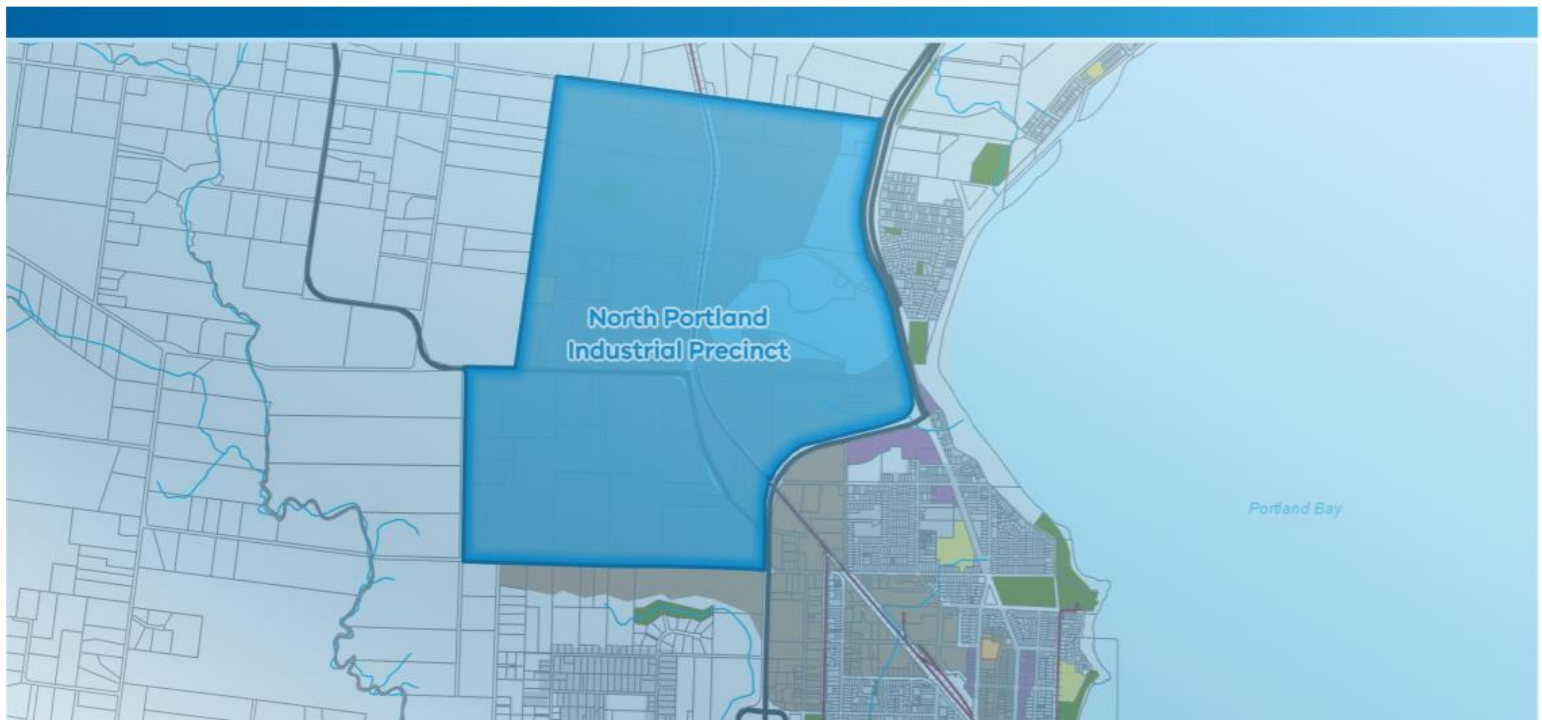


North Portland Industrial Precinct Development Plan



Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

This plan was prepared by the Glenelg Shire Council with funding and assistance from the Victorian Planning Authority. The Glenelg Shire Council is the planning authority for this plan and the content of this plan has been at the direction of the Council.

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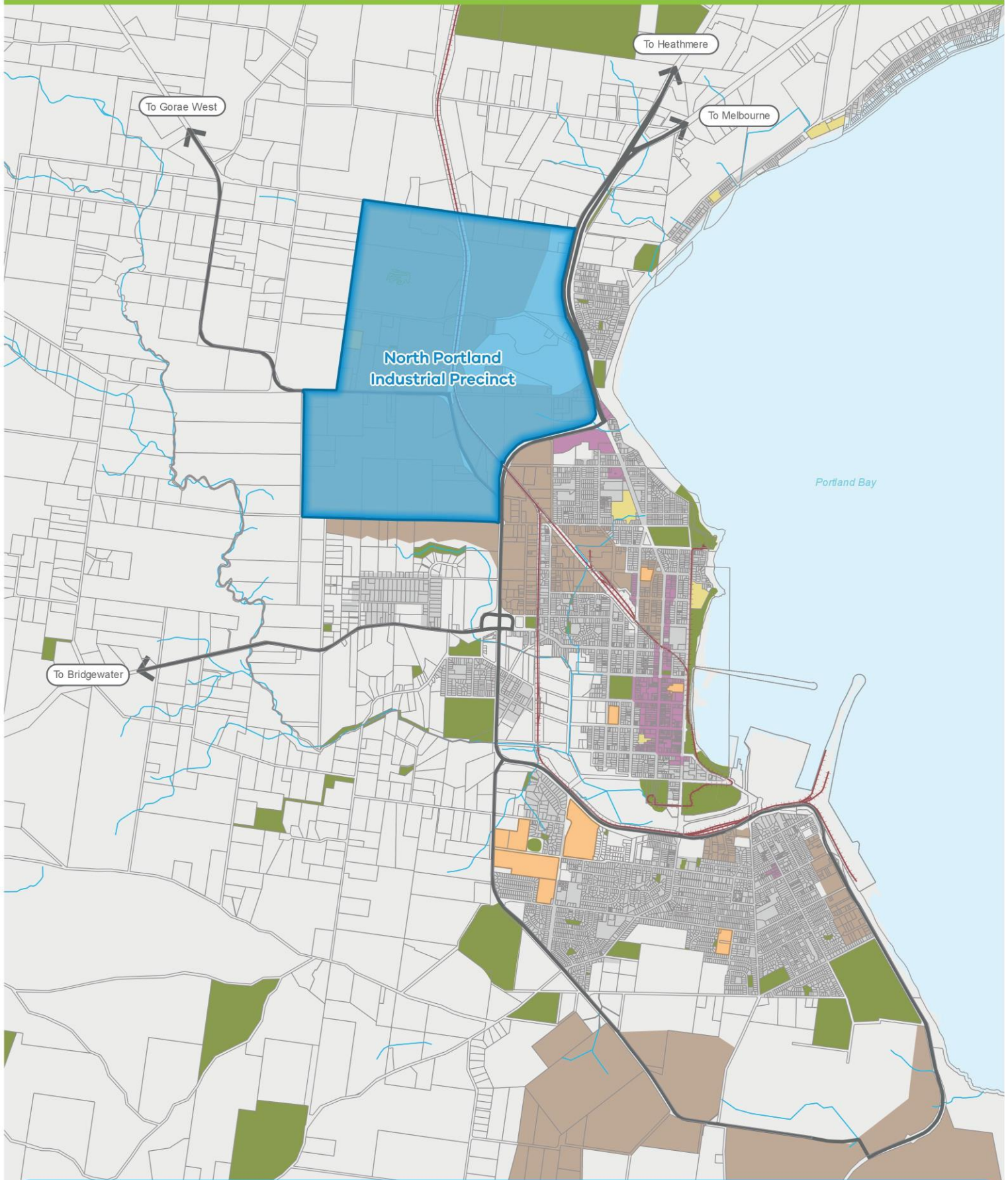
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precinct boundary	industrial area	waterway & drainage
non urban area	education	railway line
existing urban area	community	existing road network
existing retail	open space	

1.0 INTRODUCTION

The North Portland Industrial Precinct Development Plan (“the DP”) is a long term plan to facilitate the redevelopment of one of a number of industrial precincts identified in the Portland Industrial Land Strategy (Glenelg Shire Council, 2016) It describes the future layout and use of the predominantly vacant precinct as an integrated general and heavy industry precinct providing large scale industrial plants on large allotments.

The DP is informed by the State and Local Planning Policy Framework set out in the Glenelg Shire Council Planning Scheme, including the Portland Industrial Land Strategy 2016 and other relevant adopted policies of the Glenelg Shire Council.

This DP responds to the requirements of the Development Plan Overlay, Schedule 9 (DPO9) as found in the Glenelg Planning Scheme.

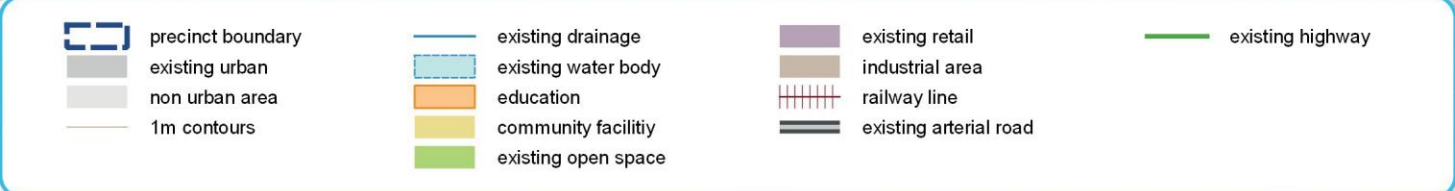
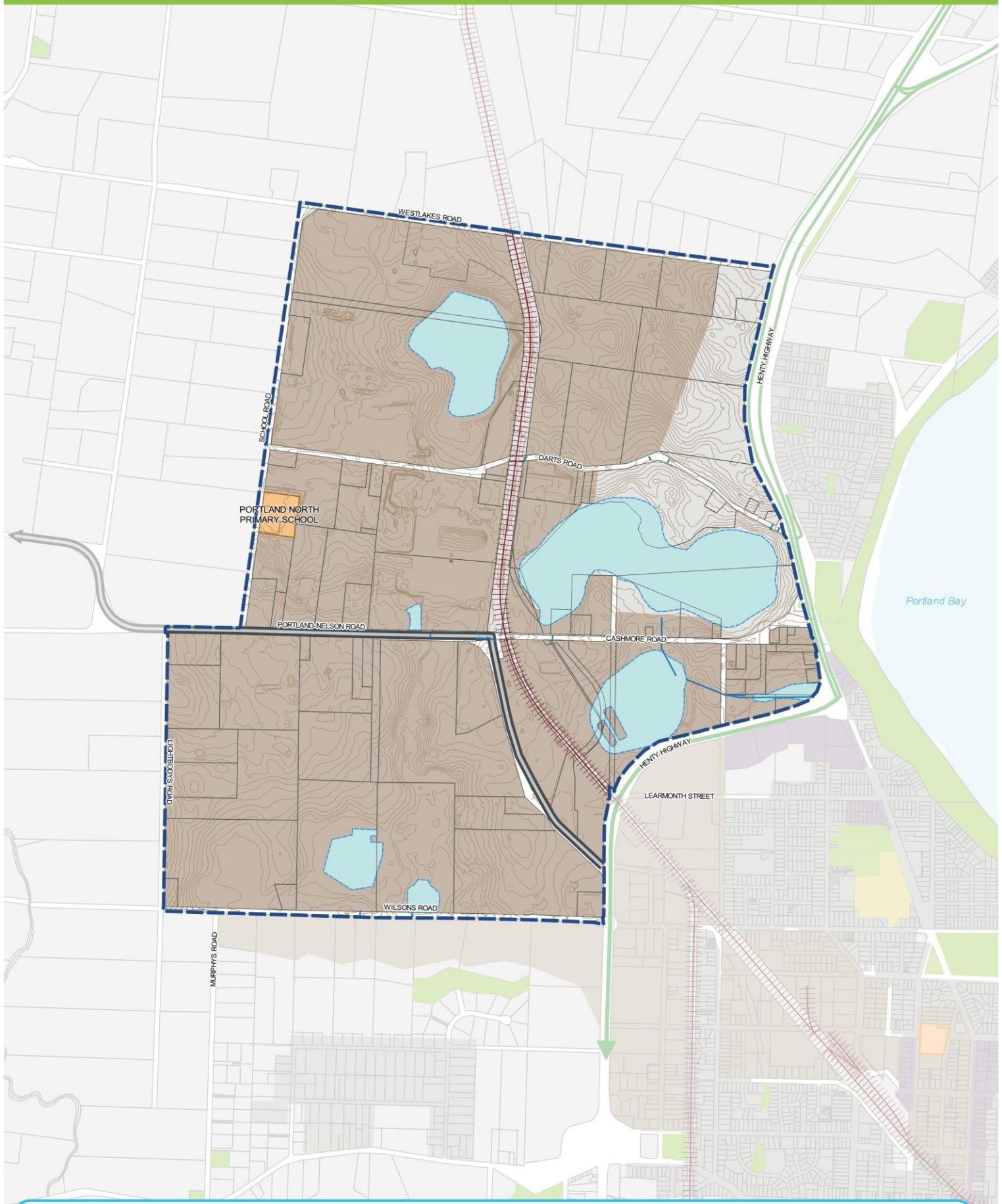
Generally, the DP guides the layout and form of land use and development in the DP area and sets out requirements that must be met by development.

1.1 How to read this document

The DP comprises a number of components including a vision, objectives, plans, diagrams, tables, illustrations, requirements and guidelines. The planning scheme, including the DPO9 schedule, directs when and how the DP is to be taken into account in making a planning decision. When the planning scheme directs this, all of these components of the DP should be considered as relevant to the decision at hand and in the manner that the scheme directs.

It is intended by the DP vision, objectives and future urban structure, collectively the DP ‘outcomes’ are achieved by all applications and permits. Requirements in the DP must be met as per the requirement in the controlling schedule to the Development Plan Overlay. The remainder of the content describes how the outcomes can be achieved; this content is not intended to exclude the possibility of a proposal achieving the outcomes of the DP in a different way.

The DP is not an exhaustive planning control; it does not address every aspect of the land’s use and development. A responsible authority must manage development and issue permits as relevant with reference to the broad range of matters it is required to consider when making a decision under the *Planning and Environment Act 1987* and the planning scheme.



1.2 Land to which the Plan applies

The DP applies to approximately 441.03 hectares of land in the town of Portland, within the municipality of Glenelg Shire Council. Portland is located in the south-west of Victoria, approximately 350kms from Melbourne and approximately 57kms east of the South Australia–Victoria state border.

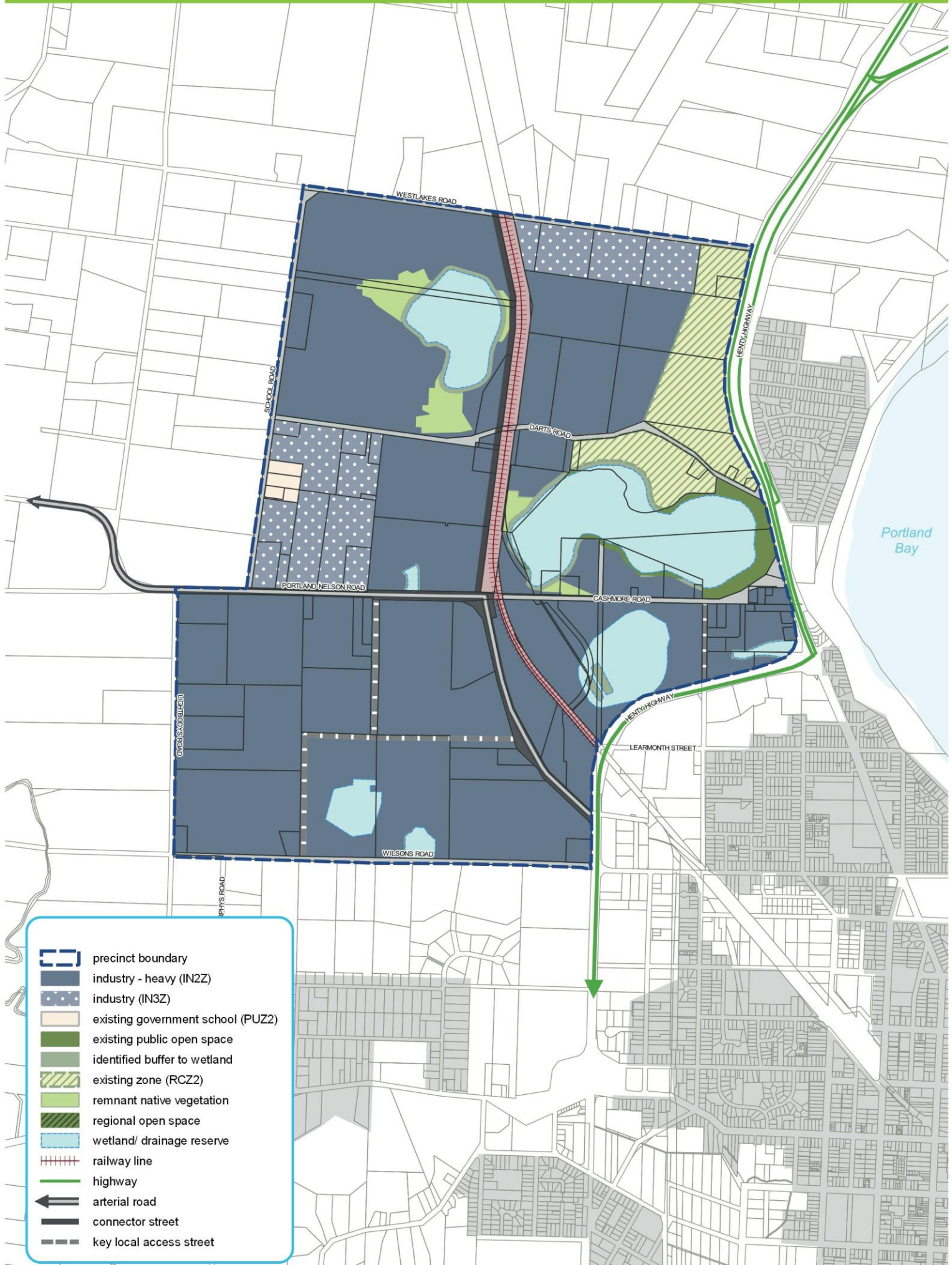
The precinct is generally bounded to the north by Westlakes Road, to the east by the Hentley Highway, to the south by Wilsons Road and to the west by Lightbody's Road and The Broadway. An existing rail line, currently used for seasonal freight movement, traverses the site from the north to the south east of the site.

The precinct is generally flat with a large portion of it currently vacant land. Some industrial development is scattered across the precinct.

The existing Portland North Primary School is located within the precinct, and fronts School Road. The school is currently operational with no current plans to relocate it to a different location.

A number of biodiversity values are also found within the precinct, specifically the wetlands located in the east portion of the site.

The existing conditions of the precinct are shown in Plan 2.



- precinct boundary
- industry - heavy (IN2Z)
- industry (IN3Z)
- existing government school (PUZ2)
- existing public open space
- identified buffer to wetland
- existing zone (RCZ2)
- remnant native vegetation
- regional open space
- wetland/ drainage reserve
- railway line
- highway
- arterial road
- connector street
- key local access street

2.0 OUTCOMES

2.1 Vision

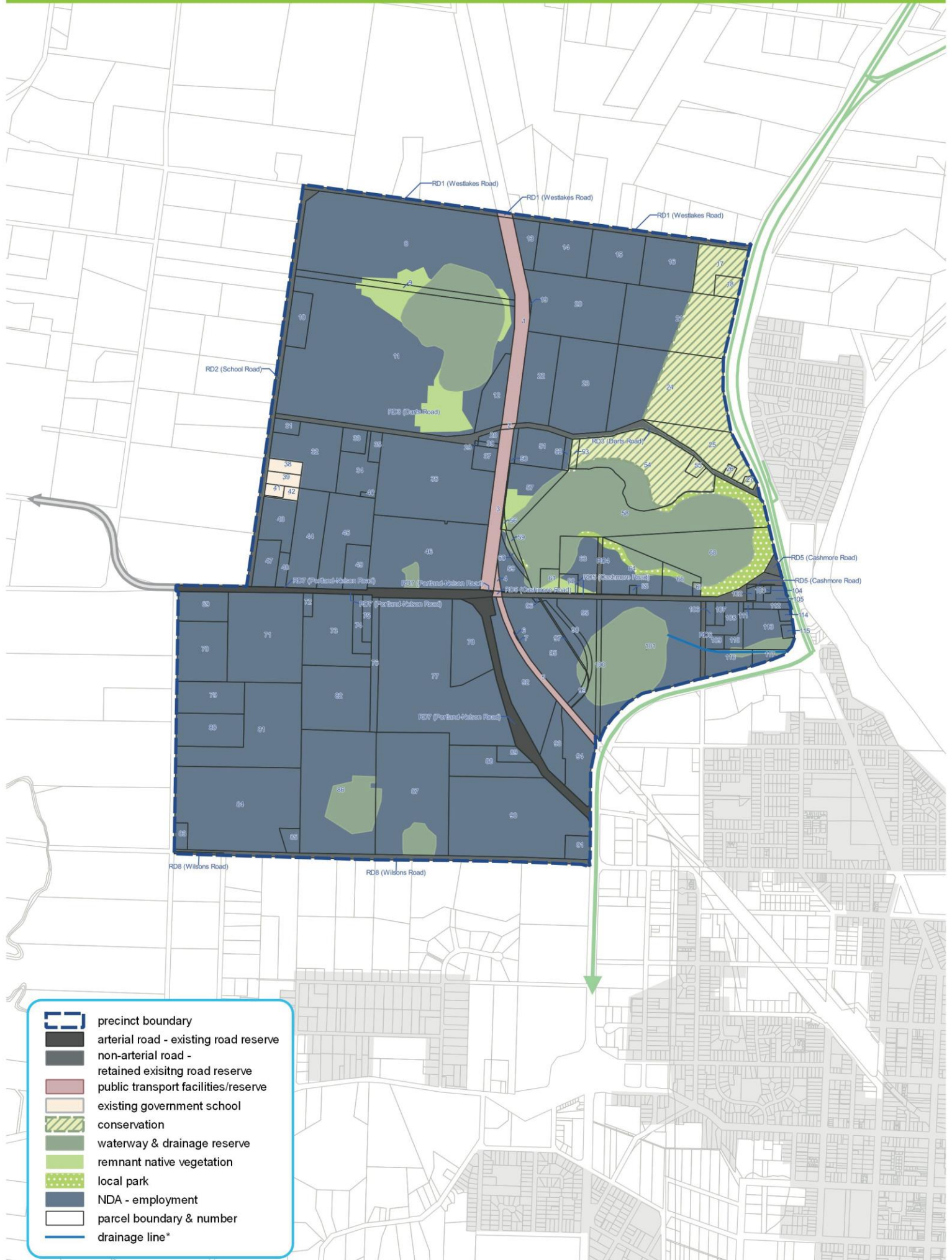
The North Portland Industrial Precinct is to become a recognised employment and economic activity area.

This precinct will facilitate the development and extension of large-scale heavy industry uses on large allotments and some general industry. These will also be effectively integrated with the existing environmental setting through improvement of its perimeter streets and frontage treatments.

The wetland will be enhanced and developed to become an open space feature to be enjoyed by the Portland community.

2.2 Objectives

- To develop the precinct with a focus on the delivery of innovative and environmentally sustainable industries that achieve best practice and have strong regional economic links.
- To effectively manage the interface between industrial and sensitive uses and surrounding rural zones.
- To create an identifiable and attractive character for the industrial precinct.
- To improve the visual quality of the precinct that complements the business activities and adds to the value of these enterprises.
- To maximise the available access to existing major transport infrastructure of road, rail and port facilities.
- To improve the safety and efficiency of the internal road traffic system that also increases the safety for pedestrian and cycle use.
- To improve the overall quality and management of stormwater and environmental quality of all future drainage mechanisms.
- To maintain and enhance the environmental values of the wetlands.
- To ameliorate the effects of any potential site degradation, contamination or inappropriate site use.
- To encourage heavy industries within the precinct that maintain adequate buffers to sensitive uses and minimum off-site impacts.



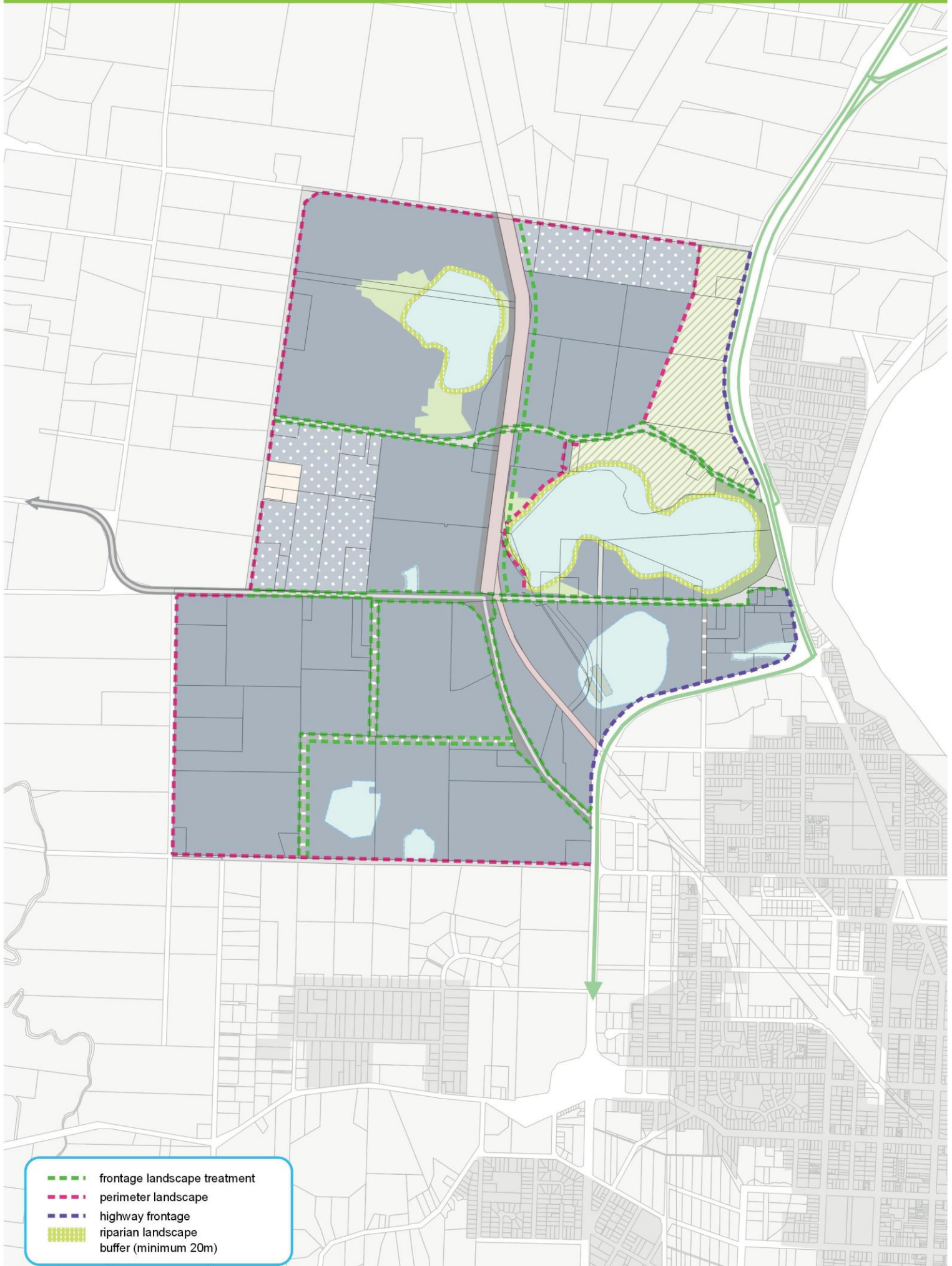
- precinct boundary
- arterial road - existing road reserve
- non-arterial road - retained existing road reserve
- public transport facilities/reserve
- existing government school
- conservation
- waterway & drainage reserve
- remnant native vegetation
- local park
- NDA - employment
- parcel boundary & number
- drainage line*

3.0 IMPLEMENTATION

3.1 Image and character, land use and built form

3.1.1 Image and character

REQUIREMENTS									
R1	All public landscaped areas must be planted and designed to the satisfaction of the responsible authority.								
R2	Street tree planting must use species suitable for local conditions which are fast growing, hardy, drought tolerant and will not interfere with underground or overhead utilities and are to the satisfaction of the responsible authority.								
R3	Street trees must be planted on both sides of all roads and streets at regular intervals appropriate to tree size at maturity, unless otherwise agreed by the responsible authority, at an average of: <table border="1" data-bbox="319 683 1085 851"> <thead> <tr> <th>Average Interval</th> <th>Tree size (in height)</th> </tr> </thead> <tbody> <tr> <td>5–7 metres</td> <td>Small trees (less than 10 metres)</td> </tr> <tr> <td>7–10 metres</td> <td>Medium trees (10–15 metres)</td> </tr> <tr> <td>10–15 metres</td> <td>Large trees (15 metres or greater)</td> </tr> </tbody> </table>	Average Interval	Tree size (in height)	5–7 metres	Small trees (less than 10 metres)	7–10 metres	Medium trees (10–15 metres)	10–15 metres	Large trees (15 metres or greater)
Average Interval	Tree size (in height)								
5–7 metres	Small trees (less than 10 metres)								
7–10 metres	Medium trees (10–15 metres)								
10–15 metres	Large trees (15 metres or greater)								
R4	Trees in streets must be: <ul style="list-style-type: none"> • Larger species wherever space allows (to facilitate continuous canopy cover); • Planted in modified and improved soil to support tree establishment; • Appropriate in size to nature strips, nearby utilities and built form; • Used consistently across the precinct to reinforce movement hierarchy and local character; and • Consistent with any guidance provided on the relevant cross section within this CDP unless otherwise approved by the responsible authority. 								
R5	Site landscape treatment must comprise hardy, locally indigenous plant material.								
R6	Landscape treatment at the perimeter of the allotment is to complement and reinforce the environment of the drainage line.								
R7	Where allotments abut or include a drainage reserve, pedestrian and vehicle access along this interface is to be managed to the satisfaction of the responsible authority.								
R8	All landscaped areas to be designed in accordance with relevant Council guidelines and to the satisfaction of the responsible authority, including the use of recycled water and storm water where possible.								
R9	Interfaces between development and drainage assets must be treated through the incorporation of medium to large trees and shrubs, open space buffers or landscape buffers, to the satisfaction of the responsible authority.								
R10	Where development proposals for an industrial activity will result in the production of dust and noise, an earth berm of a minimum 3 metres is required at the perimeter of the allotment. Comprehensive planting of trees and shrubs are required along or adjacent to each berm.								
R11	A consistent suite of lighting and furniture must be used across the precinct, as approved by the responsible authority.								
R12	Light spillage must be contained on the site, using baffling and effective alignment.								
R13	Key locations such as gateway points must incorporate features of interest, clear signage and landscape features.								
GUIDELINES									
G1	High quality and cohesive landscape treatments should be provided throughout the precinct, within the streetscape and in local open spaces, particularly along at key interfaces.								
G2	Variations in street tree species should be used to reinforce and support the road hierarchy or create visual cues in appropriate locations such as gateway points.								
G3	Significant trees and areas of vegetation, where possible, should be retained and located within the public domain, including parks and road reserves, unless otherwise agreed by the responsible authority.								
G4	Subdivision design should preserve the opportunity for additional landscaping in existing road reserves.								



- frontage landscape treatment
- perimeter landscape
- highway frontage
- riparian landscape buffer (minimum 20m)

3.1.2 Land use and built form

REQUIREMENTS	
R14	Industrial lot and building design should conform with guidance provided in Figures 1 and 2 to the satisfaction of the responsible authority.
R15	The location of land uses, building design, and interface treatment within the precinct must minimise negative impacts on the amenity of nearby residents.
R16	Development which fronts the perimeter of the precinct must incorporate features of interest into the built form, including: <ul style="list-style-type: none"> • Variations in built form elements (such as building heights, use of parapets, awnings and roof elements); • Articulation of building facades; and • Feature colours and materials.
R17	Goods and materials storage areas and refuse areas must not be visible from public areas.
R18	Development proposals within the precinct must take into account CPTED design principles.
R19	Buildings or other areas of development proposals must be setback a minimum of 10 metres from the street within INZ1 areas and setback 20 metres within INZ3 areas. Landscaping for a depth of at least 5 metres must be provided within both setbacks to ensure an attractive interface to surrounding areas.
R20	Ancillary offices of development proposals are to be located at the front of buildings; must include a façade addressing the frontage of the lot; and provide for improved pedestrian access and engagement with the public domain.
R21	Any visitor car parking and access areas in the front setback area should be setback a minimum of 5 metres from the street frontage to enable the provision of sufficient landscape strips at the street frontage.
R22	All vehicles must be able to enter and exit the site in a forward direction.
R23	All developments must demonstrate a minimum of 20% permeable site coverage.
GUIDELINES	
G5	Building heights should be carefully considered when proximate to adjacent sensitive land uses to avoid overshadowing.
G6	External finishes and roof forms of any office/showroom elements of development should be selected to ensure a consistent design theme of the Portland Industrial Park.
G7	Building materials such as corrugated iron, steel and large timber forms which are characteristic of the rural context of the Portland Industrial Park should be used.
G8	Where fencing is required forward of the building lines and along public streets, it should be visually permeable and not greater than 2.0m in height.
G9	Large expanse of continuous walls visible to the street should have appropriate articulation, landscaping, and other elements to provide relief and visual interest.
G10	Any secondary buildings on site should be designed to have an integrated appearance with the main buildings so as to avoid the appearance of clutter.

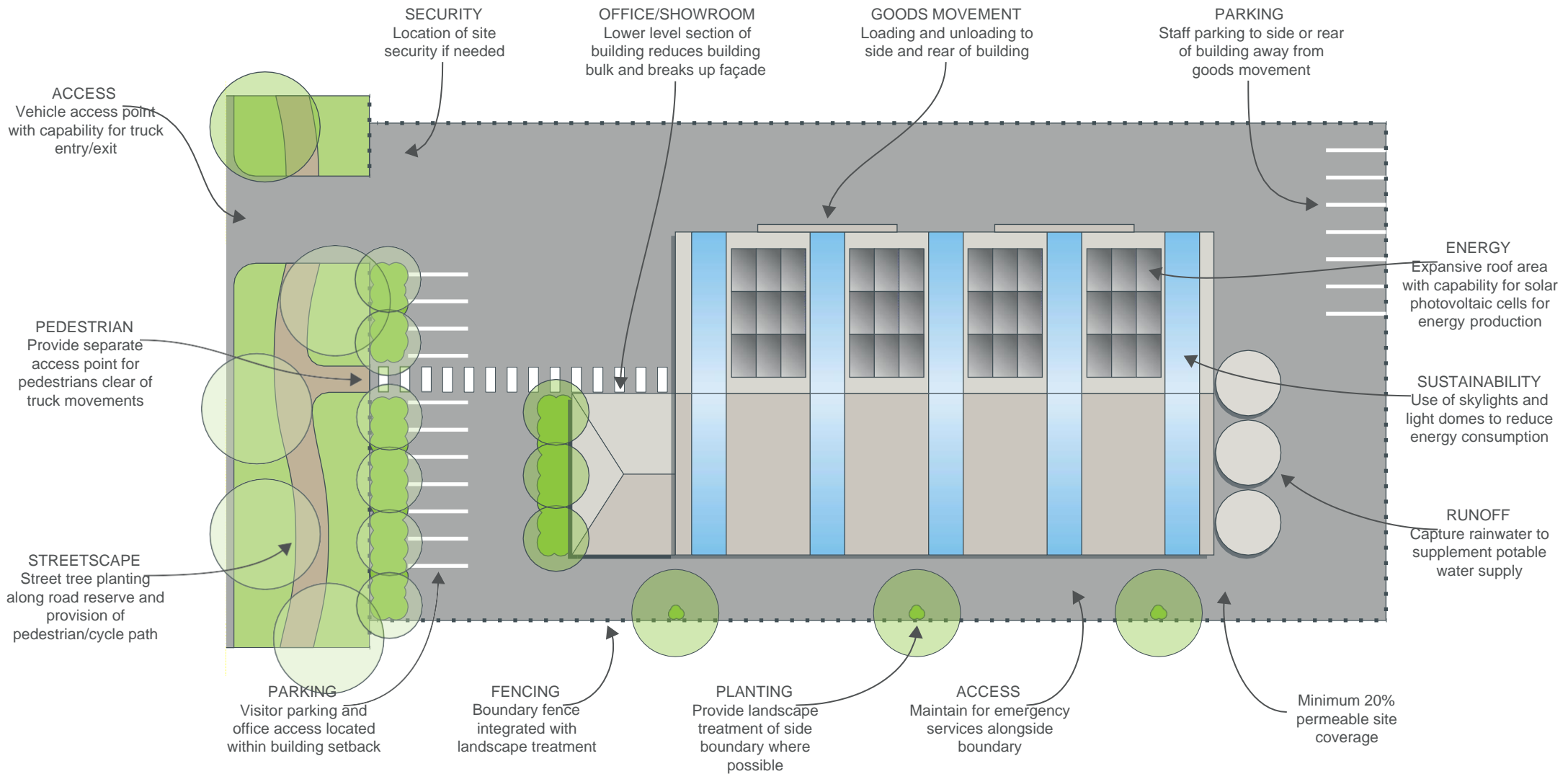


Figure 1 – Design Guidelines: Industrial Development Allotment Treatment Layout

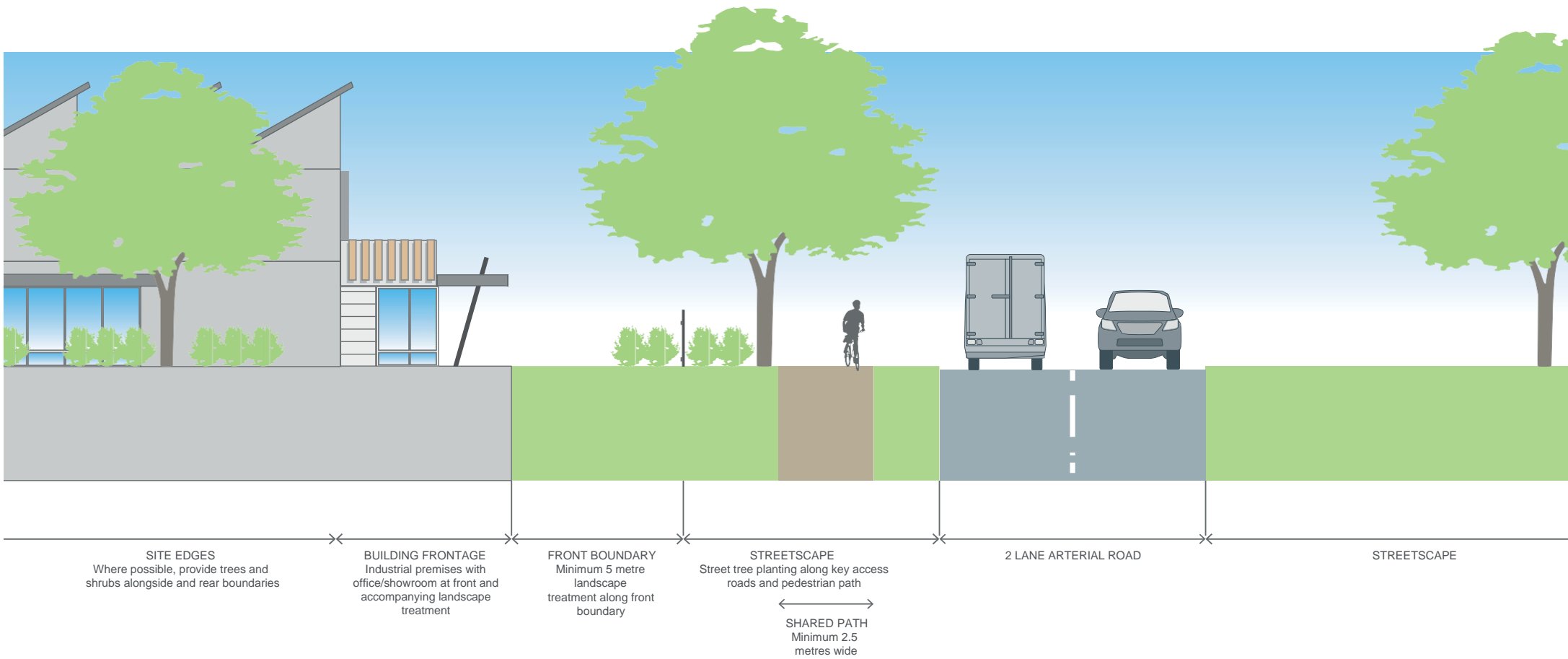


Figure 2 – Design Guidelines: Front Allotment Treatment to Henty Highway (north view)

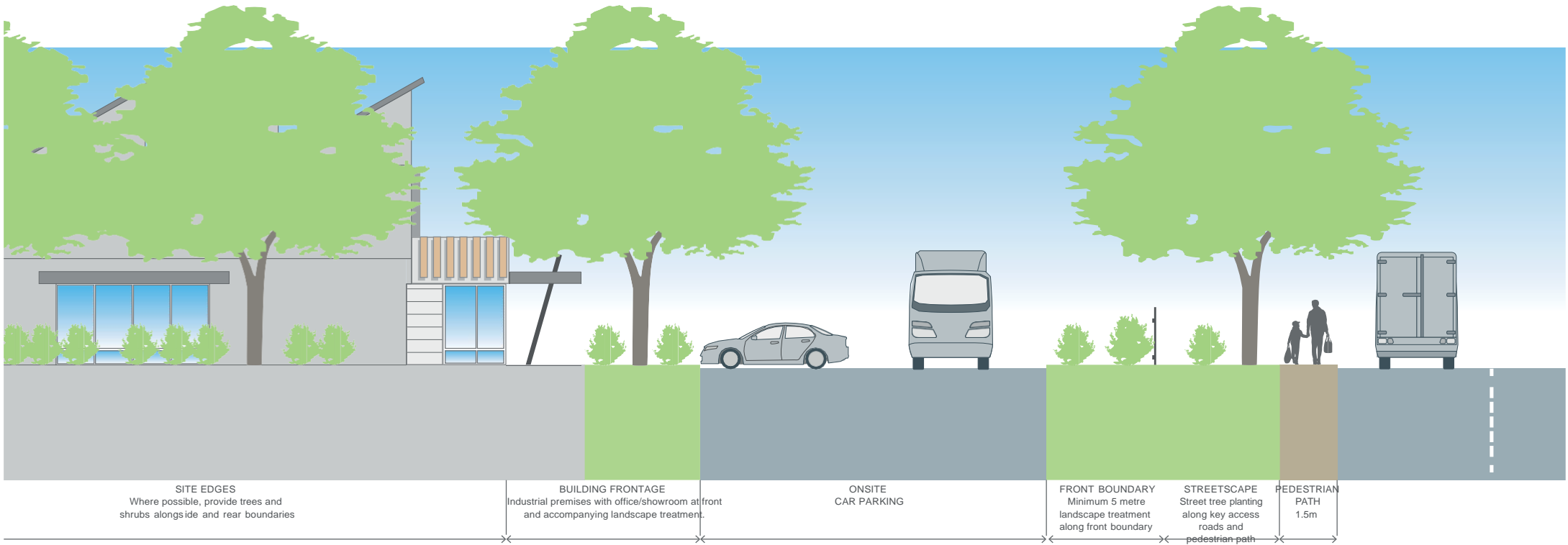
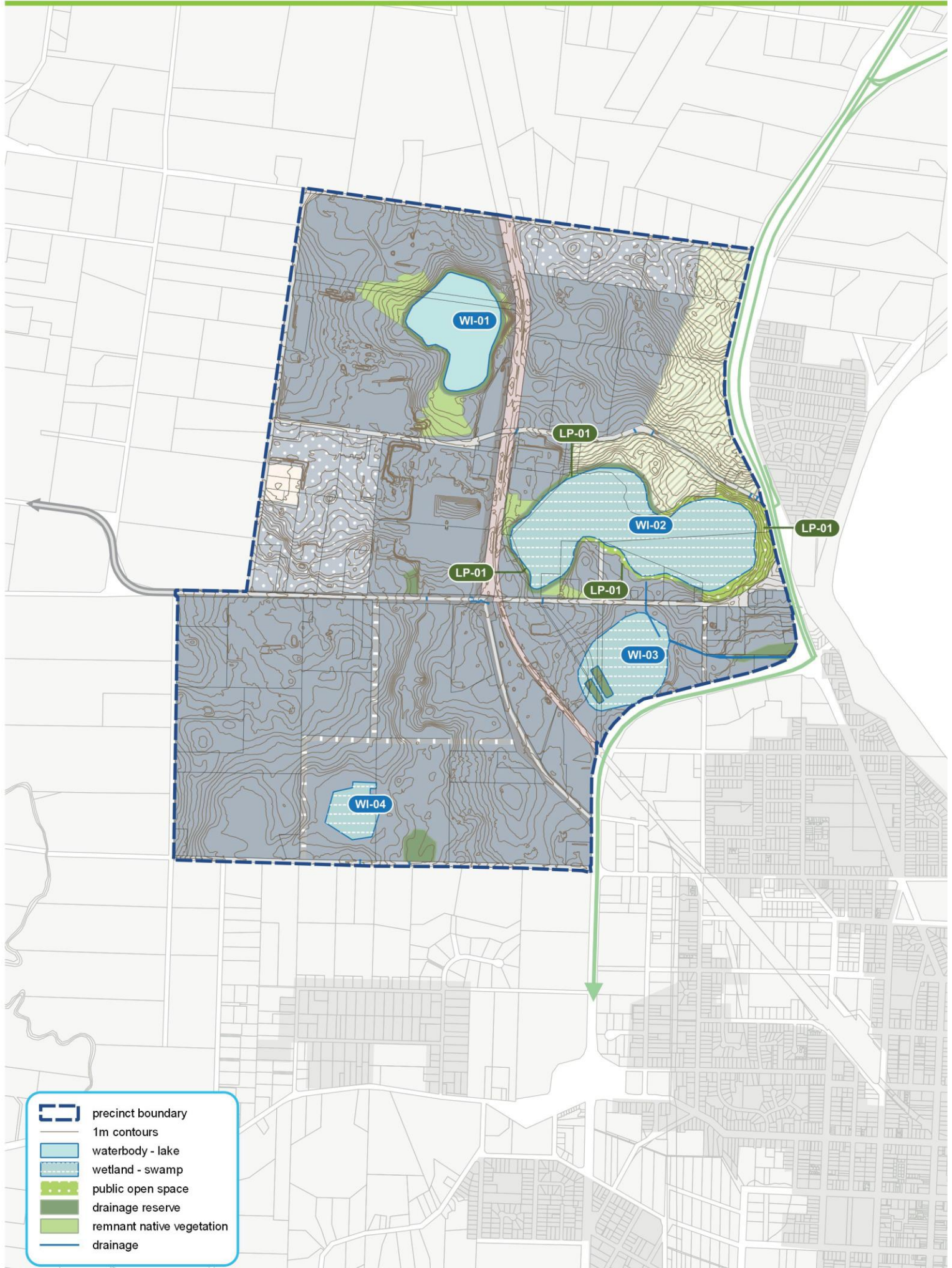










Figure 3

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-  precinct boundary
-  1m contours
-  waterbody - lake
-  wetland - swamp
-  public open space
-  drainage reserve
-  remnant native vegetation
-  drainage

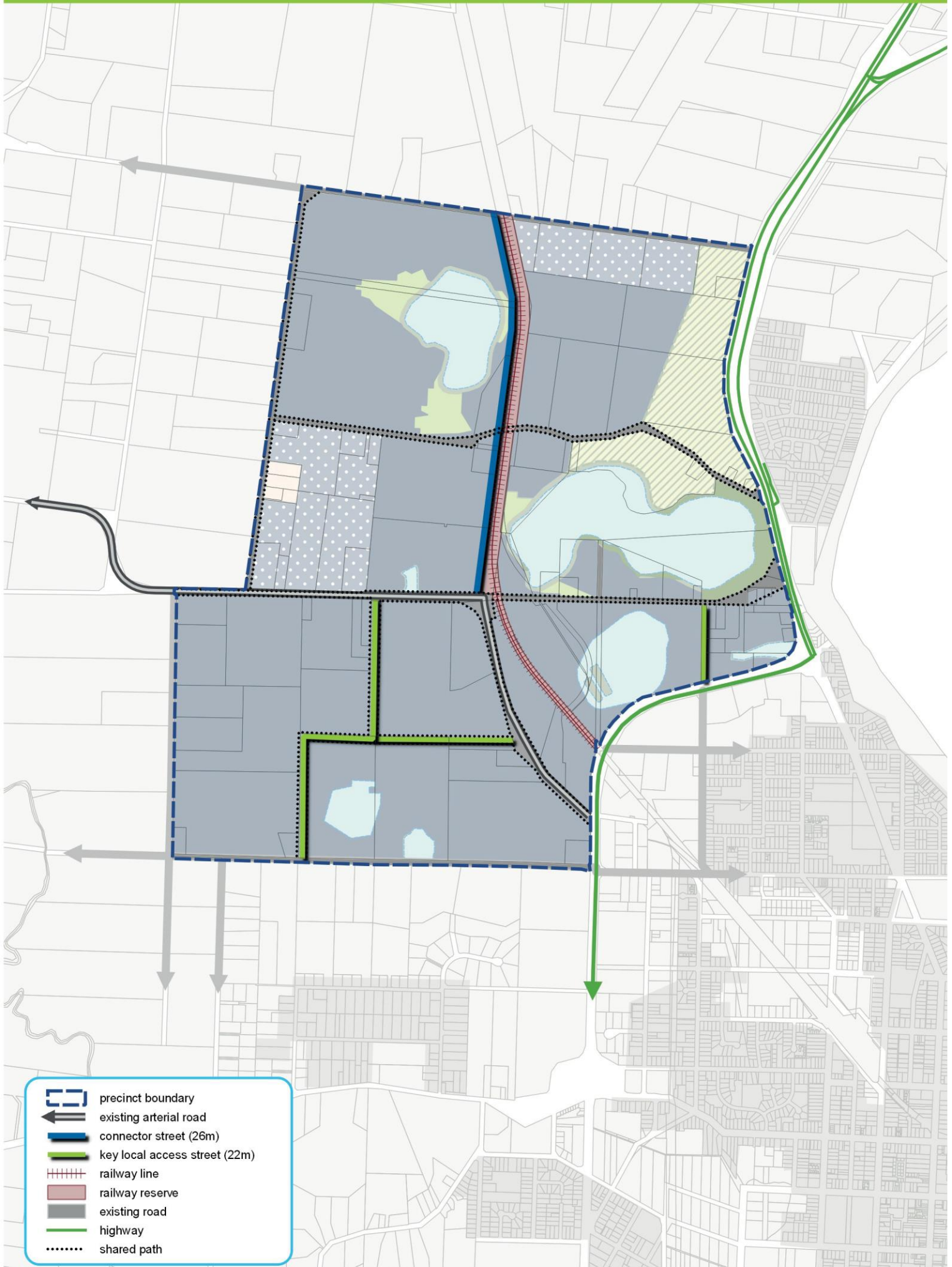
3.2 Community facilities










REQUIREMENTS	
R24	The environmental quality of the school is to be protected through the treatment of the industrial sites immediately adjacent to this site.

3.3 Biodiversity

REQUIREMENTS	
R25	A buffer zone of minimum 20m must be provided around all edges of WI-01 and WI-02. The buffer zone must exclude buildings but may include roads, paths, nature strips, public open space and drainage infrastructure. A frontage road (connector street as shown on Plan 7) is to be provided between the wetland and adjacent development in accordance with the relevant road standard (Figure 4).
R26	Remnant vegetation should be retained where practical, particularly if near a waterway or wetland.

GUIDELINES	
G11	Street trees and public open space landscaping should contribute to habitat for indigenous fauna species, in particular arboreal animals and birds, where practical.
G12	The layout and design of waterways, wetlands and retarding basins (including the design of paths, bridges and boardwalks and the stormwater drainage system) should integrate with the biodiversity and natural systems to the satisfaction of the responsible authorities.
G13	Planting in streetscapes and parks abutting waterways should make use of indigenous species to the satisfaction of the responsible authorities.



-  precinct boundary
-  existing arterial road
-  connector street (26m)
-  key local access street (22m)
-  railway line
-  railway reserve
-  existing road
-  highway
-  shared path

3.4 Integrated transport & movement

3.4.1 Public transport

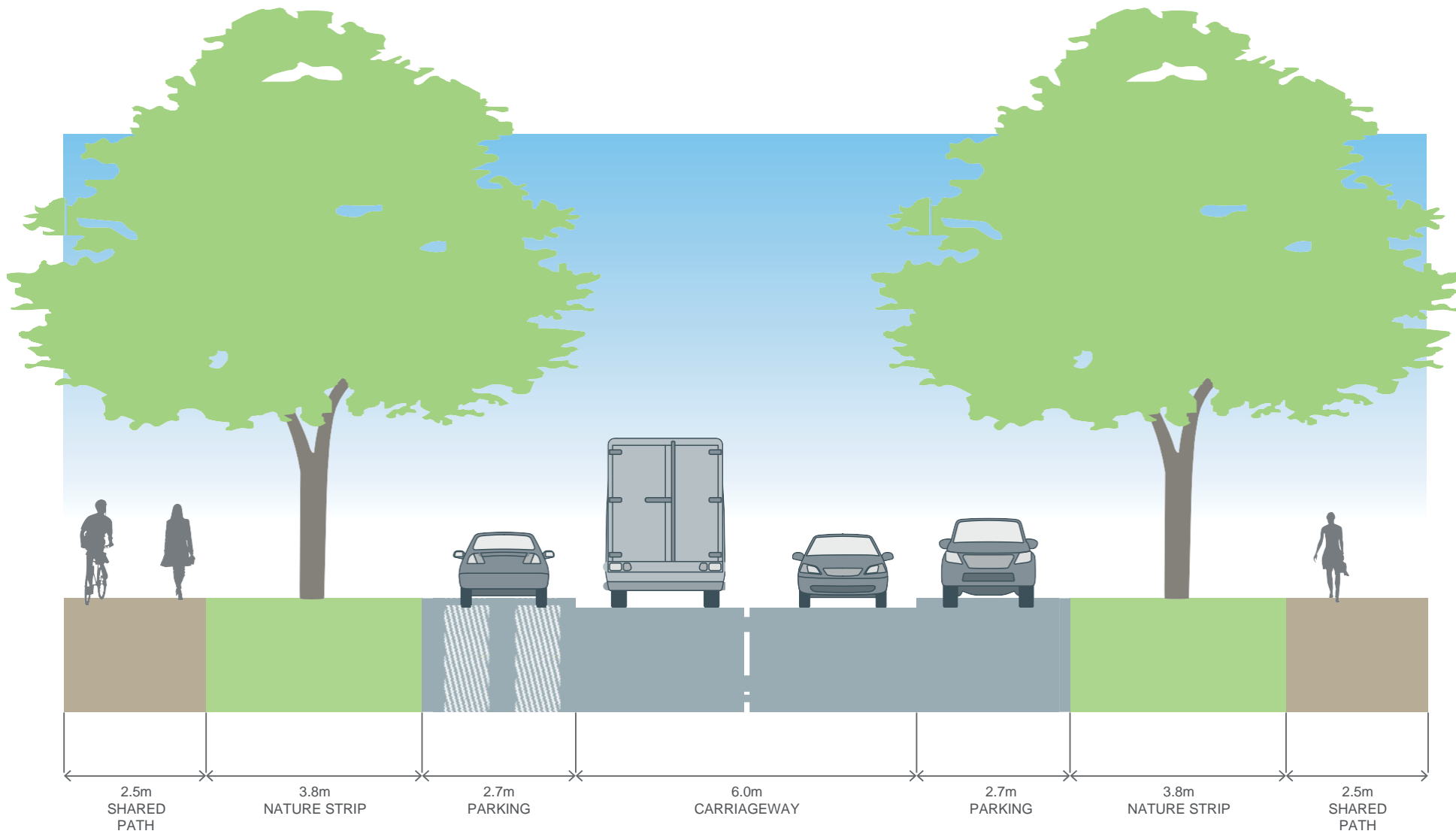
REQUIREMENTS	
R27	Bus stop facilities must be designed to the satisfaction of Public Transport Victoria (PTV).

3.4.2 Walking & cycling

REQUIREMENTS	
R28	<p>Design of all roads must give priority to the requirements of pedestrians and cyclists by providing:</p> <ul style="list-style-type: none"> • Shared paths of at least 2.5 metres on both sides of all streets and roads unless otherwise specified by the DP. • Safe and convenient crossing points of connector roads and local streets at all intersections and on key desire lines. • Safe pedestrian crossings of arterial roads at all intersections, at key desire lines, and on regular intervals appropriate to the function of the road and public transport provision. <p>All to the satisfaction of the coordinating roads authority and the responsible authority.</p>
GUIDELINES	
G14	Lighting should be installed along shared, pedestrian, and cycle paths linking to key destinations, unless otherwise agreed by the responsible authority.

3.4.3 Road network

REQUIREMENTS	
R29	All existing local roads within the precinct associated with any development proposal must be upgraded to the satisfaction of the responsible authority.
R30	<p>Staging of subdivisions must provide for the timely connection of:</p> <ul style="list-style-type: none"> • Road links between properties; and • Road links to the connector and arterial road network.
R31	Vehicle access to lots fronting arterial roads must be provided from a service road or local road to the satisfaction of the coordinating road authority.
R32	<p>Subdivision layouts must provide:</p> <ul style="list-style-type: none"> • A permeable, safe and low speed street network that encourages walking and cycling; • Convenient access to local points of interest and destinations; and • For the effective integration with neighbouring properties.
GUIDELINES	
G15	Vehicle crossovers should be provided so as not to dominate the streetscape and provide the opportunity for nature strip landscaping.



NOTES:

- Minimum street tree mature height 15 metres
- All kerbs are to be B2 Barrier Kerb

Figure 4 - Connector Street Level (24.0m)

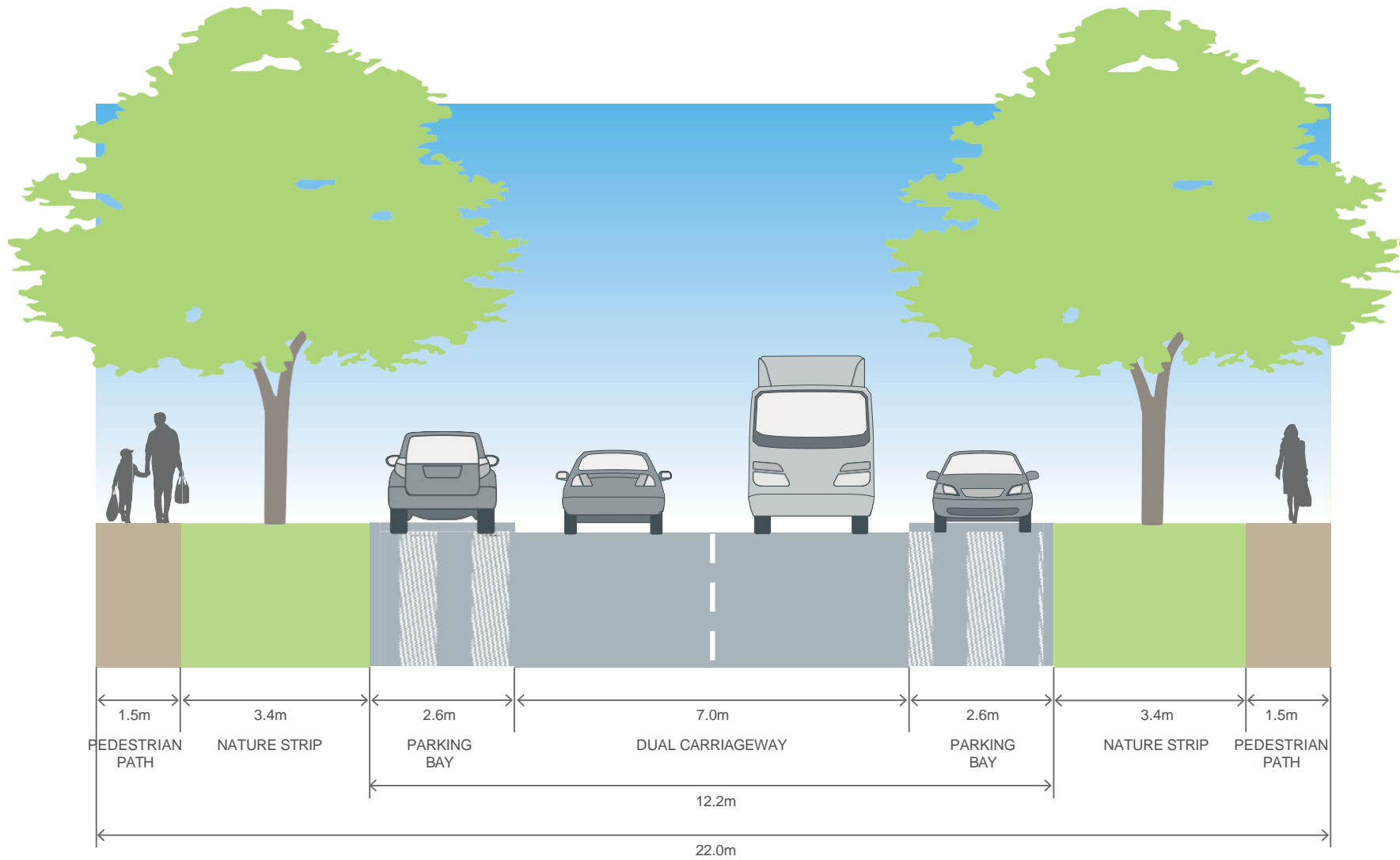


Figure 5 - Local Access Street (22.0m) – Industrial

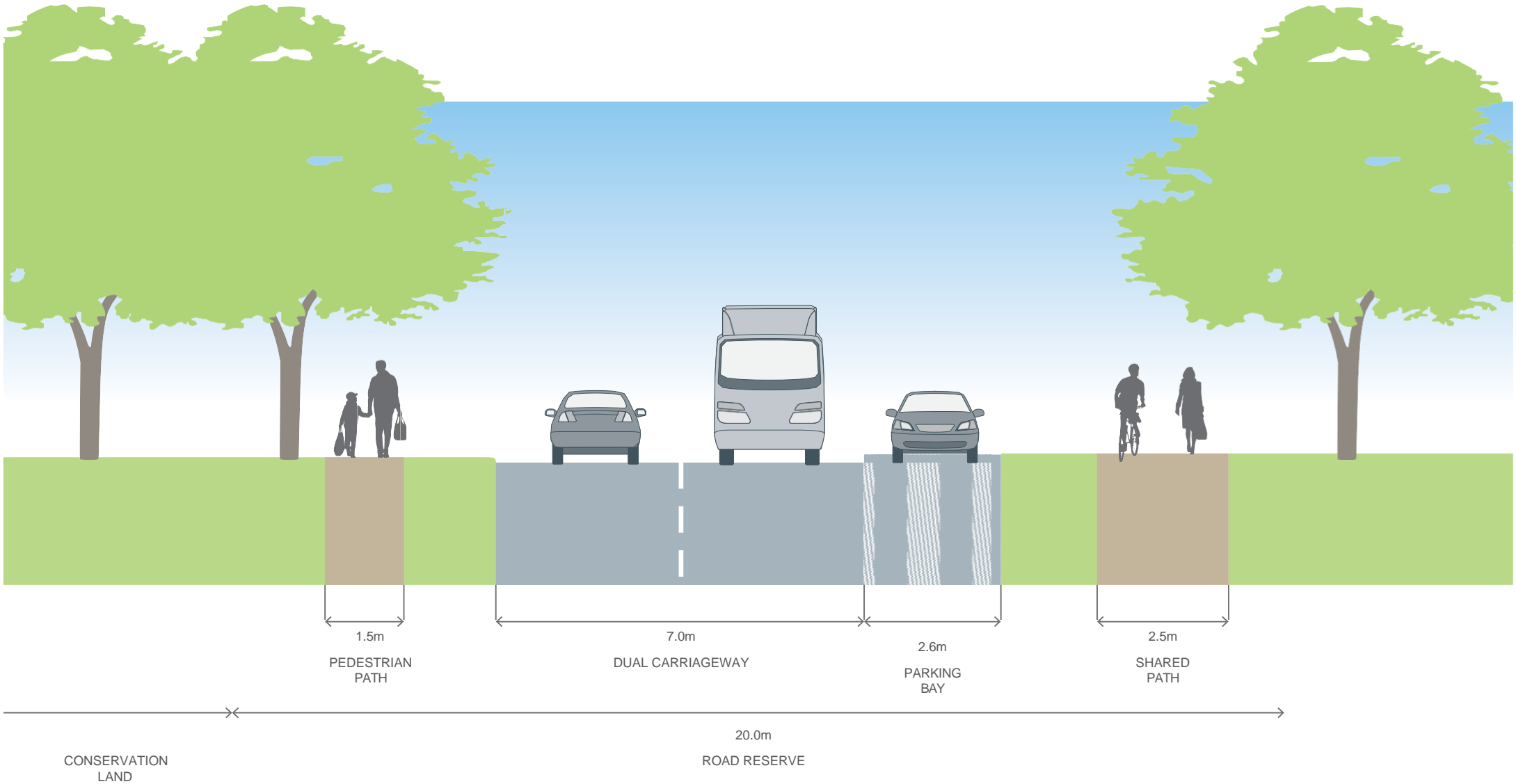
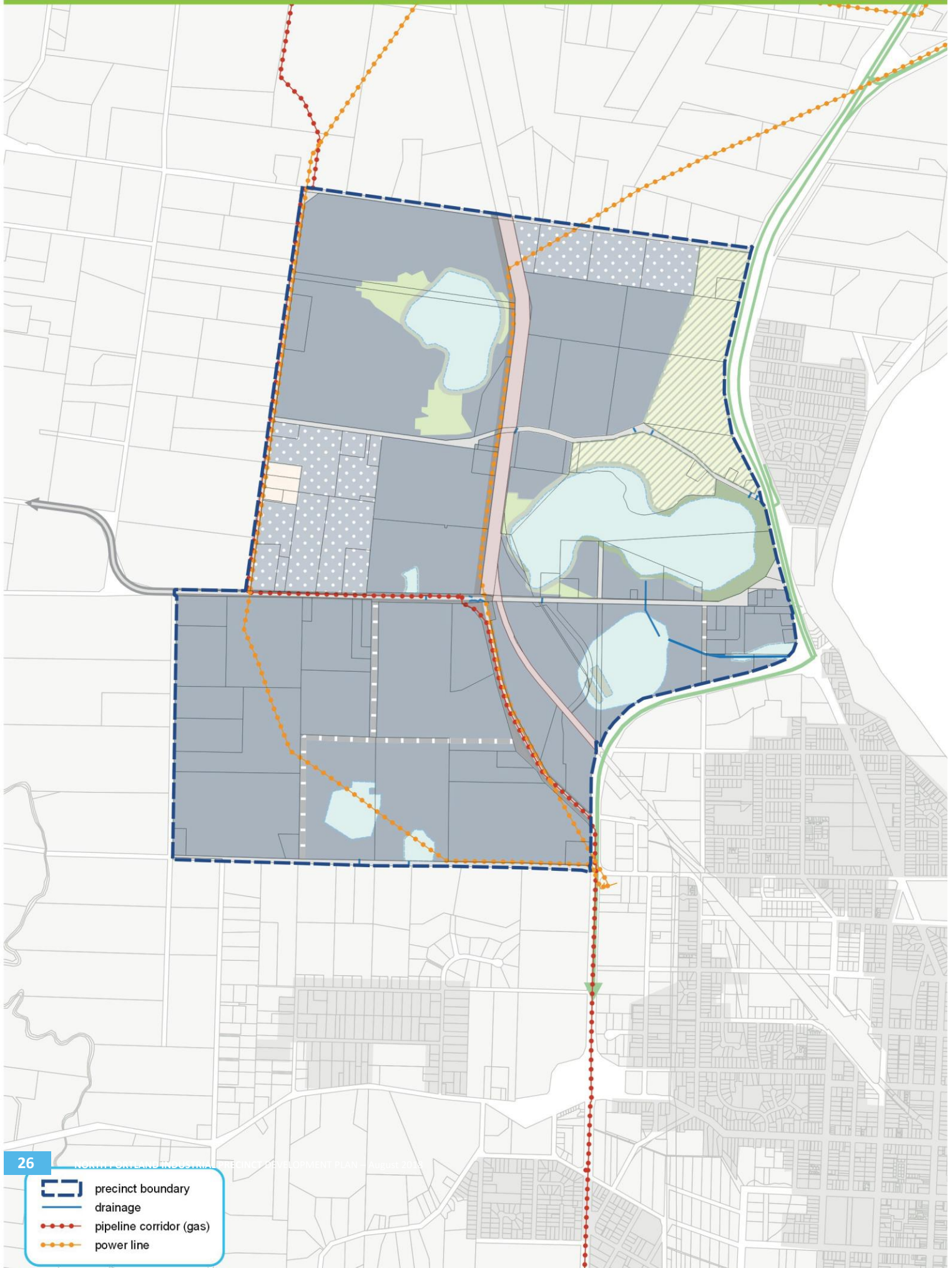


Figure 6 - Local Access Street (20.0m) – School Road (north view)

3.5 Integrated water management, sustainability & utilities servicing

3.5.1 Integrated water management & sustainability

REQUIREMENTS	
R33	Final design and boundary of retarding basins, wetlands, stormwater quality treatment infrastructure and associated paths, boardwalks, bridges and planting, must be to the satisfaction of Wannon Water and the responsible authority.
R34	Stormwater runoff from new development must meet or exceed the performance objectives of the Infrastructure Design Manual (IDM) prior to discharge to receiving waterways, unless otherwise approved by the responsible authority
R35	Quantity of stormwater runoff from development must not exceed the runoff generated from the pre-developed site, to the satisfaction of the responsible authority.
R36	Within the road reserve, water sensitive urban design treatments must be used to improve the quality of infiltration and runoff.
R37	Development applications must demonstrate how: <ul style="list-style-type: none"> • Overland flow paths and piping within road or other reserves will be connected and integrated across property/parcel boundaries; • Wannon Water and the responsible authority freeboard requirements for overland flow paths will be adequately contained within road or other reserves; • The development will deliver Integrated Water Management requirements of any approved Integrated Water Management Plan or Strategy; • Development will prevent litter from entering the downstream drainage system through the use of litter traps, as required by the drainage authorities.
R38	Environmentally sustainable principles and initiatives should be considered in the design of buildings, such as solar aspect, crossflow ventilation, materials and finishes, embodied energy, use of solar hot water and on-site collection and reuse of stormwater.
GUIDELINES	
G16	Development should support and facilitate the use of alternative water supplies.
G17	Development should have regard to relevant policies and strategies being implemented by the responsible authority, Wannon Water and water retail authority, including any approved Integrated Water Management Plan.
G18	The design and layout of roads, road reserves, and public open space should optimise water use efficiency and long-term viability of vegetation and public uses through the use of overland flow paths, Water Sensitive Urban Design initiatives such as rain gardens and/or locally treated storm water for irrigation, where practical.
G19	Where practical, development should include integrated water management initiatives to reduce reliance on potable water and increase utilization of storm and wastewater, contributing to a sustainable and green urban environment.
G20	Maximise the potential for integration of stormwater management infrastructure with recreation and environmental uses in open space where this does not conflict with the primary function of the open space.
G21	Subdivision in areas containing natural waterways should: <ul style="list-style-type: none"> • Minimise earthworks and changes to the existing landform; • Retain existing remnant native vegetation; • Make provision for appropriate revegetation of the waterway riparian corridor to increase erosion resistance.
G22	Increase the use of fit-for-purpose alternative water sources such as storm water, rainwater and recycled water.
G23	Integrated water management systems should be designed to: <ul style="list-style-type: none"> • Support and enhance habitat values for local flora and fauna species. • Enable future harvesting and/or treatment and re-use of stormwater.
G24	Streets should be the primary interface between development and waterways.



- precinct boundary
- drainage
- pipeline corridor (gas)
- power line

3.5.2 Utilities

REQUIREMENTS	
R39	Delivery of underground services must be coordinated, located, and bundled (using common trenching) to facilitate the planting of trees and other vegetation within road verges.
R40	All existing above ground electricity cables of less than 66kV voltage must be placed underground as part of the upgrade of existing roads.
R41	All new electricity supply infrastructure (excluding substations and cables of a voltage greater than 66kV) must be provided underground.
R42	Where existing above ground electricity cables of 66kV voltage are retained along roadways, underground conduits are to be provided as part of the upgrade of these roads to allow for future undergrounding of the electricity supply.
R43	Above ground utilities must be identified at the subdivision design stage to ensure effective integration with the surrounding area and to minimise amenity impacts and be designed to the satisfaction of the relevant authority.
R44	All lots must be provided with potable water, electricity, reticulated sewerage, drainage, gas and telecommunications to the satisfaction of the relevant servicing authority.
R45	Any plan of subdivision must contain a restriction which provides that no commercial building may be constructed on any allotment unless the building incorporates dual plumbing for recycled water supply for toilet flushing and garden watering use should it become available.
GUIDELINES	
G25	Above ground utilities should be screened with vegetation, as appropriate.
G26	Existing above ground 66kV electricity cables should be removed and placed underground as part of the upgrade of existing roads.
G27	Design and placement of underground services in new or upgraded streets should utilise the service placement guidelines outlined in Appendix 4.2.
G28	Utility easements to the rear of lots should only be provided where there is no practical alternative.

3.6 Infrastructure delivery & development staging

3.6.1 Development staging

REQUIREMENTS	
R46	<p>Development staging must provide for the timely provision and delivery of:</p> <ul style="list-style-type: none"> • Street links between properties, constructed to the property boundary; and • Connection of the on- and off-road pedestrian and bicycle network.
R47	<p>Development viability and staging in this precinct will be determined largely through the availability and provision of infrastructure in order to access and service each development site. Within this context, development must:</p> <ul style="list-style-type: none"> • Ensure the safe and orderly vehicular access to the existing arterial network; and • Provide access to each lot via a sealed road constructed to an industrial standard to service the development, all to the satisfaction of the responsible authority.
R48	<p>Streets must be constructed to property boundaries where an inter-parcel connection is intended or indicated in the DP, by any date or stage of development required or approved by the responsible authority.</p>

3.6.2 Subdivision

REQUIREMENTS	
R49	<p>Subdivision of land within the precinct must provide and meet the total cost of delivering the following infrastructure:</p> <ul style="list-style-type: none"> • Upgrade of local streets; • Local bus stop infrastructure (where locations have been agreed in writing by Public Transport Victoria); • Landscaping of all existing and future roads and local streets; • Intersection works and traffic management measures along arterial roads, connector streets, and local streets; • Landscaping of all existing and future roads and local streets; • Council approved fencing and landscaping (where required) along the precinct boundary; • Local shared, pedestrian and bicycle paths along local arterial roads, connector roads, utilities easements, local streets, waterways and within local parks including bridges, intersections, and barrier crossing points; • Appropriately scaled lighting along all roads, major shared and pedestrian paths, and traversing public open space; • Basic improvements to local parks and other open space; • Local drainage system; and • Infrastructure as required by utility service providers including water, sewerage, drainage (except where the item is funded through a Development Services Scheme), electricity, gas and telecommunications.

3.7 Open space delivery

REQUIREMENTS	
R50	<p>All public open space must be finished to a standard to the satisfaction of the responsible authority prior to the transfer of the public open space, including:</p> <ul style="list-style-type: none"> • Removal of all existing and disused structures, foundations, pipelines, and stockpiles; • Clearing of rubbish and weeds, levelled, top soiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise); • Provision of water tapping, potable and recycled water connection points. Sewer and gas connection points must also be provided to land identified as a sports reserve and community facility; • Planting of trees and shrubs; • Provision of vehicular exclusion devices (fence, bollards, or other suitable method); and • Maintenance access points.
R51	<p>Installation of park furniture including barbeques, shelters, furniture, rubbish bins, local scale playground equipment, local scale play areas, drinking fountains and kickabout spaces and appropriate paving to support these facilities consistent with local parks.</p>
R52	<p>Include boundary fencing where the public open space abuts private land, or as required by the responsible authority.</p>
R53	<p>Remediation of any contamination.</p>
GUIDELINES	
G29	<p>Subdivision should provide for a range of lot sizes to cater for a diversity of industrial and commercial uses.</p>

4.0 APPENDIX

4.1 Property Specific Land Budget (Refer Plan4)

PSP PROPERTY ID	TOTAL AREA (HECTARES)	TRANSPORT			COMMUNITY & EDUCATION	OPEN SPACE				TOTAL NET DEVELOPABLE AREA (HECTARES)	NET DEVELOPABLE AREA % OF PROPERTY	
		ARTERIAL ROAD – EXISTING ROAD RESERVE	NON-ARTERIAL ROAD – RETAINED EXISTING ROAD RESERVE	PUBLIC TRANSPORT FACILITIES / RESERVE	EXISTING GOVERNMENT SCHOOL	CONSERVATION (RCZ)	REMNANT NATIVE VEGETATION	WATERWAY AND DRAINAGE RESERVE	LOCAL NETWORK PARK			
PROPERTY												
1	5.44	-	-	5.44	-	-	-	-	-	0.00	0.00%	
2	0.13	-	-	0.13	-	-	-	-	-	0.00	0.00%	
3	3.91	-	-	3.91	-	-	-	-	-	0.00	0.00%	
4	0.21	-	-	0.21	-	-	-	-	-	0.00	0.00%	
5	1.90	-	-	1.90	-	-	-	-	-	0.00	0.00%	
6	0.01	-	-	0.01	-	-	-	-	-	0.00	0.00%	
7	0.01	-	-	0.01	-	-	-	-	-	0.00	0.00%	
8	30.22	-	-	-	-	-	1.18	2.67	-	26.37	87.27%	
9	2.60	-	-	-	-	-	0.78	0.96	-	0.86	32.90%	
10	2.00	-	-	-	-	-	-	-	-	2.00	100.00%	
11	50.92	-	0.00	-	-	-	5.59	11.93	-	33.40	65.59%	
12	2.72	-	-	-	-	-	-	-	-	2.72	100.00%	
13	1.64	-	-	-	-	-	-	-	-	1.64	100.00%	
14	4.76	-	-	-	-	-	-	-	-	4.76	100.00%	
15	4.77	-	-	-	-	-	-	-	-	4.77	100.00%	
16	4.79	-	-	-	-	-	-	-	-	4.79	100.00%	
17	3.37	-	-	-	-	3.37	-	-	-	0.00	0.00%	
18	0.95	-	-	-	-	0.95	-	-	-	0.00	0.00%	
19	0.05	-	-	-	-	-	-	-	-	0.05	100.00%	
20	10.52	-	-	-	-	-	-	-	-	10.52	100.00%	
21	12.12	-	-	-	-	5.59	-	-	-	6.53	53.86%	
22	5.36	-	-	-	-	-	-	-	-	5.36	100.00%	
23	9.69	-	-	-	-	-	-	-	-	9.69	100.00%	
24	15.26	-	-	-	-	9.10	-	-	-	6.17	40.40%	
25	4.45	-	-	-	-	4.45	-	-	-	0.00	0.00%	
26	0.20	-	-	-	-	0.20	-	-	-	0.00	0.00%	
27	0.24	-	-	-	-	0.24	-	-	-	0.00	0.00%	
28	0.35	-	-	-	-	-	-	-	-	0.35	100.00%	
29	0.03	-	-	-	-	-	-	-	-	0.03	100.00%	
30	0.18	-	-	-	-	-	-	-	-	0.18	100.00%	
31	0.67	-	-	-	-	-	-	-	-	0.67	100.00%	
32	6.10	-	-	-	-	-	-	-	-	6.10	100.00%	
33	1.06	-	-	-	-	-	-	-	-	1.06	100.00%	
34	2.96	-	-	-	-	-	-	-	-	2.96	100.00%	
35	0.65	-	-	-	-	-	-	-	-	0.65	100.00%	

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		ARTERIAL ROAD – EXISTING ROAD RESERVE	NON-ARTERIAL ROAD – RETAINED EXISTING ROAD RESERVE	PUBLIC TRANSPORT FACILITIES / RESERVE	EXISTING GOVERNMENT SCHOOL	CONSERVATION (RCZ2)	REMNANT NATIVE VEGETATION	WATERWAY AND DRAINAGE RESERVE	LOCAL NETWORK PARK		
36	15.72	-	-	-	-	-	-	-	-	15.72	100.00%
37	1.01	-	-	-	-	-	-	-	-	1.01	100.00%
38	0.80	-	-	-	0.80	-	-	-	-	0.00	0.00%
39	0.79	-	-	-	0.79	-	-	-	-	0.00	0.00%
40	0.13	-	-	-	-	-	-	-	-	0.13	100.00%
41	0.41	-	-	-	0.41	-	-	-	-	0.00	0.00%
42	0.41	-	-	-	0.41	-	-	-	-	0.00	0.00%
43	2.80	-	-	-	-	-	-	-	-	2.80	100.00%
44	5.47	-	-	-	-	-	-	-	-	5.47	100.00%
45	6.29	-	-	-	-	-	-	-	-	6.29	100.00%
46	14.27	-	-	-	-	-	-	0.58	-	13.69	95.93%
47	2.01	-	-	-	-	-	-	-	-	2.01	100.00%
48	0.66	-	-	-	-	-	-	-	-	0.66	100.00%
49	2.00	-	-	-	-	-	-	-	-	2.00	100.00%
50	0.43	-	-	-	-	-	0.08	-	-	0.35	82.11%
51	3.14	-	-	-	-	-	-	-	-	3.14	100.00%
52	0.38	-	-	-	-	-	-	0.01	-	0.38	98.33%
53	0.41	-	-	-	-	0.38	-	0.02	-	0.00	0.00%
54	11.68	-	-	-	-	8.83	-	2.85	-	0.00	0.00%
55	0.43	-	-	-	-	0.43	-	-	-	0.00	0.00%
56	0.08	-	-	-	-	-	0.08	-	-	0.00	0.00%
57	4.03	-	-	-	-	-	0.92	1.04	-	2.06	51.20%
58	22.37	-	-	-	-	-	0.00	19.79	2.52	0.05	0.20%
59	2.06	-	-	-	-	-	0.01	0.36	-	1.69	82.18%
60	0.46	-	-	-	-	-	0.02	0.14	-	0.31	67.32%
61	0.81	-	-	-	-	-	0.26	0.48	-	0.07	9.01%
62	0.65	-	-	-	-	-	0.39	0.02	-	0.24	37.37%
63	3.24	-	-	-	-	-	0.14	1.08	-	2.03	62.55%
64	4.84	-	-	-	-	-	-	1.07	0.60	3.17	65.52%
65	0.12	-	-	-	-	-	-	-	-	0.12	100.00%
66	1.65	-	0.00	-	-	-	-	0.59	0.15	0.91	55.06%
67	0.20	-	-	-	-	-	-	0.08	-	0.12	60.04%
68	11.53	-	-	-	-	-	-	8.55	2.98	0.00	0.00%
69	2.69	-	-	-	-	-	-	-	-	2.69	100.00%
70	5.46	-	-	-	-	-	-	-	-	5.46	100.00%
71	12.23	-	-	-	-	-	-	-	-	12.23	100.00%
72	0.40	-	-	-	-	-	-	-	-	0.40	100.00%
73	6.57	-	-	-	-	-	-	-	-	6.57	100.00%
74	1.21	-	-	-	-	-	-	-	-	1.21	100.00%

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		ARTERIAL ROAD – EXISTING ROAD RESERVE	NON-ARTERIAL ROAD – RETAINED EXISTING ROAD RESERVE	PUBLIC TRANSPORT FACILITIES / RESERVE	EXISTING GOVERNMENT SCHOOL	CONSERVATION (RCZ2)	REMNANT NATIVE VEGETATION	WATERWAY AND DRAINAGE RESERVE	LOCAL NETWORK PARK		
75	0.81	-	-	-	-	-	-	-	-	0.81	100.00%
76	1.80	-	-	-	-	-	-	-	-	1.80	100.00%
77	24.45	-	-	-	-	-	-	-	-	24.45	100.00%
78	4.98	-	-	-	-	-	-	-	-	4.98	100.00%
79	3.91	-	-	-	-	-	-	-	-	3.91	100.00%
80	4.06	-	-	-	-	-	-	-	-	4.06	100.00%
81	11.33	-	-	-	-	-	-	-	-	11.33	100.00%
82	8.04	-	-	-	-	-	-	-	-	8.04	100.00%
83	0.63	-	-	-	-	-	-	-	-	0.63	100.00%
84	17.72	-	-	-	-	-	-	-	-	17.72	100.00%
85	0.75	-	-	-	-	-	-	-	-	0.75	100.00%
86	16.78	-	-	-	-	-	-	4.02	-	12.76	76.06%
87	16.26	-	-	-	-	-	-	1.83	-	14.42	88.71%
88	3.85	-	-	-	-	-	-	-	-	3.85	100.00%
89	0.81	-	-	-	-	-	-	-	-	0.81	100.00%
90	17.75	-	-	-	-	-	-	-	-	17.75	100.00%
91	1.07	-	-	-	-	-	-	-	-	1.07	100.00%
92	6.40	-	-	-	-	-	-	-	-	6.40	100.00%
93	2.18	-	-	-	-	-	-	-	-	2.18	100.00%
94	3.69	-	-	-	-	-	-	-	-	3.69	100.00%
95	12.23	-	-	-	-	-	-	1.18	-	11.06	90.38%
96	0.04	-	-	-	-	-	-	-	-	0.04	100.00%
97	0.27	-	-	-	-	-	-	0.05	-	0.21	79.50%
98	0.88	-	-	-	-	-	-	0.27	-	0.62	69.68%
99	0.34	-	-	-	-	-	-	0.11	-	0.23	66.88%
100	1.19	-	-	-	-	-	-	0.63	-	0.56	47.11%
101	17.38	-	-	-	-	-	-	9.44	-	7.94	45.69%
102	0.22	-	-	-	-	-	-	-	-	0.22	100.00%
103	0.25	-	-	-	-	-	-	-	-	0.25	100.00%
104	0.10	-	-	-	-	-	-	-	-	0.10	100.00%
105	0.60	-	-	-	-	-	-	-	-	0.60	100.00%
106	0.41	-	-	-	-	-	-	-	-	0.41	100.00%
107	0.40	-	-	-	-	-	-	-	-	0.40	100.00%
108	1.17	-	-	-	-	-	-	-	-	1.17	100.00%
109	0.48	-	-	-	-	-	-	-	-	0.48	100.00%
110	0.79	-	-	-	-	-	-	0.03	-	0.76	96.33%
111	0.12	-	-	-	-	-	-	-	-	0.12	100.00%
112	0.48	-	-	-	-	-	-	-	-	0.48	100.00%
113	3.07	-	-	-	-	-	-	0.75	-	2.33	75.67%

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114	0.26	-	-	-	-	-	-	-	-	0.26	100.00%
115	0.29	-	-	-	-	-	-	0.003	-	0.28	98.92%
116	1.95	-	-	-	-	-	-	0.26	-	1.69	86.62%
117	0.65	-	-	-	-	-	-	0.28	-	0.37	57.14%
SUB-TOTAL	530.93	0.00	0.00	11.62	2.40	33.54	9.44	71.08	6.25	396.60	74.70%

ROAD RESERVE

RD1 (Westlakes Road)	3.67	-	3.54	0.13	-	-	-	-	-	0.00	0.00%
RD2 (School Road)	3.65	-	3.65	-	-	-	-	-	-	0.00	0.00%
RD3 (Darts Road)	4.56	-	4.56	-	-	-	-	-	-	0.00	0.00%
RD4	0.49	-	0.44	-	-	-	-	0.002	0.04	0.00	0.00%
RD5 (Cashmore Road)	3.77	-	3.67	0.10	-	-	-	-	-	0.00	0.00%
RD6	0.66	-	0.66	-	-	-	-	-	-	0.00	0.00%
RD7 (Portland-Nelson Road)	8.46	8.46	-	-	-	-	-	-	-	0.00	0.00%
RD8 (Wilsons Road)	3.60	-	3.60	-	-	-	-	-	-	0.00	0.00%
SUB-TOTAL	28.84	8.46	20.11	0.23	0.00	0.00	0.00	0.00	0.04	0.00	0.00%

TOTALS PSP	559.78	8.46	20.11	11.84	2.40	33.54	9.44	71.08	6.30	396.60	70.85%
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4.2 Service placement guidelines

ROAD CROSS SECTIONS

The following service placement guidelines outline placement of services for a typical street environment. This approach is appropriate for the road cross sections outlined in this DP containing grassed nature strips, footpaths and road pavements.

	UNDER PEDESTRIAN PAVEMENT	UNDER NATURE STRIPS	DIRECTLY UNDER TREES ¹	UNDER KERB	UNDER ROAD PAVEMENT ²	WITHIN ALLOTMENTS	NOTES
SEWER	Possible	Preferred	Possible	No	Possible	Possible ³	
POTABLE WATER	Possible ⁴	Preferred	Possible	No	Possible	No	Can be placed in combined trench with gas
RECYCLED WATER	Possible ⁴	Preferred	Preferred	No	Possible	No	
RETICULATED GAS	Possible ⁴	Preferred	Preferred	No	No	No	Can be placed in combined trench with potable water
ELECTRICITY	Preferred ⁴	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
FTTH / TELCO	Preferred ⁴	Possible	Possible	No	No	No	Pits to be placed either fully in footpath or nature strip
DRAINAGE	Possible	Possible	Possible	Preferred	Possible	Possible ³	
TRUNK SERVICES	Possible	Possible	Possible	Possible	Possible	No	

GENERAL PRINCIPLES FOR SERVICE PLACEMENT

- Place gas and water on one side of road, electricity on the opposite side
- Place water supply on the high side of road
- Place services that need connection to adjacent properties closer to these properties
- Place trunk services further away from adjacent properties
- Place services that relate to the road carriageway (e.g. drainage, street light electricity supply) closer to the road carriageway
- Maintain appropriate services clearances and overlap these clearances wherever possible
- Services must be placed outside of natural waterway corridors or on the outer edges of these corridors to avoid disturbance to existing waterway values.

TABLE NOTES

1. Trees are not to be placed directly over property service connections.
2. Placement of services under road pavement is to be considered when service cannot be accommodated elsewhere in road reserve. Placement of services beneath edge of road pavement/parking bays is preferable to within traffic lanes.
3. Where allotment size/frontage width allows adequate room to access and work on a pipe.
4. Where connections to properties are within a pit in the pedestrian pavement/ footpath.

