

## **Table of contents**

Exe	ecutive Summary	5		
1.	BRE Project Overview			
1.1	Structure of Development Applications for the BRE	8		
2.	Project Details	9		
2.1	Project Team	9		
2.2	Land Description	9		
3.	Site Context	10		
3.1	Armadale Town Centre			
3.2	Principal Shared Path and DA 5	10		
3.3	Planning Approval Applicability	11		
	3.3.1 Planning and Development Act 2005 and Public Works			
	3.3.2 Metropolitan Region Scheme	11		
	3.3.3 Planning Control Area 164	12		
	3.3.4 METRONET Act	12		
	3.3.5 BRE Exemption Matrix			
4.	Engagement	15		
5.	Development Overview	16		
5.1	Relationship with Surrounding Urban Context	16		
5.2	Principal Shared Path	17		
5.3	•			
5.4	Screening and Aesthetics	19		
5.5	Lighting	20		
5.6	1 3			
5.7	Tree Retention	21		
5.8				
5.9	Ŭ			
5.10	-			
5.1	,			
5.12				
5.13	•			
6.	Planning Framework Considerations			
6.1	Orderly and Proper Planning			
6.2	$\mathbf{e}$			
6.3	1 9			
6.4	State Planning Policy 7.0 – Design of the Built Environment			
6.5	Development Control Policy 1.6 – Planning to Support Transit use and Development			
6.6	, , , , , , , , , , , , , , , , , , , ,			
6.7	,			
6.8	,			
6.9	Activity Centre Plan (DevelopmentWA)	29		
7.	Conclusion	30		



Byford Rail Extension
Development Application 5 – Armadale Road Principal Shared Path Bridge
R30-WWH-RPT-PN-000-00006 Rev B

Appendix A:	MRS Form 1	31
Appendix B:	Certificate of Titles	31
Appendix C:	DA Drawings	31
• •	Landscaping Plan	
	Staging and Construction Management Plan	
	Drainage Strategy	



# **Byford Rail Extension**

# Development Application 5 – Armadale Road Principal Shared Path Bridge

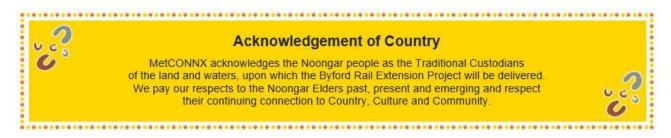
Bridge			
Document details			
Title Development Application 5 – Armadale Road Principal Shared Path Bridge			
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Laing O'Rourke Project No.	R30		
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A	10-Jan-2024	Issued for IPLS	Timothy Hodge	Nicholas Temov	Alistair Eyres
В	30-Jan-2024	Issued for DA	Timothy Hodge	Nicholas Temov	Alistair Eyres

Table 1: Revision History



## **Executive Summary**



This 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 new elevated station at Armadale, an at-grade station at Byford, and related works.

The BRE will extend the Armadale line from Armadale station south to a new station in Byford. BRE will be constructed in the existing rail corridor which, when reopened, will also be used by Australind rail services between Perth and Bunbury. BRE will provide a direct transport connection between Byford and Perth, supporting a growing population, facilitating economic growth, and providing greater access to services and jobs.

BRE follows the Victoria Park-Canning Level Crossing Removal Project which also forms part of the METRONET expansion along the south-eastern corridor, with the aim to improve public transport safety, reduce traffic congestion, and create new publicly accessible spaces for ongoing use by the community within the existing rail corridor.

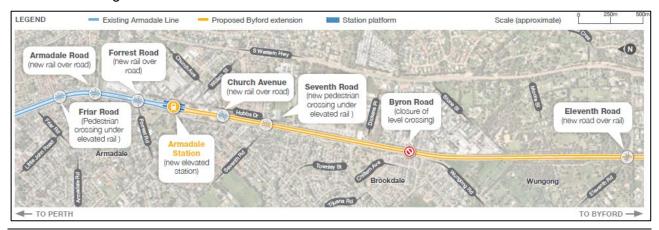


Figure 1: Overview of the METRONET Byford Rail Extension Project for works within the City of Armadale



This Development Application (DA) Report has been prepared to provide:

- An overview of the BRE project
- An overview and explanation of the works that form part of this development application, requiring approval from the Western Australian Planning Commission (WAPC)
- An overview and explanation of the works that are exempt from the requirement to obtain development approval
- An overview of the previous development applications which are required as part of BRE that are not
  included in this development application (i.e., new train stations, new public realm design, bus
  interchanges, public car parking facilities (park and ride facilities) and the broader public spaces, and
  facilities under the viaduct)
- An overview of the context of the subject site
- An assessment of the proposal against relevant planning requirements
- An examination of the planning merits of this proposal.

This application seeks approval for the following BRE project components only:

- Principle shared path (PShP) bridge over Armadale Road
- Landscaping and Urban Realm related to the area around the PShP within the planning control area.



Figure 2: Site and Context Plan



At this stage, there are some specific details of the finishes to parts of the PShP bridge (for example screens, paint finishes, lighting and/or public art attached to structures such as the 'Welcome Gateway Signage'), and landscaping which are yet to be finalised. Details on these elements are expected to be finalised through an appropriate condition of development approval, reflective of pre-lodgement discussions held with the City relating to the 'Welcome Gateway' and PShP ramp. Specifically, these discussions relate to the:

- PShP bridge including the 'Welcome Gateway' entry statement (along the western side of the PShP bridge where it crosses Armadale Road)
- PShP ramp.

Special attention is being given to ensuring the ultimate design aligns seamlessly with the City's expectations, taking into careful consideration any associated funding parameters including City of Armadale funding. Notwithstanding the above, the finalisation of the condition of development approval should be cognisant of the relationship between timing of the funding approvals and the timing of the project. In regard to the acceptance of DA conditions, it is noted that the previous wording has received approval from the WAPC to the satisfaction of the City. Additionally, it is anticipated that Main Roads Western Australia may be included in the conditions as the bridge itself will fall under their jurisdiction.

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

DA 5 (refer to Table 2) is accompanied by specialist reporting and supporting information, which includes:

Appendix C: DA Drawings

Appendix D: Landscaping Plan

Appendix E: Staging and Construction Management Plan

Appendix F: Drainage Strategy.



## 1. BRE Project Overview

#### 1.1 Structure of Development Applications for the BRE

A total of seven (7) DAs form part of the BRE, four (4) of which are located within the City of Armadale Town Centre and its surrounds.

The purpose of splitting the DAs is to ensure project timeframes are not adversely impacted. Separating the DA works is common for complex projects such as BRE, with similar approaches being undertaken by other METRONET projects such as the Victoria Park-Canning Level Crossing Removal Project. This approach has been supported by the WAPC on other projects and does not obviate the responsibility of MetCONNX to deliver development compliant with the state and relevant local planning framework.

Table 2 identifies each DA package associated as part of the BRE.

DA	Name	Lodgement	Approval Authority	Additional information / Notes	
DA 1	Early works and viaducts, piers, and associated infrastructure	City of Armadale	WAPC	Approved by the WAPC July 2023	
DA 1.5	Temporary bus interchange, and site establishment works for DA Package 1.5 at Armadale Station and surrounds, and early servicing and infrastructure	City of Armadale	WAPC	Approved by the WAPC March 2023	
DA 2	Eleventh Road Bridge	DevelopmentWA	DevelopmentWA	Approved by DevelopmentWA's Armadale Land Redevelopment Committee October 2023	
DA 3	Armadale Station structures, bus interchange facilities, public realm upgrades, viaduct treatments (where applicable), related car parking, and pedestrian and vehicle access)	City of Armadale	WAPC	Approved by the WAPC October 2023	
DA 4	Byford Station structures, bus interchange facilities, public realm upgrades, viaduct treatments (where applicable), related car parking, and pedestrian and vehicle access)	Shire of Serpentine Jarrahdale	WAPC	Approved by the WAPC November 2023	
DA 5 (Subject DA)	Principal Shared Path (PShP) Bridge over Armadale Road	City of Armadale	WAPC	NA	
DA 6	Roads External to Precinct	Shire of Serpentine Jarrahdale	WAPC	NA	

Table 2: Development Applications



Extent of DA5 for the Armadale Road PShP bridge in relationship to DA3 is shown below:

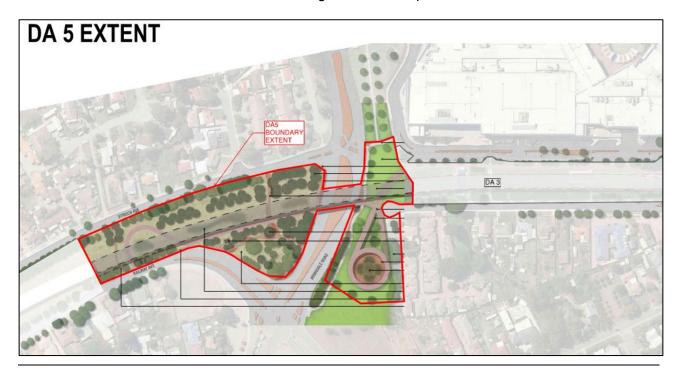


Figure 3: DA 5 Extent

## 2. Project Details

## 2.1 Project Team

Specialisation	Responsible
Statutory Planning	MetCONNX
DA Drawings	MetCONNX
Landscaping Plan	MetCONNX
Staging and Construction Management Plan	MetCONNX
Drainage Strategy	MetCONNX

Table 3: Project Team

## 2.2 Land Description

Lot	Primary Interest Holder / Registered Proprietor	Deposited Plan	Volume	Folio	Lot area (m²)
1091	State of Western Australia / PTA	796	LR3136	672	206,460
304	City of Armadale	2945	2945	82	6,231
301	City of Armadale	3945	2945	79	9,636
NA	Road Reserve	NA	NA	NA	NA

Table 4: Land Ownership



#### 3. Site Context

#### 3.1 Armadale Town Centre

The Armadale Town Centre (Town Centre) is located in the City of Armadale (the City), about 28 kilometres southeast of Perth. The Town Centre is a vibrant urban area that serves as the commercial, retail, and cultural hub of the City. It is situated around Jull Street Mall, a pedestrianised mall that features a variety of shops, cafes, and restaurants. The Town Centre is surrounded by residential neighbourhoods, schools, and parks, making it an important gathering place for the local community. It is easily accessible by public transport, with a train station and bus stops located in the Town Centre providing an essential service to the people of the Armadale community.

The BRE project will deliver contemporary public transport and public realm upgrades to the Town Centre. New public spaces, streetscape improvements, and infrastructure upgrades will encourage further revitalisation of the place, creating an attractive and functional urban environment for residents and visitors alike. Additionally, the new Armadale station and public realm upgrades such as the PShP will further enhance revitalisation of the area, with the changes expected to increase active transport and passenger satisfaction around safety perceptions along the Armadale Railway Line.

#### 3.2 Principal Shared Path and DA 5

Expanding the PShP network is a key action of the Western Australian Bicycle Network Plan 2014 – 2031 and is being delivered as part of a state-wide major transport infrastructure project. From 2023 the focus has moved to areas beyond the 15 km radius of the Perth central area to provide greater connectivity to strategic activity centres, such as Armadale.

The Perth-Armadale PShP is a partially completed urban dual use pathway that runs parallel to the Armadale Railway Line through the south-eastern suburbs. Approximately 30km long and 75% of the route consisting of high-quality asphalt shared path, with the remaining 25% comprising of low traffic residential streets.

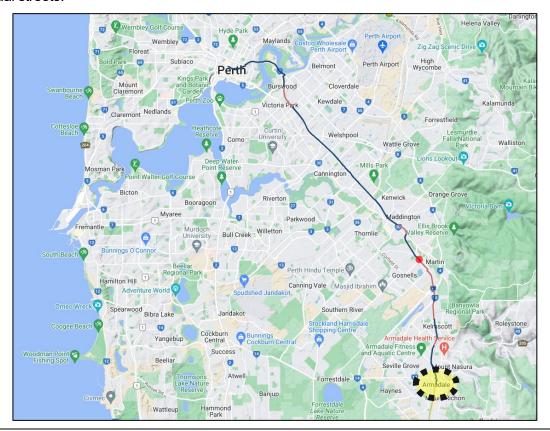


Figure 4: PShP Regional Context



#### 3.3 Planning Approval Applicability

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

- The Planning and Development Act 2005 (PD Act) 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 PD Act. A PCA is an
  enabling planning mechanism that requires all development within the PCA be considered and
  determined by the WAPC.
- The Railway (METRONET) Act 2018 (METRONET ACT) 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 MRS Railways Reservation.

#### 3.3.1 Planning and Development Act 2005 and Public Works

Under Section 6 of the PD Act, 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 work whatsoever authorised by any Act;

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

#### 3.3.2 Metropolitan Region Scheme

The MRS defines the future use of land and provides the legal basis for planning in the Perth Metropolitan Region, dividing it into broad zones and reservations.

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. The majority of the works for this DA fall outside an MRS reserve.

In the absence of a PCA, the MRS would ordinarily exempt all work for, or in connection with a railway, 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 car parks, public transport interchange facilities or associated means of pedestrian or vehicular access, such as a PShP. However, in the case of BRE, the MRS exemptions are overridden by the PCA provisions as outlined below.



#### 3.3.3 Planning Control Area 164

PCA 164 was prepared under s.112 of the PD Act and 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, however the additional land has since been removed. PCA 164 is shown in Figure 3.

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

The requirements for development in a PCA are set out under Section 115 of the PD Act, which states:

- A person who wishes to commence and carry out development in a planning control area may apply
  to the local government in the district of which the planning control area is situated for approval of
  that development.
- 2. An applicant is to submit to the local government such plans and other information as the local government may reasonably require.
- 3. The local government, within 30 days of receiving the application, is to forward the application, together with its recommendation, to the Commission for determination.

Within 30 days of the City 'receiving the application', the City is required to forward the application, together with its recommendation, to the WAPC for determination. The WAPC considers the PCA to ensure that no development occurs on this land which might prejudice the outcome of BRE works.

Pursuant to Sections 116(1)(b)(ii) and 116)(1)(b)(iii) of the PD Act, the WAPC will have regard in assessing a PCA development application, to the purposes for which the land to which the application relates is zoned or reserved under any planning scheme and any special considerations relating to the nature of the planning control area concerned and of the development to which the application relates.

#### 3.3.4 METRONET Act

The *METRONET Act* states that METRONET works can be carried out without the approval of the WAPC despite any provisions in the MRS or PCA.

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".

Accordingly, all the railway works other than works for the new stations, 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.

On this basis, the Alliance is seeking development approval from the WAPC under PCA 164 for all non-exempt development (associated means of pedestrian or vehicular access). 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 given that the construction of exempt and non-exempt works are intrinsically interconnected as part of the delivery and ultimate operation of the rail infrastructure.



## 3.3.5 BRE Exemption Matrix

(Yellow means applicable to DA 5)

Works Location	METRONET Works – 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	Approval required for all works	WAPC approval required for all works
Works located: Within Planning Control Area, and Outside Metropolitan Region Scheme Railway Reserve	Exempt	WAPC approval required for all works
Works located: Outside Planning Control Area, and Outside Metropolitan Region Scheme Railway Reserve	Exempt	WAPC required for all works



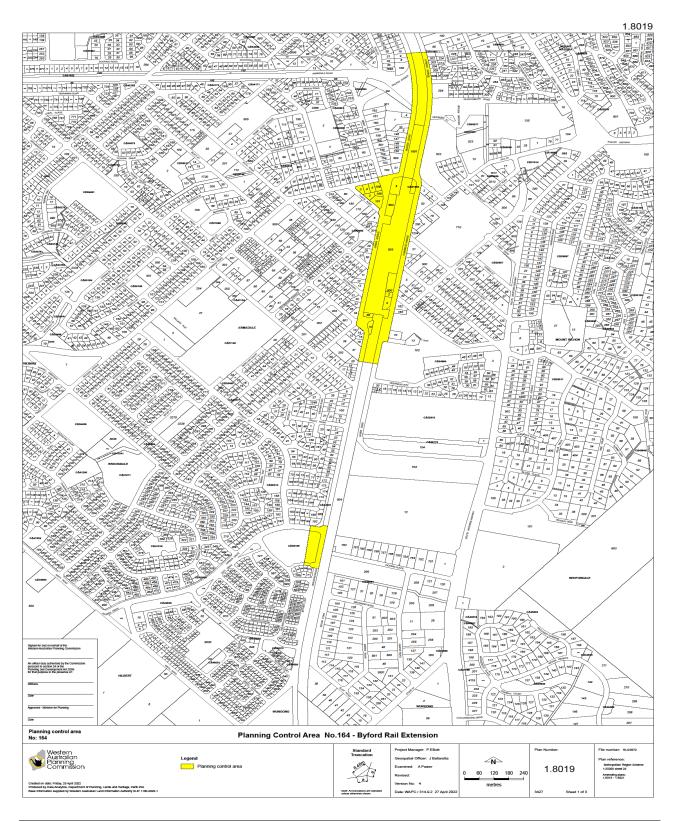


Figure 5: Planning Control Area 164 - Armadale

## 4. Engagement

The BRE engagement team has prioritised a proactive engagement approach to improve understanding of the works in this DA and to mitigate project risks.

**Table 6** – Engagement Outcomes details the key issues raised during these activities, the relevant stakeholders and how the project has responded.

Sentiment	Issues Raised	Stakeholders	Response / Solutions
Tree Retention and Landscaping	A strong desire for tree retention and appropriate landscaping	Residents  Community reference group	Prioritise the retention of native vegetation
Access and Amenity During Construction	Residents and stakeholders have expressed a desire to maintain access and amenity during construction	Businesses Residents	<ul> <li>The Alliance has and will continue to work closely with businesses most affected to minimise impacts to access and amenity during construction</li> <li>A Staging and Construction Management Plan has been prepared to ensure all vehicle movements are facilitated in a safe manner</li> </ul>
Noise During Construction	Residents and stakeholders have expressed concerns about the noise impacts during construction	Residents Community reference group	<ul> <li>The Alliance will provide regular updates on upcoming construction works to mitigate any adverse impacts on the amenity of the area</li> <li>All vehicles will be fitted with croakers rather than beepers to maintain safety requirements whilst being more amenable to residents' requirements</li> <li>Every effort has been made to avoid after hours work, where possible</li> </ul>
Parking During Construction	Parking access to local businesses is not compromised	City of Armadale	<ul> <li>Additional parking has been provided for residents and contractors</li> </ul>
Drainage	Drainage compliance	City of Armadale	Drainage has been surveyed to ensure compliance

Table 6: Engagement Outcomes



## 5. Development Overview

### 5.1 Relationship with Surrounding Urban Context

The PShP is an integral component of the broader BRE project, particularly in conjunction with the railway viaduct. This elevated structure will raise the Armadale Rail Line within the Town Centre, covering approximately 1,500 meters from north of Armadale Road to the abutment south of Church Avenue.

The Town Centre features a blend of commercial and civic buildings alongside a range of residential developments. The residential area encompasses various structures, including single-storey homes and low to medium-scale apartment buildings on both the western and eastern sides of the rail corridor. This mix of architectural styles and land uses reflects the vibrant character of the Town Centre, highlighting its multifaceted nature within the community. The elevated viaduct and the integrated PShP will serve to enhance connectivity and accessibility within this dynamic urban environment, accommodating the diverse needs of residents and visitors alike.

The height specifications of the PShP have been carefully planned to align with the future development vision for the Town Centre and other elements of the broader BRE project, such as the railway viaduct. This careful alignment is crucial to maintain a seamless and integrated approach to urban planning and transportation infrastructure within the Town Centre. By ensuring the PShP's height conforms to the overall planning strategy, the project aims to create a harmonious and cohesive urban environment that caters to the growing and future needs of the community.

The objectives outlined in the City's Draft Structure Plan Activity Centre are akin to the goals of the new Armadale Station, the railway viaduct, and the PShP. This strategic harmonisation of objectives is essential for the successful implementation of the project as it ensures that all components work in tandem, promoting efficient urban development and robust transportation networks. By aligning these objectives, the project aims to maximise the benefits derived from the integrated planning approach. The elevated rail component and integration of the PShP offers a range of substantial advantages to the community. These benefits include improved connectivity, alleviation of traffic congestion, and enhanced efficiency in public transportation services. Additionally, the elevated rail creates opportunities to optimise land use, as the space underneath can be utilised for various urban development purposes, such as drainage and multi-use corridors. The PShP crossing construction brings several benefits, including:

#### **Enhanced Safety**

The inclusion of PShP crossing promotes safer conditions for various road users, including drivers, public transport users, pedestrians, and cyclists. By providing designated pathways away from vehicular traffic, the risk of accidents is significantly reduced.

#### **Enhanced Connectivity**

The integration of PShP crossing fosters improved connectivity between different modes of transportation. Commuters can seamlessly transition between cycling, walking, and public transport, promoting a holistic and integrated transportation network.

#### Reliable Travel Times

The development of the PShP crossing ensures more reliable travel times for both drivers and public transport users. Separating cycling and pedestrian pathways from Armadale Road to help mitigate congestion, leading to smoother traffic flow and predictable travel times.

#### Better Access within Urban Centres

Through providing enhanced connections through walkability and cyclability within the Town Centre, these developments contribute to the overall accessibility of urban areas. Residents and visitors can navigate these centres more easily, stimulating economic activities and enhancing the quality of life for the local community.



#### 5.2 Principal Shared Path

This application concerns the PShP crossing over Armadale Road.

PShP's are dedicated paths for walking and riding, designed to high standards to ensure safety and accessibility. These paths are crucial components of the cycling infrastructure, providing a separate and secure route for cyclists and pedestrians away from motorised traffic. PShP's in Western Australia are designed as per the Main Roads WA standard, and typically built along major transportation routes such as freeways and rail corridors. By following these established routes, PShP's allow for more direct travel, reducing detours and making cycling and walking trips more convenient and efficient. This design also promotes safety, as users are separated from vehicular traffic, minimising the risk of accidents.

The emphasis on high-quality construction and adherence to standards ensures that PShP's are well-maintained and durable, offering a reliable option for commuters and recreational users alike. Additionally, these paths contribute to promoting a healthier lifestyle, reducing congestion, and supporting sustainable modes of transportation in urban areas.

The proposed redevelopment of the PShP is set to enhance the existing cycling and pedestrian infrastructure in the area. Beginning approximately 230 meters north of Armadale Road on the western side of the rail corridor, the new section of the PShP will span approximately 525 meters south winding underneath the viaduct for approximately 50m and ultimately linking up with the existing PShP near the Armadale Train Station within the Town Centre. To accommodate the varying terrain, the path will gradually incline as it extends southward at approximately 6% gradient, aligning with the elevation of the viaduct. On the decline south of Armadale Road, the PShP will decline at approximately 3% gradient in compliance with Australian Standard 1428 which is compliant with the *Disability Discrimination Act 1992*. The PShP dimensions will adhere to Main Roads WA PShP standards, ensuring a width of not less than 4 meters to accommodate both cyclists and pedestrians comfortably.

#### Columns

The PShP is structurally upheld by a configuration of 19 columns.

In terms of treatment, the columns are intended to be finished in a neutral grey colour, with the only proposed treatment being the application of an anti-graffiti coating. This protective coating aims to mitigate potential graffiti damage and maintain the aesthetic integrity of the columns without altering their basic grey finish.

#### **Balustrading**

The barrier specifications align with Australian Roads standards for cycling compliance, ensuring safety and adherence to regulations throughout the pathway's design.

The standard height of the barrier measures 1.4 meters, providing necessary protection and demarcation along the route for cyclists and pedestrians. This height maintains consistency with established safety protocols while allowing unobstructed passage.

Specific sections require varying barrier heights to cater to separate needs. For instance, the privacy screen located on the 'corkscrew' section reaches a height of 1.8 meters. This elevated barrier serves the dual purpose of ensuring privacy and offering an additional level of protection for users navigating the curves of the bridge.

Atop the Armadale Road section, the barrier (Welcome Gateway) stands at 2.4 meters in height. This increased elevation provides an opportunity to highlight arrival to the Town Centre as well as providing an additional safety measure in relation to Armadale Road below.

The barrier specifications, ranging from 1.4 meters as the standard height to 1.8 meters for privacy screens and 2.4 meters over Armadale Road, are designed to support safety, functionality, and compliance with Australian Roads cycling standards throughout the PShP's various sections.



For further details relating to the design of the PShP and details regarding columns and balustrading, please refer to **Appendix C** – DA Drawings.

For further details regarding the specific design of the PShP, please refer to the following sections:

Section 5.3: Entry Statement

Section 5.4: Screening and Aesthetics

Section 5.5: Lighting

Section 5.6: Landscaping

Section 5.7: Tree Retention

Section 5.8: CPTED

Section 5.9: Drainage

Section 5.10: Amenity and Privacy

Section 5.11: Connectivity and Accessibility

Section 5.12: Staging and Integration

Section 5.13: Safety

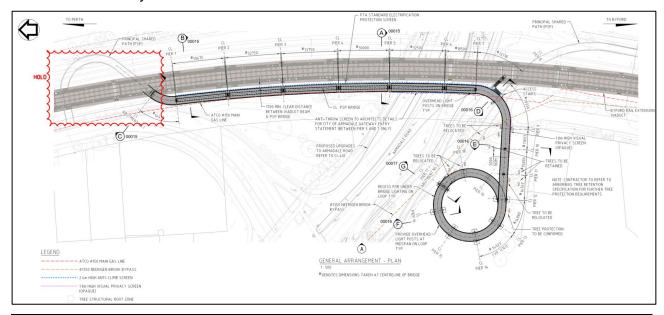


Figure 6: General Arrangement Plan

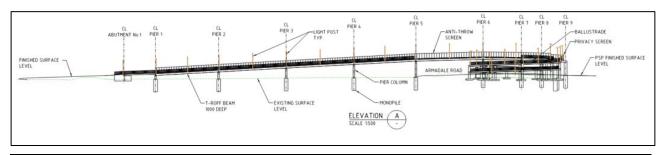


Figure 7: Elevation





Render 1:PShP Looking South-East Showing Aesthetic Entry Statement Screening (to be updated)

#### **5.3** Entry Statement

The project draws its design from the merging point of the City meets the Hills, shaping the overall direction of its design and intent. Highlighting the picturesque landscape, special emphasis is placed on the approach from the Railway Avenue Intersection with Armadale Road. This visual landmark intends to serve as a guiding beacon, directing attention towards the heart of the Town Centre.

Proposed design elements include gradually increasing the height of fins from the standard balustrading situated north of the gateway, aligning them with the height of the privacy screens along the privacy ramp (noting this may be subject to further design changes to include the additional funding to be provided by the City).

Exploring potential design upgrades involves substituting the privacy screen on the upper part of the spiral ramp with a design akin to the Stations 'fins'. This approach aims to blend the structures aesthetically and strategically block views of the southern residential properties and future development sites while maintaining an open perspective towards the north. It is expected that an appropriate condition of development approval will be included upon determination to finalise the specifics of the Entry Statement to ensure compliance and engineering requirements.

An indicative view of the entry statement is provided in **Render 1** – PShP Looking South-East.

#### 5.4 Screening and Aesthetics

Acknowledging the significance of the PShP bridge as a substantial public infrastructure, these aesthetic elements are perceived as instrumental in enhancing the relationship between the PShP crossing structure and vital sections of the Town Centre.

Different levels of treatment are expected to be applied in specific areas based on several factors:

- The 'Welcome Gateway'
- The potential impact of aesthetic treatments on the public realm, specifically to the southern properties along Aragon Court
- Consideration of potential vandalism impacts across different sections of the PShP crossing.



#### Screening

Screening is located at certain locations along the corkscrew section of the viaduct to ensure privacy to the properties south of the structure along Aragon Couty is not adversely impacted. In addition, four, fully mature trees have also been identified and intentionally preserved, providing substantial screening advantages. Their preservation not only contributes significantly to the overall aesthetics but also enhances the general ambiance and amenity of the surrounding area, especially for the low-density residential properties located to the south of the PShP.

Visual representations are shown in **Figure 7** – Elevation.

#### **Aesthetics**

Current aesthetic enhancements include considerations such as cladding and screening elements paint treatments, and landscaping. The specifics regarding screening and aesthetics of the PShP are presently undergoing development and are anticipated to undergo further refinement through an appropriate condition of development approval.

#### Public Art

Allocations of a Public Art project involving paint treatment to the viaduct bridge piers is currently being developed. Detailed mural treatment theme at Armadale Road will reinforce the City of Armadale's vision to develop a Gateway Entry Statement, which emphasises Armadale being a link between the city and the hills.

Visual representations are shown in **Render 1** – PShP Looking South-East Showing Aesthetic Entry Statement Screening.

#### 5.5 Lighting

The installation of adequate lighting along the path will contribute to the safety and usability of the PShP bridge, especially during low-light conditions. Overall, this extension aims to provide a well-designed, safe, and accessible route for cyclists and pedestrians, connecting important destinations in the area.

The classification of the PShP places it within the Main Roads WA P2 Category, specifically designed for Principal Shared Paths. The lighting implementation, outlined in the Development Application (DA) Drawings, primarily involves the use of light posts strategically positioned along the path to ensure adequate illumination.

For users navigating the lower spiral of the bridge path, lighting is sourced differently. Specifically, lighting is provided from the soffit of the concrete slab positioned above the pathway. This configuration aims to offer sufficient visibility and safety for individuals utilising this section of the PShP.

On the upper spiral of the path, the lighting setup diverges. In this section, illumination primarily originates from the designated light posts installed along the path. This arrangement is orchestrated to ensure consistent and effective lighting for individuals traveling along the upper spiral of the bridge.

#### 5.6 Landscaping

Attention has been given to provide appropriate landscaping within the Armadale precinct as part of the ongoing design process for the BRE. The significance of landscaping and its seamless integration into the precinct is important, particularly given the introduction of the PShP bridge crossing as a large aboveground structure. The placement of landscaping elements has been considered to reduce the impact and scale of the PShP crossing structure.

Landscaping is an on-going design evolution and is expected to be refined through an appropriate condition of development approval.

Refer to **Appendix D** for the Landscaping Plan.



#### 5.7 Tree 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. MetCONNX appreciates the benefit that tree retention has, combined with the aesthetic and environmental outcomes that benefit the broader Armadale community.

To support the previous DAs submitted as part of the BRE, a Tree Retention Strategy has been an ongoing process to ensure that the trees are not removed unnecessarily and are protected during construction related activities.

North of Armadale Road, numerous trees were removed to facilitate the construction of the viaduct. However, the implementation of the PShP has led to the relocation of six trees to the south of Armadale Road. Additionally, four large, mature trees have been identified and preserved, offering exceptional screening benefits, and contributing significantly to the overall aesthetics and pleasantness of the area. These preserved trees not only provide valuable screening but also enhance the overall ambiance and amenity of the surroundings.

This information is included in **Appendix C** - DA Drawings to be read in conjunction with the Landscaping Plan.

#### 5.8 CPTED

Safer places by design supports the creation of well-designed built environments through the principles of crime prevention through environmental design (CPTED). CPTED is the application of best practice principles and processes to the design of the built environment to minimise crime and fear for enhanced community safety. Safer places by design includes four key CPTED Principles.

#### Surveillance

Surveillance aims for "seeing and being seen," emphasising the importance of maximising the usage of a space by people to promote effective passive surveillance. With the considerable circumference of the PShP bridge's 'corkscrew' design, the goal is to ensure sufficient sightlines throughout the pathway's length. This approach optimises visibility along the path, fostering an environment where individuals are encouraged to use the space actively, thereby enhancing natural surveillance for increased safety and security.

#### **Territorial Definition**

The intent of territorial definition is to make it clear that an area is owned and cared for by someone. The PShP seeks to enforce this through high-quality landscaping and built form outcomes.

#### Access Control

Access control uses a series of design principles to reduce the number of opportunities for crime to take place. The design of the PShP bridge has been planned to prioritise functionality and safety measures, specifically addressing the challenge of preventing unauthorised access to the viaduct structure. While not fully enclosing the overpass, the engineering of the PShP bridge focuses on strategies to mitigate the possibility of individuals climbing onto the viaduct, ensuring a balance between safety and accessibility.

#### Natural Surveillance

Natural surveillance hinges on the principle that increased visibility enhances security. In designing the PShP bridge, this concept is embraced by minimizing the necessity for artificial barriers through the retention of mature trees and ensuring unobstructed sightlines along extended portions of the pathway. By preserving mature trees and enabling clear visibility along the PShP, the design maximises natural surveillance, promoting a safer environment by leveraging visibility as a means of enhancing security.



#### 5.9 Drainage

Stormwater runoff from the PShP will be discharged to new drainage infrastructure down at ground level through internal pipes located within the PShP columns. There are four catchment points located on the structure, one north of Armadale Road currently located within the Rail Corridor and three located south of Armadale Road.

The existing drainage network is predominately 'pit and pipe' infrastructure that flows west and runs along the local roads to the west of the corridor. Drainage within the rail corridor is predominately a network of open channel that manages rail runoff and discharges at select location into the City's drainage network. There is no intent to discharge any runoff from the PShP into the rail corridor.

Refer to **Appendix F** for the Drainage Strategy.

#### 5.10 Amenity and Privacy

- It is recognised that the PShP crossing structure may have visual amenity impacts to the adjoining residential properties located at 24 Aragon Court, t29, and 33 Abbey Road though effort has been made to balance its scale with the amenity afforded to users.
- Elevated crossings enable opportunities to develop landscape space for public use on what is currently vacant land. These spaces can be activated which facilitate specific events and activities, or passive open spaces which can contribute to the public realm.
- High clearances of approximately 5 6 metres which are consistent with the viaduct will allow for visual connections, light, and openness to enhance safety those using the areas underneath and beside.

#### 5.11 Connectivity and Accessibility

- Stairs are located at the northern end of Aragon Court and are made of precast concrete.
- Connectivity for pedestrians and cyclists will be greatly enhanced, as opportunities to safely cross time train line will no longer be limited to infrequent points along the Armadale Line.
- The PShP will also improve access to Armadale Station, increasing rail patronage, and further reducing road congestion.

#### 5.12 Staging and Integration

A Staging and Construction Management Plan has been prepared to outline the construction methodology for the safe and efficient delivery of all works associated with the construction of the PShP bridge.

The Alliance appreciates the disruption a large infrastructure project like BRE can have to the local community during the construction of the PShP crossing. This includes minimising the impact to the existing operation of the Armadale line during construction, which has informed the alignment of the structure to the west of the existing at-grade rails.

To mitigate against any adverse impacts, on-going consultation with stakeholders and the local authority will be made to ensure minimal disruption, both before and after PTA's possession of the Armadale line.

Refer to **Appendix E** for more information on Staging and Construction Management.



#### 5.13 Safety

The PShP structure is designed with a feeling of openness for users as they cross over Armadale Road. At eye level users can look out over balustrades towards the Town Centre and see their path of travel.

The removal of all level crossings within the Town Centre marks a significant enhancement in safety along the entire corridor. This elimination substantially reduces the risks of collisions between trains and various road users—be it cars, cyclists, or pedestrians. With such increased safety measures, there's a positive outlook for encouraging greater usage of new spaces. This surge in activity fosters passive surveillance and enhances the utilisation of public areas. With a focus on safety, the design of the columns aims to achieve maximum narrowness. This deliberate design choice aims to limit concealment opportunities, ultimately enhancing safety for individuals using the spaces both underneath and adjacent to the PShP structure, without producing the structural integrity of the structure.

The PShP bridge is positioned at an approximate distance of 1.5 meters from the side mounted fixtures of the viaduct development and roughly 1.7 meters from the viaduct structure itself. To ensure safety and deter unauthorised access onto the viaduct structure, the PShP will incorporate screening material over Armadale Road, strategically preventing users from gaining entry.

## 6. Planning Framework Considerations

#### 6.1 Orderly and Proper Planning

The principles of orderly and proper planning require that new development is a logical and efficient extension of existing development, and consistent with the planning vision and strategic direction for a locality. The BRE Project represents a significant investment by the WA Government to support sustainable growth of Perth Metropolitan Region over the next 50 - 100 years. The project seeks to provide a positive impact on the neighbourhoods it serves, including additional infrastructure and initiatives to support the development of local communities at the same time. Additionally, the project supports safety and congestion issues associated with existing level crossings and improving the amenity of the Town Centre to support urban renewal and consolidation.

#### 6.2 Perth and Peel@3.5 Million

Perth and Peel @3.5 Million 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 and other pedestrian and cycling movement networks. 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 PShP will introduce new rail technology to Perth and will facilitate ongoing development and advancement of passenger rail services in the Perth and to the Peel regions.

#### 6.3 Metropolitan Region Scheme

The proposed works align with areas primarily reserved for 'Railways', 'Primary Regional Roads', and Urban. The infrastructure proposed in this DA aligns with this definition, as a viaduct to be constructed for railway purposes.

Zones adjacent reserved for the purpose of 'Primary Regional Roads' and 'City Centre Area'. Many of the public realm upgrades to be included in DA 5 will describe how these uses under and beside the PShP will improve connections from east to west across the corridor and provide amenity for residents and visitors in these zones.

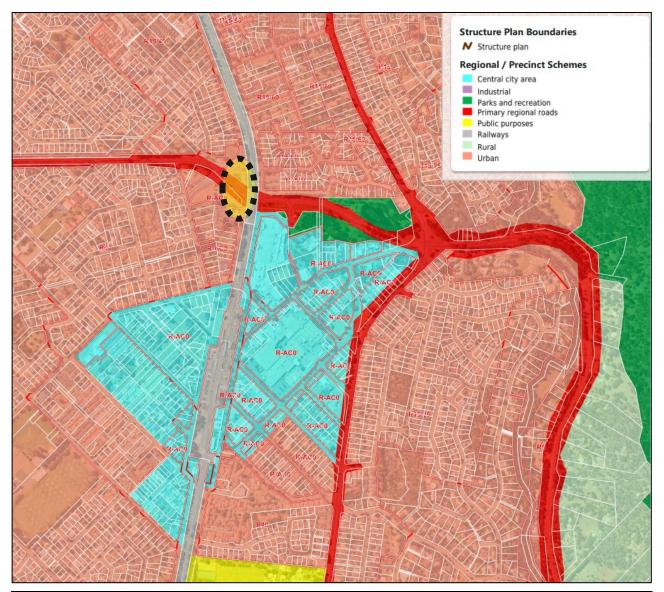


Figure 8: Extract of Metropolitan Region Scheme



#### 6.4 State Planning Policy 7.0 – Design of the Built Environment

State Planning Policy 7.0 – Design of the Built Environment (SPP 7.0) requires new development proposals to address the 10 Principles of Good Design. It is intended to promote positive design outcomes, with the viaduct structure facilitating improved outcomes for residents and visitors who will use the spaces beside or below. The assessment includes the viaduct structure as a whole.

A response to each of the principles is provided in **Table 7** below.

Principle	Response
Context and Character	
Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.	The PShP will play a pivotal role in the Town Centre. By creating a physical above ground link between the northern and southern sections of the Town Centre, the PShP amplifies the distinct characteristics of the area. Establishing visual connections to the Darling Scarp, this pathway promotes cohesion within the Town Centre. It facilitates easier movement across different parts of the Town Centre, contributing significantly to cultivating a stronger sense of place and community identity.
Landscape Quality	
Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.	The proposal is mindful of the local ecology and has worked hard to minimise the impact of the construction process on the surrounding landscape. This has included limiting the amount of earthworks, preserving existing vegetation and trees (where possible) which has been used for screening, and managing construction waste and pollution. The elevated nature of the PShP allows for the integration of green spaces, promoting a more sustainable and accessible environment. The materials used to construct the PShP have been chosen with sustainability in mind. Specifically, the use of precast concrete elements reduces the amount of material required with the final design to be durable, low maintenance, reducing the need to frequent repairs and replacement and therefore minimising the impact of the viaduct on the local ecology and resources over its lifetime.
Built Form and Scale	
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.	The design of the PShP ensures that its massing and height are appropriate for the Town Centre by balancing functional requirements with the need to deliver optimum benefit over the full life cycle of the development. The PShP's design meets the functional requirements of a shared path, while aligning with the future built form character of the Town Centre. It will contribute to the overall liveability and amenity of the Town Centre, with the intent catalysing development to encourage it to meet the built form goals of the local planning framework.
Functionality and Build Quality	
Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full lifecycle.	The elevated nature of the PShP will future proof public transport operations in the Town Centre. The PShP design prioritises the comfort, productivity, and safety of all users. The use of precast concrete elements ensures that the PShP is durable and low maintenance, reducing the need for frequent repairs or replacements that could disrupt the comfort and productivity of users. Concrete structures will naturally weather over time, and parts of the PShP such as the Welcome Gateway that will be aesthetically enhanced will ensure that architectural treatments, painting, lighting, and public art can be maintained easily over time.



#### Sustainability

Good design optimises the sustainability of the built environment, delivering positive environmental, social, and economic outcomes. The PShP's elevated design allows for a variety of uses and activities to take place in close proximity to the structure. Additionally, the landscaping and mature tree retention will contribute to the visual amenity of the area and provide shade and privacy to the adjoining residential properties.

#### **Amenity**

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.

The PShP bridge's elevated design provides an open and flexible space that can accommodate a variety of activities. The PShP bridge will improve accessibility and promote active transportation, while the public art installations and landscaping will work together to enhance the aesthetic appeal of the area. These amenities contribute to the overall liveability and vibrancy of the Town Centre, improving the quality of life for residents and visitors alike.

#### Legibility

Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.

The PShP bridge creates safe north-south connections and easily identifiable elements to help people find their way around the Town Centre. The PShP is clearly defined and well connected to the surrounding streets and public places. The PShP is designed to be safe, accessible, and easy to navigate, providing clear connections for pedestrians and cyclists to move around the centre. Visual connections will help users identify buildings, trees, and open space elements (such as Neerigen Brook) to allow for intuitive wayfinding.

#### Safety

Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.

Safety has been a priority during the design of the PShP bridge. One of the considerations made by the design team includes ensuring sight lines are clear, in and around the 'corkscrew' section of the PShP. The removal of the 'at grade' design allows for free movement of pedestrians and cyclists, reducing risks of conflict that could result in injury. Additionally, the generous vertical clearance of the PShP over Armadale Road (by approximately 5 -7 metres) and the spacing of the piers maximises visibility with clear sight lines to the Town Centre. Details such as the 'Welcome Gateway' on top of the viaduct provides additional safety for passengers using the viaduct in emergency egress situations and also for rail maintenance workers.

#### Community

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. PShP's seek to better connect people to places. Through an elevated PShP, the space below is optimised and can be used for free-flowing traffic leading to reduced congestion. The elevated nature of the viaduct also promotes essential economic and social functioning of the Town Centre by utilising and expanding on existing built form and future development areas, benefiting local communities in the long term.

#### **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.

The PShP is a large structure, though its design is consistent with other designs in the Perth so as not to visually compete with the established Town Centre. Most of the structure will remain as untreated pre-cast concrete that is natural in appearance. Additional aesthetic treatments are currently under development for prominent locations (such as the 'Welcome Gateway') on the western side and will be refined through an appropriate condition of development approval.

Table 7: Response to State Planning Policy 7.0 – Design of the Built Environment



#### 6.5 Development Control Policy 1.6 – Planning to Support Transit use and 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	The PShP bridge will enable the improved use of public transport as a more sustainable alternative to private vehicle use.  The PShP bridge will enable a balanced public transport ridership along transit corridors by creating a consolidated arrival and departure points within the Town Centre.

Table 8: Response to State Planning Policy 1.6 – Design of the Built Environment

#### 6.6 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 Strategy 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 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.

#### 6.7 City of Armadale Town Planning Scheme No. 4

The City's Town Planning Scheme 4 (TPS 4) is the primary planning instrument for the development and use of land within the surrounding local government area. As a result of the viaduct structure being reserved under the Metropolitan Region Scheme, the subject site is not zoned under TPS 4.

TPS 4 provides the zonings for the land immediately adjacent to the PShP structure. These zones are broadly allocated 'Strategic Regional Centre' on the east of the rail line, and in small portions to the west, 'Mixed Business/Residential' in the former Development WA area to the west of the station and 'Residential' in remaining areas.

While it is important to note the context of the adjacent land uses identified in TPS 4, the proposed works in this DA are noted as Public Works being delivered on behalf of a public authority.



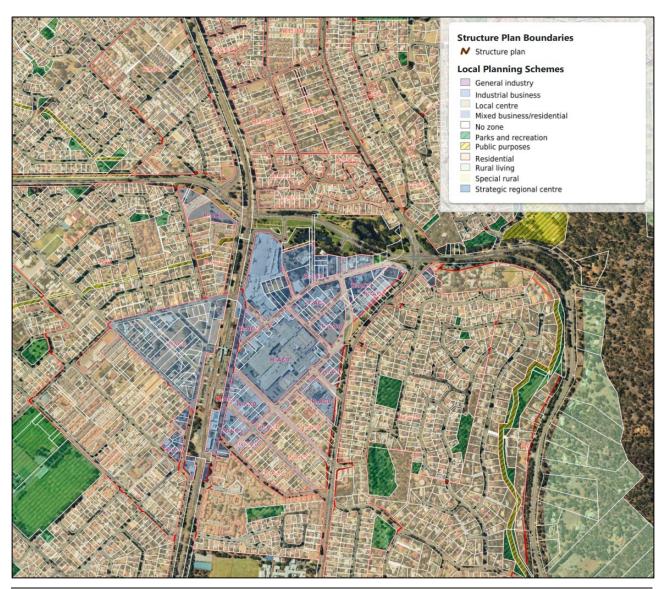


Figure 9: Extract of Local Planning Scheme

## 6.8 City of Armadale Local Planning Policies

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

Despite this, the Alliance understands the impacts that the introduction of an elevated PShP will have on the public realm. As such, regard has been given to Local Planning Policy 2.4 - Landscape Feature and Tree Preservation (LPP 2.4), to ensure that the project has had regard to the various aspirations and objectives of the City.

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 process.



#### The objectives of LPP 2.4 are to:

- a) To provide guidance on the criteria that shall be used when considering whether or not a tree is significant enough to warrant issuing of a notice under Clause 80A of Schedule A of TPS4.
- b) To provide guidance on the review of a registered tree and guidance on administrative processes associated with the protection of a registered tree.
- c) To provide guidance on the level of information required by the City when considering significant trees and landscape features at each stage of the planning framework.
- d) To aim for retention of significant trees and other landscape features through the strategic and statutory planning framework to retain the character of the area.
- e) To provide referral advice and/or advocate to the WAPC / DevelopmentWA, to retention of trees and other landscape plans when considering Structure Plans and Subdivision Plans.
- f) Advocate for the achievement of 'environmental offsets' in the City's municipal boundary.

MetCONNX 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 works, the Alliances 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
- Visual screening of noise walls and viaducts to minimise scale and visual impact and improve visual amenity.

The Project Team has identified at least four mature trees that have been able to be retained which will greatly assist with privacy as well as screening of the development from neighbouring properties.

# 6.9 Armadale Activity Centre Plan (City of Armadale) and Armadale City Centre West of Railways Activity Centre Plan (DevelopmentWA)

The PShP bridge 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 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 the viaduct structure, being Gateway South, West of Plaza, and Gateway North. They also contemplate development of between 3 – 7 storeys in scale.



The PShP bridge is generally consistent in height and scale as the future development of the viaduct. The scale of the PShP relates to this future context, with open views achievable to pedestrians traversing the space from north to south. Further information on this relationship with surrounding urban context, and massing models help to illustrate this.

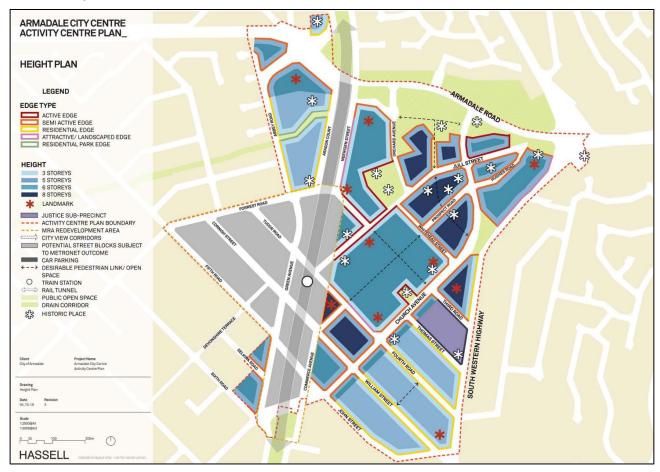


Figure 10: Armadale City Centre Activity Centre Plan

#### 7. Conclusion

This DA report has been prepared in support of the construction of the PShP for Armadale Station and surrounds.

Based on the justification provided throughout this report, the Alliance respectfully request the City of Armadale and the Western Australian Planning Commission support this application to ensure development can begin as soon as possible. This will support the timely delivery the PShP, to ensure further works to the Armadale Station can occur in line with Government's expected timeframes for the BRE project.

Additionally, the PTA is progressing necessary arrangements for the acquisition of the land designated for the PSP ramp (portion of Lots 301 and 304 Abbey Road). Council has resolved to sell a portion of its freehold land to the State Government and the PTA will continue to work with the City to finalise the land acquisition process. DA conditions relating to the land acquisition would underscore the commitment to ensuring a smooth and well-coordinated acquisition and land transfer process, taking into account the various stakeholders involved in the project and development time frames.



**Appendix A: MRS Form 1** 

Refer to Appendix A

**Appendix B: Certificate of Titles** 

Refer to **Appendix B** 

**Appendix C: DA Drawings** 

Refer to **Appendix C** 

**Appendix D: Landscaping Plan** 

Refer to **Appendix D** 

**Appendix E: Staging and Construction Management Plan** 

Refer to **Appendix E** 

**Appendix F: Drainage Strategy** 

Refer to **Appendix F** 





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