passenger experience. The proposed upgrades support urban consolidation by substantially improving access across the rail corridor, allowing the Armadale Town Centre to become a more unified precinct whilst also providing a catalyst for future development.



8.1.2 Metropolitan Region Scheme (MRS)

The proposed works fall within an area that is primarily reserved for 'Railways'. Under the MRS 'permitted development' for land reserved for 'Railways' includes:

“works on land reserved for Railways for the purpose of or in connection with a railway”.

This DA also includes a range of infrastructure in addition to the railway itself, meaning that approval from the WAPC is required.

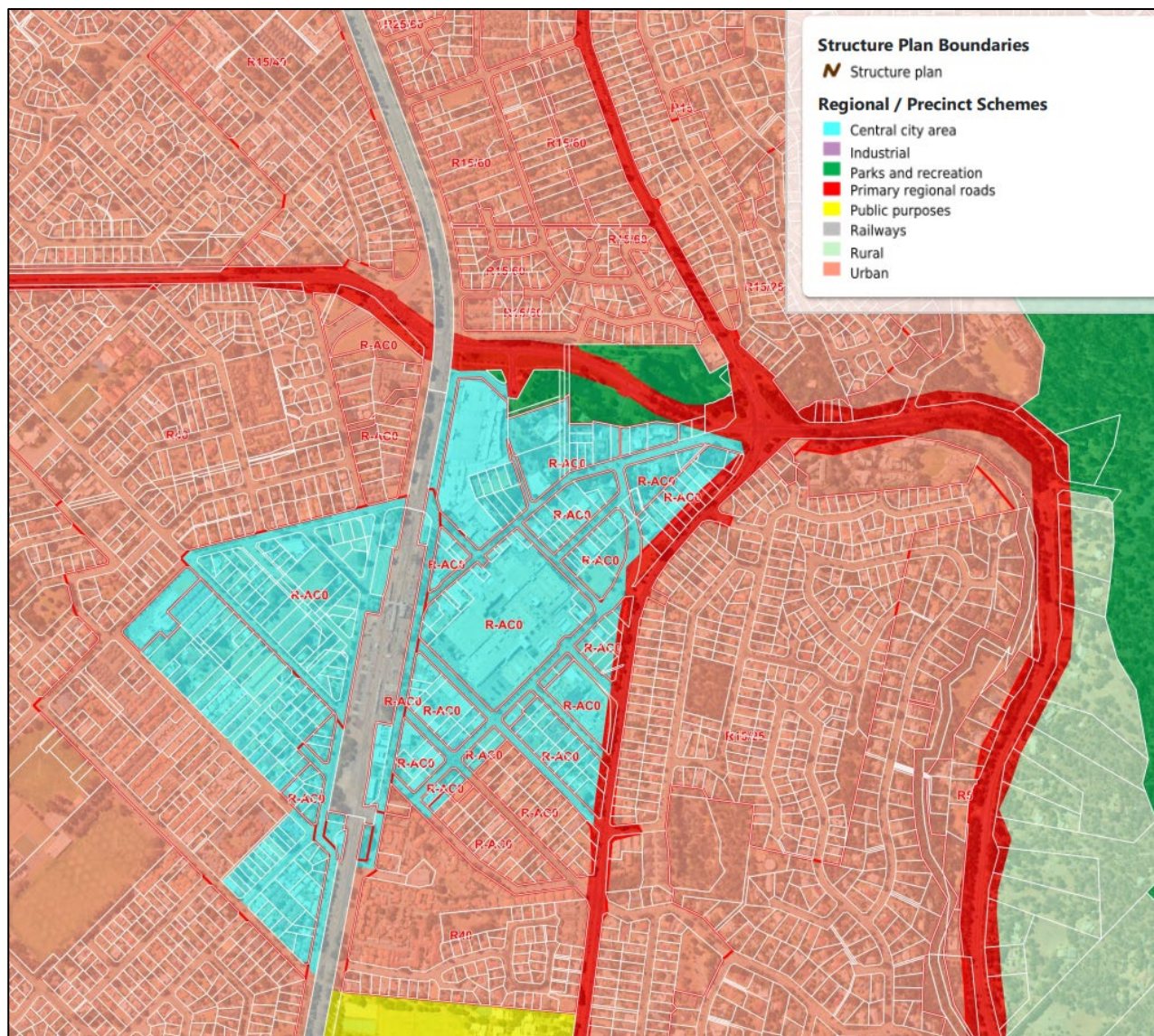


Figure 14: Extract of Metropolitan Region Scheme

Please refer to **Section 8.2.5 – Armadale Activity Centre Plan** (City of Armadale) and **Armadale City Centre West of Railways Activity Centre Plan** for further consideration on how the Armadale Station and public realm upgrades respond to the adjoining ‘Central City Area’ and what this means for east-west connections through the Armadale Town Centre.

8.1.3 State Planning Policy 5.4 – Road and Rail Noise

The criteria relevant to managing the impacts of road and rail noise are outlined within the WAPC's State Planning Policy 5.4 Road and Rail Noise (SPP 5.4). Rail noise has been a key consideration for the project and extensive work has been undertaken to ensure the viaduct will comply with all relevant planning and health requirements.

SPP5.4 guides the interface of noise sensitive development and major road and rail transport routes, with the overall aim of protecting significant transport routes whilst minimising the adverse impact of transport noise on sensitive development.

As all new proposed railways are required to meet the specified noise targets of SPP5.4, a Noise and Vibration Assessment has been completed in support of Armadale Station.

The policy recognises that in some instances, it may not be reasonable and/or practicable to meet the outdoor noise targets. Where transport noise is above the noise targets, measures are expected to be implemented that balance reasonable and practicable considerations with the need to achieve acceptable noise protection outcomes.

SPP 5.4 classifies a major upgrade to a railway meaning:

- A proposed realignment, either inside or outside the existing rail corridor.
- A rail track duplication.
- Works that are likely to adversely affect a noise sensitive land-use, such as the installation of switches/turnouts, signalling systems, spurs or passing loops, the modification to the track support structure, crossovers, refuges, and relief lines.

The infrastructure upgrades proposed in DA 3 meet this classification of a 'major upgrade to a railway'.

The works proposed in this report will facilitate the replacement and realignment of the existing rail line within the rail corridor so the objectives and requirements of SPP 5.4 apply to the proposed development.

Refer to **Appendix N** – Noise and Vibration Report for more detail regarding Noise and Vibration for the operation of the elevated railway infrastructure and associated upgrades within the Armadale Town Centre.

The project is committed to conducting comprehensive assessments of potential measures to mitigate railway noise and vibration around Armadale Station, particularly in relation to future Transit-Oriented Development (TOD) in the surrounding area. The goal is to ensure that the outcomes align with the expectations of stakeholders. While railway infrastructure and system works are not included in the development approvals process, the design of these elements will prioritise the reduction of noise and vibration associated with the railway, as necessary. The project will maintain close collaboration with the METRONET Office and other key stakeholders to plan for the adjacent precinct, aiming to achieve best practice outcomes in integrated transport and land use planning.



8.1.4 State Planning Policy 7.0 – Design of the Built Environment

SPP 7.0 became operational in 2019 and is the lead policy that elevates the importance of design quality in WA's built environment. SPP 7.0 includes 10 principles for good design and establishes the framework for integrating design review as part of the evaluation process. A detailed explanation of the design evolution (including the response to SDRP comments) is provided in Section 6.

A detailed summary of the design is provided in Section 7, a high-level summary addressing how DA 3 responds to the SPP 7.0 design principles is provided in **Table 10**.

Principle	Response
Context and Character	
Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	<p>Armadale Station has been carefully integrated into the Armadale Town Centre, paying careful attention to the unique characteristics that define the location. The design approach embraces and celebrates the local Aboriginal and post-colonial histories and stories, aiming to be a good neighbour to the surrounding community.</p> <p>Throughout the design process, Armadale Station has taken inspiration from the local built environment, streetscapes, and landscapes that hold significance for the area. By acknowledging and incorporating local features, Armadale Station seeks to create a sense of familiarity and connection for both residents and visitors.</p> <p>The materiality and colour scheme of Armadale Station has been thoughtfully considered to respond to the unique contexts of its location while maintaining a consistent character across the south-eastern rail line. The materials used and the colours chosen are designed to harmonise with the surrounding environment and reflect the distinctive qualities of Armadale.</p> <p>The design of the Armadale Station considers the specific local context of the area, ensuring that it becomes an integral part of the urban fabric and contributes to the sense of place and identity. By embracing and responding to the unique elements of the station's surroundings, the design aims to create stations that are not only functional but also contribute to the cultural and aesthetic richness of the community.</p>
Landscape Quality	
Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	<p>The landscaping design for Armadale Station is deeply rooted in the local identity and streetscape character, creating a place that resonates with the community and fosters a meaningful connection to the surrounding environment.</p> <p>Each element of the public realm surrounding the station has been carefully considered to provide spaces that are responsive to the unique characteristics of Armadale. The design principles applied to the landscaping seek to enhance sustainability, reinforce the station's identity, promote connectivity, create safe and comfortable spaces, and encourage activation and development.</p> <p>Environmental factors have played a crucial role in shaping the landscape design. Considerations such as water and soil management, ground and site conditions, solar access, micro-climate, tree canopy, urban heat island impacts, and habitat creation have been integrated into the design process. By incorporating these considerations, the landscaping design aims to minimise environmental impacts and contribute to the overall sustainability of the station.</p> <p>A native planting palette has been carefully selected to define the character of Armadale Station's landscape. Native plants not only help restore and preserve lost and damaged ecosystems but also promote biodiversity and support the region's endemic vegetation.</p> <p>The use of native plantings not only enhances the visual appeal but also creates a sense of place that is in harmony with the natural surroundings.</p> <p>The landscape design for Armadale Station seeks to create a welcoming and inviting environment for passengers and the local community. By integrating the unique local identity, sustainable practices, and native plantings, the landscaping design aims to create a vibrant and ecologically sensitive station precinct that celebrates Armadale's distinct character and fosters a strong sense of connection to the local environment.</p>



Built Form and Scale	
<p>Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.</p>	<p>The design of Armadale Station considers the specific scale, massing, and height of the viaduct, ensuring appropriate weather protection while considering the surrounding planned built fabric and potential future higher density development. The station building is carefully designed to serve as an urban marker without creating physical or visual barriers.</p> <p>The design approach includes the incorporation of compartments within the built form to enhance visual openness while providing adequate weather protection. The orientation, proportion, composition, and articulation of the station elements are tailored to the local context, ensuring functionality and harmonious integration with the surroundings.</p> <p>Armadale Station is thoughtfully designed to enhance the character of the adjacent streetscape and open spaces. It provides excellent amenities for pedestrians, ensuring connections to important views, vistas, and landmarks. This careful design approach contributes positively to the overall urban environment, creating a welcoming and functional station for the local community.</p>
Functionality and Build Quality	
<p>Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full lifecycle.</p>	<p>Armadale Station has been designed with a focus on functional simplicity and efficiency, ensuring a clear arrangement of spaces that facilitates ease of use and good relationships between different areas. The layout includes distinct sections for unpaid areas, paid areas, and service spaces, providing a seamless flow for passengers. Vertical access, such as stairs, lifts, and elevators, have been carefully integrated into the design, prioritising safety, and convenience for passengers to access the platforms. Factors such as efficient passenger movement during peak times and sightlines have been taken into consideration during the design process.</p> <p>The designs have also prioritised flexibility and adaptability to meet future requirements of the PTA without the need for major modifications. The aim is to create rail infrastructure that will serve the community in the long term and age gracefully.</p> <p>To ensure good build quality, durable materials, finishes, elements, and systems have been selected. These choices not only make maintenance easier but also allow the station to withstand weathering over time. The same attention to good build quality extends to the public realm, considering consultation with the SDRP and other stakeholders to determine appropriate materiality and finishes for areas that will be managed by the local authorities in the future.</p> <p>Architectural product selections and details have been carefully considered to ensure resilience to expected wear and tear, facilitate ease of future upgrades, and minimise maintenance requirements. An integrated systems approach has been adopted to achieve a functional and serviceable final outcome while maintaining an aesthetic appearance.</p> <p>The designs also consider the full life cycle of systems and consider mitigation strategies for potential climate change impacts. This approach ensures that Armadale Station is not only designed for the present but also prepared for future challenges and changes in the climate.</p> <p>Overall, the design of Armadale Station and surrounding public realm demonstrates a commitment to functional efficiency, durability, adaptability, and sustainability, aiming to provide a reliable and enjoyable transportation experience for the community while considering long-term implications and environmental factors.</p>
Sustainability	
<p>Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes.</p>	<p>The design of Armadale Station is committed to achieving a five-star Green Star equivalency target rating, both in its design phase and upon completion. The design incorporates various sustainability initiatives tailored to the local climate and site conditions, prioritising passive environmental design measures. These measures include thoughtful orientation, shading strategies, thermal performance considerations, and natural ventilation to optimise energy efficiency and minimise reliance on artificial heating and cooling systems.</p> <p>To minimise negative impacts on the existing natural features and ecological processes, the design integrates Water Sensitive Urban Design and landscape principles. This approach ensures responsible water management while preserving and enhancing the local environment.</p>



	<p>The project also focuses on energy efficiency and resource conservation by reducing reliance on technology for heating and cooling. This strategy aims to minimise energy consumption, resource usage, and long-term operating costs.</p> <p>In alignment with sustainable practices, sustainable construction materials will be utilised, and waste management practices will be implemented to maximise recycling and reuse of materials. The design also considers harnessing renewable energy sources and incorporating total water cycle management, where applicable.</p> <p>The holistic approach to the Armadale Station project not only prioritises sustainability but also aims to deliver a high-quality station that integrates seamlessly with bus services. This will provide the local community with improved access to high-quality, low-emission transportation options, in line with the principles of sustainability and environmental responsibility.</p>
Amenity	
<p>Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors, and neighbours, providing environments that are comfortable, productive, and healthy.</p>	<p>The design of Armadale Station and associated infrastructure has a strong focus on the amenity of future users. The public realm design (as described in Section 7.1) demonstrates the amenity that will be offered back to the community.</p> <p>With regard to mitigating amenity impacts, the rail and station infrastructure has been informed by acoustic modelling and testing. This approach ensures compliance with the <i>Environmental Protection (Noise) Regulations of 1997</i>. By considering acoustic factors, the design aims to mitigate and control noise levels to create a more comfortable environment for station users.</p> <p>Additionally, wind and rain modelling will be conducted to determine the optimal location and design of station canopies, bus shelters, and other structures to help ensure passenger comfort by providing adequate protection from adverse weather conditions.</p> <p>The proposed platform widths have been designed to meet PTA requirements to ensure that the widths support positive passenger flow and level of service requirements. This evaluation aims to optimise the efficiency and functionality of the platforms, ensuring smooth passenger movement and a satisfactory user experience.</p> <p>By considering acoustic factors, passenger comfort in adverse weather conditions, and meeting platform width requirements, the design strives to ensure Armadale Station is both functional and comfortable for passengers.</p>
Legibility	
<p>Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.</p>	<p>The movement and access strategy applied to the design of Armadale Station and the public realm improvements prioritise the creation of a well-connected network of spaces and places. The PTA has established a station access hierarchy that places pedestrian access as the highest priority, followed by cycling, bus access, Kiss and Ride, and Park and Ride access.</p> <p>By adhering to this hierarchy, the design aims to ensure easy and direct access for pedestrians while minimising conflicts between different modes of transportation. In order to enhance the legibility of the station and public spaces, a wayfinding and signage strategy will be implemented. While the specific details of this strategy are not yet provided, it is intended to assist people in navigating the station precincts by providing clear directional information.</p> <p>To aid legibility, several design initiatives have been implemented for the Armadale Station redevelopment. These include:</p> <ul style="list-style-type: none"> ▪ Providing entrances to commuter car parking areas and bus interchanges from both the north and south of the station, facilitating convenient access for different modes of transportation. ▪ Utilising various materials to distinguish between different path networks, making it easier for users to identify and navigate the designated routes. ▪ The Armadale Station entry is an integral part of the Jull Street mall connection, with significant public realm upgrades to create a welcoming and safe environment. ▪ The urban design and landscape have been intentionally kept simple to ensure easy accessibility to the Station's northern entrance. ▪ Lifts and stairs within Armadale Station have been strategically located and designed to be easily identifiable and accessible for passengers, facilitating clear navigation to the platforms.



	<ul style="list-style-type: none"> These design initiatives aim to improve the legibility of Armadale Station and its surroundings, ensuring that passengers can navigate the station precincts with ease and clarity.
Safety	
<p>Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.</p>	<p>Safety is a crucial aspect considered in the design of the corridor, and it has been influenced by the DPLH's draft Safer Places by Design Guidelines. The design team has prioritised the provision of clear and unobstructed sightlines in and around the pillars within the public realm, as well as to and from the main entrances of the train station.</p> <p>By incorporating open sightlines, the design aims to enhance visibility and create a sense of openness, which contributes to a safer environment. This approach allows people to have clear lines of sight, enabling them to observe their surroundings and potential hazards. By improving visibility in these areas, the design team seeks to increase the sense of safety and security for pedestrians and commuters using the corridor and accessing the train station. Additional design measures include:</p> <ul style="list-style-type: none"> Spaces predominantly beside the viaduct have been designed to encourage activity and incorporate a diverse range of features such as playgrounds, youth plazas, event spaces, recreational equipment, and seating areas. These elements facilitate passive surveillance, meaning that the presence of people engaging in activities can contribute to increased safety by naturally monitoring the surroundings. Indicative lighting concept plans, outlined in Appendix Q – Lighting Strategy, ensures that all accessible areas within the corridor are well-lit. Sufficient lighting enhances visibility, making it easier for people to navigate and increases the overall sense of safety. The design of vehicular transport routes, including busways and vehicle drop-off areas, has been configured to prioritise connectivity to the train station in a safe and easily understandable manner. This ensures smooth and efficient movement of vehicles while minimising potential conflicts or hazards. The design promotes permeability between the station and public realm areas, allowing for seamless transitions and clear pathways. This enhances accessibility and helps users navigate the spaces with ease. CCTV infrastructure managed by the PTA will be installed within Armadale Station, the bus interchange, and passenger car parking areas. This surveillance system contributes to safety by monitoring and recording activities within these areas. Careful consideration has been given to landscaping, ensuring that appropriate species are selected to prevent obstruction of sightlines and the creation of concealed areas. By maintaining clear visibility throughout the corridor, potential safety risks are minimised.
Community	
<p>Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.</p>	<p>The design of Armadale Station, plaza, and public realm has been influenced by the existing and future planned developments in the immediate surrounding context. This approach ensures that the design promotes social engagement, physical activity, and inclusivity while contributing to the activation of public spaces within and adjacent to the rail corridor.</p> <p>A significant investment has been made in the public realm to prioritise community use and benefit. The train station plazas and public spaces have been designed to be flexible and adaptable, allowing for various community events and activities.</p> <p>The development of new public spaces within the public realm, such as playgrounds, youth plazas, skate ramps, basketball half courts, event spaces, recreational equipment, and seating areas, has been informed through community engagement processes conducted by METRONET and UDLA. This ensures that the design responds to the specific needs and social context of the community. The diverse range of facilities and spaces proposed within the public realm reflects a commitment to accommodating a wide range of community members and facilitating social interactions among different segments of the community.</p> <p>Careful consideration has also been given to integrating the public realm with local movement networks. This integration aims to improve overall accessibility, allowing residents from the highly walkable neighbourhoods to have better access to the rail corridor and its surrounding areas.</p>



	The design approach considers the existing and future developments, community engagement, and the goal of creating vibrant, inclusive, and well-connected public spaces that cater to the diverse needs and interests of the community.
Aesthetics	
Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.	<p>The design of Armadale Station and public realm upgrades prioritises functionality while maintaining a simple aesthetic. The design process has been extensive, involving various stages and community engagement to ensure careful consideration of capacity, functional requirements, and community input.</p> <p>The design process commenced with the development of METRONET Place Plans, which incorporated feedback from the local community. These plans were then refined and developed through detailed community engagement, utilising platforms such as the MySay Transport website, Community Reference Groups (CRGs), pop-up information booths, and targeted consultations with business groups and stakeholders.</p> <p>The Final Place Plans, architectural plans, and landscape plans underwent design review and refinement through the SDRP process. In addition to SDRP reviews, a Design Working Group was formed, consisting of representatives from the Office OGA and METRONET, to facilitate ongoing consultative design review.</p> <p>The comprehensive design process ensures that all aspects of the station and precincts are meticulously considered. It aligns with the principles outlined in SPP 7.0, which emphasises thoughtful design and community engagement in planning projects.</p> <p>Regarding aesthetics, Armadale Station and its surrounding precinct reflect the history and character of the specific area. This is achieved through the use of themed colour identities that are carried throughout various elements such as metalwork, floor finishes, and station plaza paving. This approach contributes to a distinct and cohesive visual identity for each precinct and building.</p>

Table 9: Response to State Planning Policy 7.0 – Design of the Built Environment



8.1.5 Development Control Policy 1.6 – Planning to Support Transit Use and Transit Orientated Development

WAPC Development Control Policy (DCP 1.6) seeks to maximise the benefits to the community of an effective and well used public transit system by promoting and planning the development outcomes that will support and sustain public transport use.

Principle	Response
Proposals for the redevelopment of existing transit facilities and other network changes and improvements	<p>The primary objective of DCP1.6 is to encourage the co-location of development and transportation, promoting the mutual benefits of increased patronage on the public transport system and reduced reliance on private vehicles, in accordance with Australian English.</p> <p>Armadale Station strongly aligns with the principles of TOD as it provides major opportunities for development around a multi-modal station.</p> <p>While the detailed designs for the station and the master planned development are yet to be finalised, ensuring compliance with TOD remains a vital component of the project.</p> <p>To summarise, the following design elements of Armadale Station support TOD principles:</p> <ul style="list-style-type: none"> ▪ The co-location of the bus interchange and station building, along with a comprehensive future bus network, enhances the appeal of multi-modal trips for passengers. ▪ The station's location within Planning Control Area 145 and in close proximity to the Armadale Town Centre and surrounding suburbs, facilitates synergy between major bus, road, and rail networks, promoting efficient service provision. ▪ The positioning of the carpark adjacent to the station building provides ample space for future TOD planning and development, encouraging growth to the surrounding areas. <p>Collectively, these supportive measures extend the reach of TOD beyond proximity to the station, fostering integrated development in and around Armadale Station in accordance with Australian English.</p>

Table 10: Response to State Planning Policy 1.6 – Planning to Support Transit Use and Transit Orientated Development

8.1.6 METRONET Station Precinct Design Guide

The METRONET Station Precinct Design Guide offers detailed guidance for the design and planning of station precincts, highlighting specific objectives that are crucial for the successful implementation of a METRONET station. One important aspect emphasised in the guide is that a uniform or standardised approach cannot be applied to station design. Instead, each station should be designed on a case-by-case basis, considering factors such as the transit function, context, and future development potential.

This approach is particularly relevant to the train stations in the BRE (presumably Beckenham, Cannington, and/or Queens Park) area, as the surrounding centres are undergoing a transitional phase and are considered key growth areas within the south-eastern corridor. Recognising the evolving nature of these centres and their potential for growth, the design of the stations should consider the unique characteristics and requirements of each location. By doing so, the stations can effectively integrate with their surroundings and contribute to the long-term development and transformation of the area.



8.2 Local Planning Framework

8.2.1 City of Armadale Local Planning Strategy

The City of Armadale Local Planning Strategy (LPS) reflects the planning intent of the City until 2025. The LPS was adopted by the City on 23 December 2016.

The goal is to transform the City into a connected, progressive, strategic metropolitan community by the year 2030. This means that the City will be integrated into the wider metropolitan area, providing access to employment, education, and recreational opportunities. The City's vision includes creating a unique identity for the city, one that sets it apart from other areas in the region. This could involve showcasing the city's natural beauty and promoting sustainable practices that preserve the environment for future generations.

The LPS aims to create a liveable City that values environmental, educational, and economic sustainability. This could involve prioritising green spaces, reducing carbon emissions, investing in high quality education, and fostering economic growth in a way that benefits the community. The overall goals of the Strategy are to promote the development of the City as a Strategic Metropolitan Centre and administer the land use and development of the municipality through Town Planning Scheme No. 4. The Strategy also outlines the importance to protect the City's biodiversity, natural environments, its lifestyle attributes, enhancement of its built environments and integration of new development with sustainable transport networks.

BRE supports the State Government's vision for a well-connected Perth by investing in transport which can ultimately encourage future housing and employment choices. BRE will also support the development of the Armadale Strategic Metropolitan Centre and Byford District Centres. Additionally, BRE supports the enabling east-west connectivity and precinct integration between Byford's established Town Centre with future growth areas to the west, creating a wholly connected city.

8.2.2 City of Armadale Town Planning Scheme No. 4

The City's Town Planning Scheme No. 4 (TPS4) is the primary planning instrument for the development and use of land within the surrounding local government area. As a result of the station structure being reserved under the Metropolitan Region Scheme, the subject site is not zoned under TPS4.

TPS4 provides the zonings for the land immediately adjacent to the Armadale Station development area. These zones are broadly allocated 'Strategic Regional Centre' on the east of the rail corridor, and in small portions to the west 'Mixed Business / Residential' in the former DevelopmentWA area to the west of the station and 'Residential' in remaining areas.

While it's important to note the context of the adjacent land uses identified in TPS4, the proposed works in this DA are noted as Public Works being delivered on behalf of a public authority.



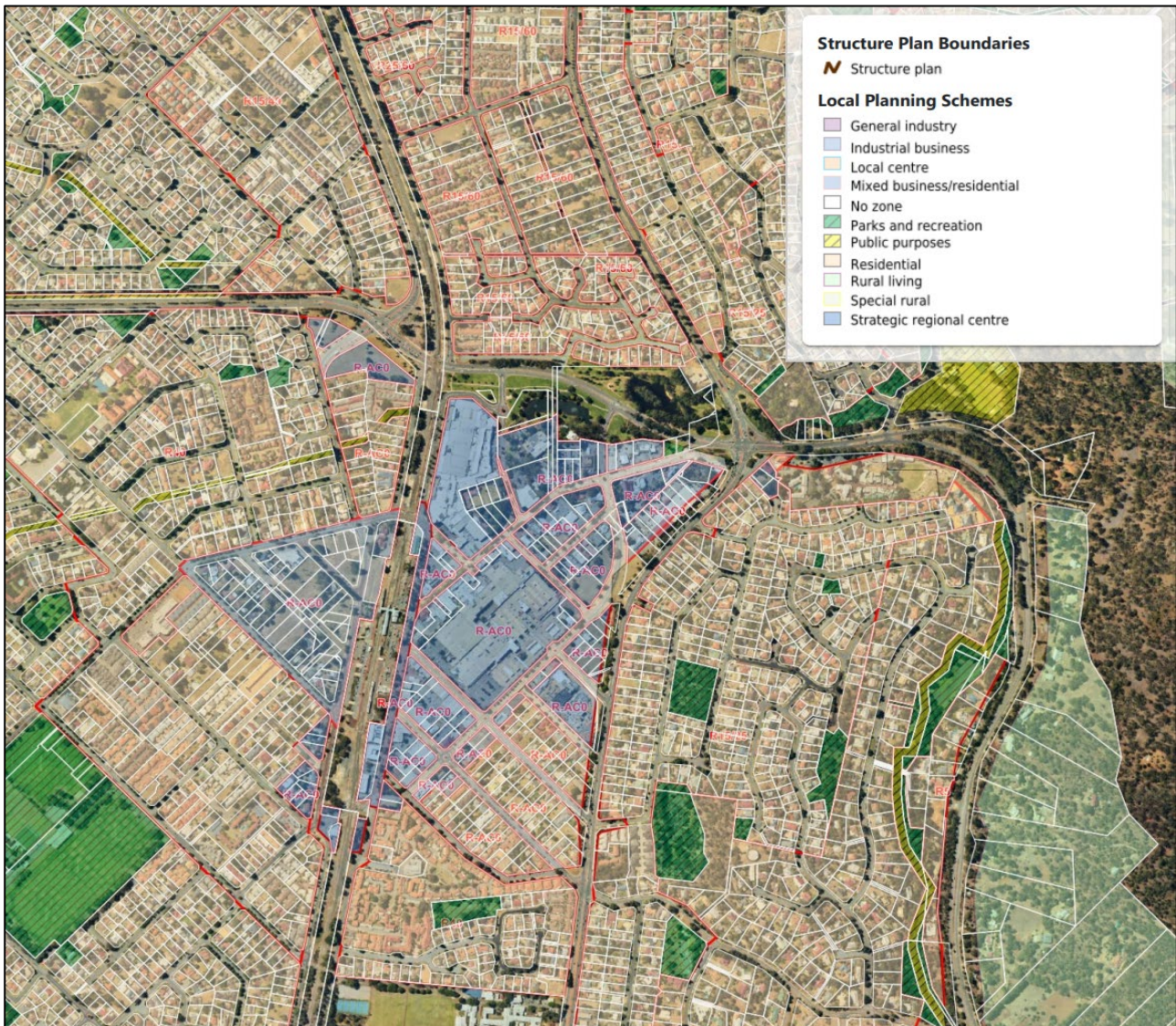


Figure 15: Extract of Local Planning Scheme

8.2.3 City of Armadale Local Planning Policies

The requirement to obtain development approval through the City is not required from this DA, and therefore the City's Local Planning Policies do not require consideration by the WAPC when deciding on this application.

Despite this, the Alliance understands the impacts that the introduction of a new elevated train station and public realm upgrades will have on the public realm and has therefore had consideration for the following:

Local Planning Policy 2.4 – Landscape Feature and Tree Preservation (LPP2.4)

LPP 2.4 provides guidance and administration on the retention of groups of trees and landscape features that are deemed significant by the community. It also identifies mechanisms for their protection through the planning and development status.

The Alliance acknowledges and recognises the importance of trees as an important feature of the Armadale locality. Tree retention within urban areas contribute greatly to the amenity and can act as a legacy to future generations. While the practicality is that not all trees are able to be retained due to the proposed viaduct and station works, the Alliance has adopted a commitment to tree retention, protection, and planting is based on the following:

- Collaboration with the City to retain, protect, and select trees for future planting;
- Maximise retention of existing trees;
- Increase the existing tree canopy within a likely time period;
- Replace “like for like” tree species removed;
- Utilise a minimum 50% endemic tree species;
- Build on and enhance the tree diversity in tree selections;
- Utilise mature tree planning stock for high amenity areas or areas with greater tree removal; and
- Visual screening of noise walls and viaducts to minimise scale (within Station Precinct) and visual impact and improve visual amenity.

The Alliance's Tree Working Group has identified a significant number of additional trees that have been able to be retained due to changes in design and construction methodologies, canopy pruning and management to minimise impacts, and relocating laydown and access area to areas minimise impacts to trees.

The Tree Retention and Replacement Strategy detailed in **Appendix G**, is expected to be finalised during assessment of DA 3. The final Tree Retention and Replacement Strategy will include a detailed survey of all trees within the station precinct, that are still currently under review with members of the Design Team and Project Arborist.

Details of the final Tree Retention and Replacement Strategy can be conditioned as part of the DA.



8.2.4 City of Armadale Urban Forest Strategy

Adopted in 2014 was the City's Urban Forrest Strategy which seeks to strengthen a diverse landscape character through allocating suitable tree diversity, to be a proactive in appropriate landscape planting while showcasing the City's botanic heritage and to distinguish an expanding 'tree-change' destination from the existing Perth vernacular.

Benefits of an Urban Forest Strategy can include:

- Reducing the 'heat island affect';
- Providing habitats and food sources for wildlife;
- Enhancing the streetscape and public realm areas;
- Improved physical and mental health; and
- Placemaking.

The Project Team has reviewed and benchmarked the proposed Tree Retention and Replacement Strategy against the Inner Armadale Line Carlisle / Oats Street DA.

The Project Teams believe a best practice approach includes:

- Data driven and demonstrated evidence based projected modelling.
- Total of 1,000 trees (from 45L pot size – 1,500L sizing) proposed to be installed within the development envelope.
- Likely projected canopy cover to exceed existing canopy after from 5 years, and a likely doubling of existing canopy after 20 years.
- Project canopy cover is based upon the entirety of the development envelope, including the viaduct, roads, rail, and station area.

In summary, the proposed redevelopment will lead to a 6x increase > 25% additional canopy cover.

Please refer **Appendix G** – Tree Retention and Replacement Strategy for further information.



8.2.5 Armadale Activity Centre Plan (City of Armadale) and Armadale City Centre West of Railways Activity Centre Plan

The redevelopment of Armadale Station will exist within a changing urban environment, where redevelopment is expected to respond to the number of growing services, amenities, and transit options available in the Armadale Town Centre.

The City embarked on a Precinct Planning process in 2019, which identified areas adjacent to the corridor that would be suitable for redevelopment. Typologies contemplated include mixed use apartments and commercial buildings, and other residential buildings such as grouped dwellings. Primary controls indicate heights of between 3- 7 storeys, with taller building heights closer to the centre, where the station building is located.

Development WA's City Centre West of Railway Activity Centre Plan also provides details of areas suitable for redevelopment in the sub-precinct areas adjacent to Armadale station, being Gateway South, West of Plaza, and Gateway North. They also contemplate development of between 3 – 7 storeys in scale.

The viaduct structure which supports Armadale Station is approximately 15 metres in height, with a clearance of 5- 6 metres underneath. The scale of the redevelopment relates to this future context, with open views achievable to pedestrians traversing the space from east to west.

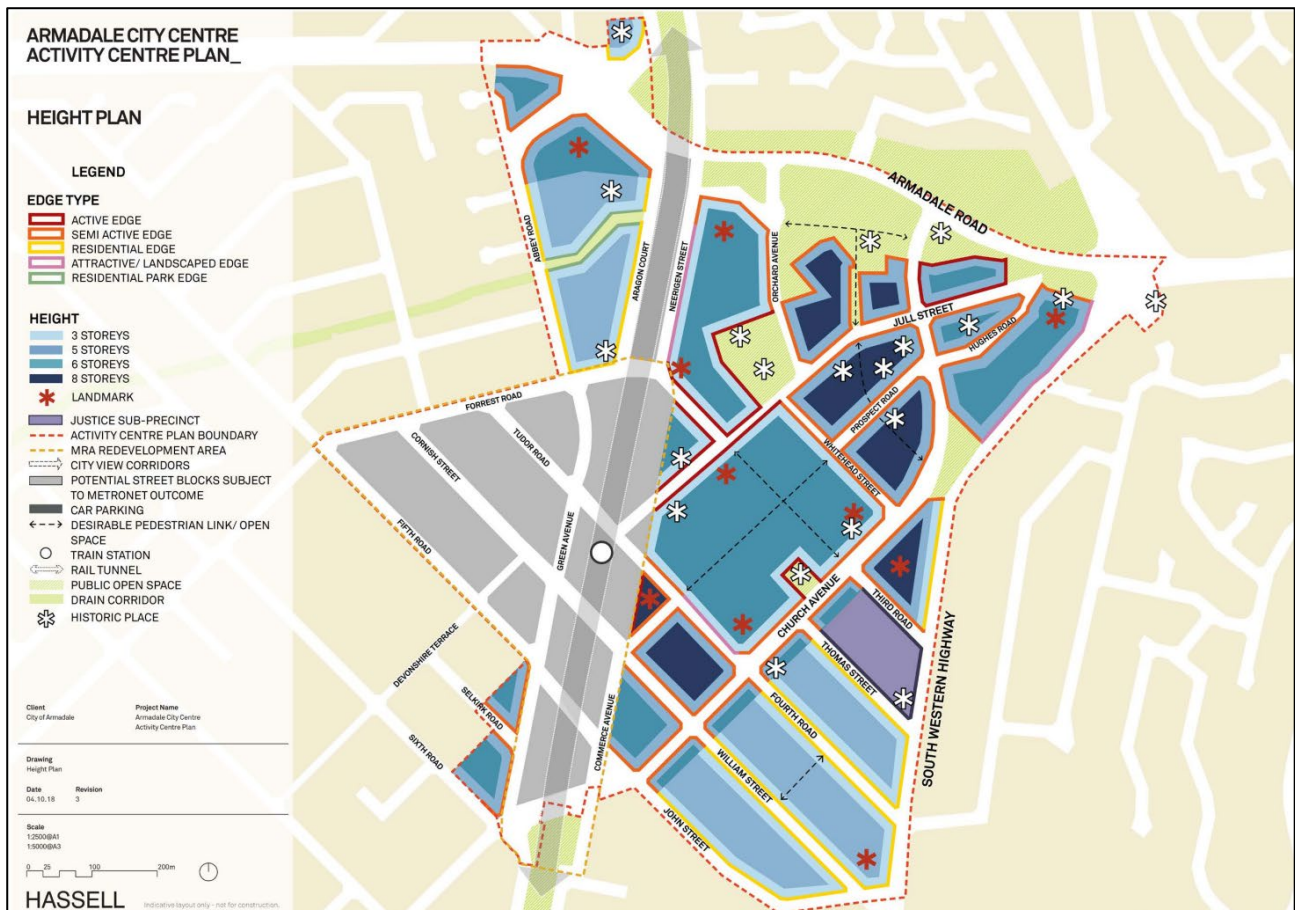


Figure 16: Armadale City Centre Activity Centre Plan



Figure 17: Extract of Armadale City Centre West of Railways Activity Centre Plan



Figure 18: Extract of Armadale City Centre West of Railways Activity Centre Plan



Figure 19: Extract of Armadale City Centre West of Railways Activity Centre Plan

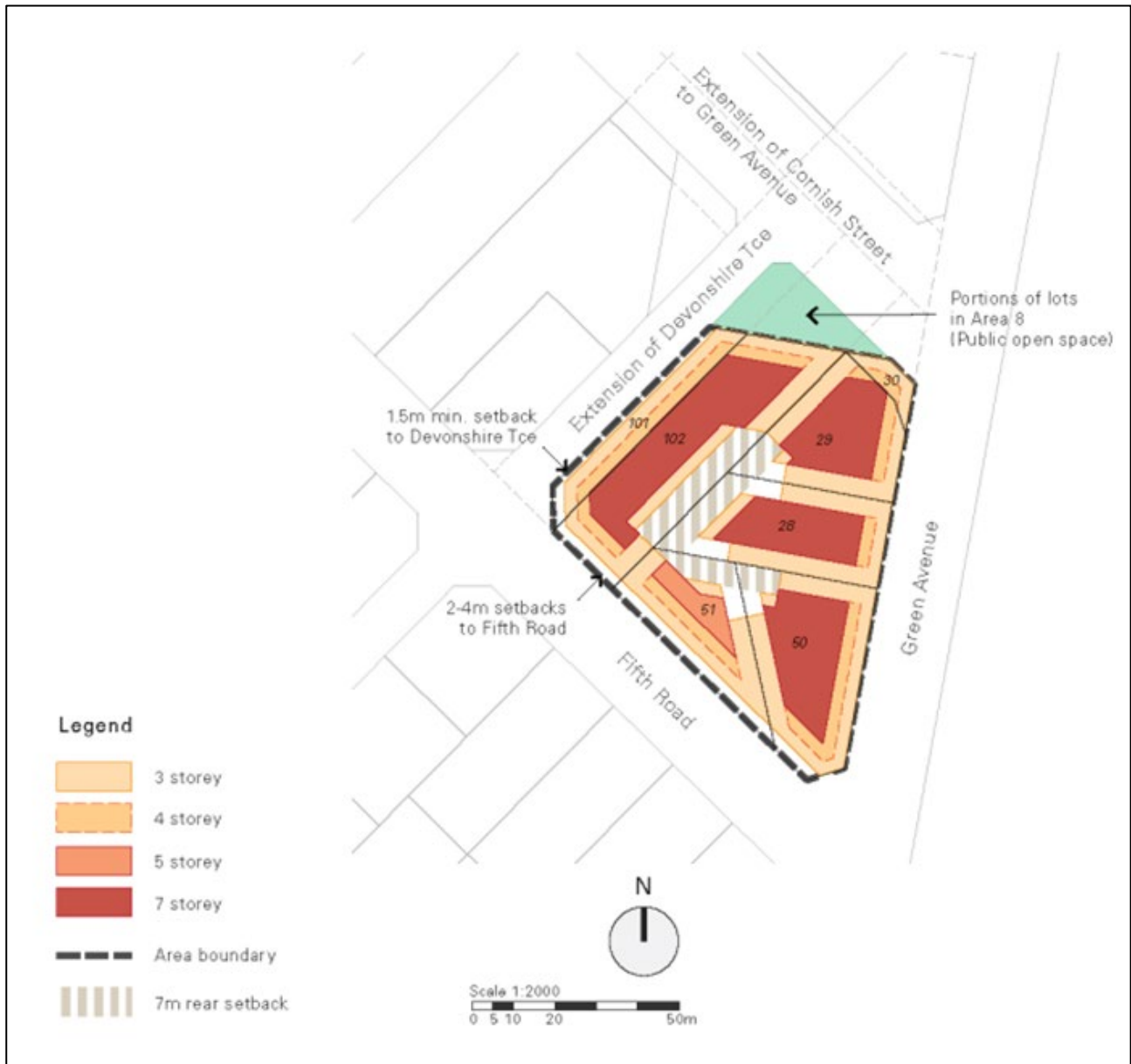


Figure 20: Extract of Armadale City Centre West of Railways Activity Centre Plan

9. Conclusion

The upgrade of Armadale Station represents a significant investment in the Armadale community. The project aims to enhance the station's infrastructure and create new public realm facilities, providing numerous benefits to residents and workers in the area. This development marks a substantial commitment to improving public transport and community amenities in Armadale.

By modernising Armadale Station, the project will result in a more efficient and accessible transportation facility for residents and workers in Armadale. Additionally, the new public realm facilities will offer attractive spaces for various activities, promoting community engagement and well-being. Specifically, this relates to:

- Provision of high-quality built form design
- Improved east-west connection
- Provision of significant areas of public realm (for passive and active recreation)
- High quality wayfinding to and from Armadale Station and throughout the public realm
- Designated bus and car movement for improved safety and ease of movement through the Armadale Town Centre.

Considering the significant advantages that the Armadale Station upgrade will bring to the local community, we respectfully request the City's support and recommendation for the approval of this application to the relevant authorities. The project aligns with the City's vision for sustainable development and will contribute to the overall improvement of public transport and community facilities in Armadale.

The Alliance respectfully requests the WAPC approve the application on the advice from the City of Armadale, subject to appropriate and reasonable conditions. These conditions will ensure compliance with standards, regulations, and environmental considerations while addressing any concerns that may arise during the approval process.

The upgrade of Armadale Station represents a crucial opportunity for the Armadale community, delivering much-needed enhancements to public transport infrastructure and community spaces. With the WAPC and City's support, this project will provide transformative and lasting benefits to Armadale Town Centre, local residents and visitors.



10. Appendices

MRS Form 1

Certificate of Titles

Final Place Plan

Site Plan

Armadale Station Development Plans

Urban Design and Landscape Concept

Tree Retention and Replacement Strategy

Public Art

Engagement Outcomes

Demolition and Construction Management Plan

Stormwater and Drainage Strategy

Transport Impact Assessment

Operational Waste Management Plan

Noise and Vibration Report

Geotechnical Report

Sustainability Management Plan

Lighting Strategy

