MINUTES

—

COUNCIL MEETING

Tuesday 26 September 2023
6:00 pm

Potato Shed, Wadawurrung Country
41 Peninsula Drive, Drysdale

LIVE STREAMED ON THE CITY'S WEBSITE:

www.geelongaustralia.com.au/meetings

COUNCIL:

Cr T Sullivan (Bellarine Ward) - Mayor
Cr A Aitken (Windermere Ward) - Deputy Mayor
Cr J Mason (Bellarine Ward)
Cr E Wilkinson (Bellarine Ward)
Cr M Cadwell (Brownbill Ward)
Cr E Kontelj (Brownbill Ward)
Cr P Murrihy (Brownbill Ward)
Cr B Harwood (Kardinia Ward)
Cr B Moloney (Kardinia Ward)
Cr R Nelson (Kardinia Ward)
Cr S Hathway (Windermere Ward)

CITY OF GREATER GEELONG

2.2. Amendment C278ggee – Marshall Precinct Structure Plan Adoption and Exhibition

Source: **Planning and Design**
Executive Director: **Gareth Smith**

Purpose

1. To seek a Council resolution to exhibit Greater Geelong Planning Scheme Amendment C278ggee following adoption of the Marshall Precinct Structure Plan, July 2023.

Background

2. The Armstrong Creek Urban Growth Plan guides development of the area to provide housing for 54,000 people in 22,000 households. Development has substantially commenced. Marshall is the northern-most precinct structure plan (PSP) covering 123 hectares. In 2017, due to the precinct's fragmented landownership, the City committed to prepare the PSP. Preparation of other Armstrong Creek PSPs were developer-led.

3. Council released a draft Marshall PSP for public consultation in mid-2019 following approval to do so at the 9 July 2019 council meeting. Submissions were received from a mix of landowners, developers and government agencies and authorities.

Key Matters

4. Since release of the 2019 draft Marshall PSP, Council has refined the plan informed by the submissions, new technical assessments and further planning review (refer to **Attachment 1** for discussion). Delay in completing the PSP was mainly due to complexities in resolving the stormwater drainage strategy for the precinct.

5. **Attachment 2** shows the future urban structure (FUS) for the Marshall Precinct. The plan is similar to the 2019 plan by providing residential, mixed use and commercial uses. The precinct will yield over 1,555 dwellings. The FUS plan forms part of the Marshall PSP recommended for adoption at this council meeting (at **Attachment 4**).

6. An amendment is required to facilitate development. The amendment proposes to insert a new schedule to the Urban Growth Zone (**Attachment 3** map). The amendment will incorporate the Marshall PSP, Marshall Development Contributions Plan and Marshall Native Vegetation Precinct Plan into the Planning Scheme, as well as applying the Environmental Audit Overlay.

7. The amendment also proposes to apply a Design and Development Overlay to 137 Barwarre Road (located outside the Marshall PSP) to safeguard future public access to the train station directly from Barwarre Road. Refer to **Attachment 1** for discussion.

8. The precinct is a unique development location for Geelong. Close to a train station, arterial roads and set within attractive remnant vegetation, the precinct will offer diverse housing choice, local employment opportunities and habitat protection.

9. It is recommended the Marshall PSP be adopted, and Amendment C278ggee exhibited inviting submissions.

RESOLUTION - Item 2.2

Cr Mason moved, Cr Cadwell seconded -

That Council:

1. **Adopt the Marshall Precinct Structure Plan, July 2023 (as shown in Attachment 4).**

2. **Support the preparation and exhibition of Amendment C278ggee to the Greater Geelong Planning Scheme to:**

   2.1 Insert Schedule 7 to Clause 37.07 Urban Growth Zone, and replace the Urban Growth Zone map with Urban Growth Zone Schedule 7 map to the land shown in Attachment 3;

   2.2 Rezone Marshall Train Station land south of the station carpark from Transport Zone Schedule 1 to Urban Growth Zone Schedule 7 (this land is included in the Attachment 3 map);

   2.3 Rezone anomaly road reserve land from Farming Zone and Urban Growth Zone Schedule 4 to Urban Growth Zone Schedule 7 (this land is included in the Attachment 3 map);

   2.4 Apply Development Contributions Plan Overlay Schedule 10 and map to all the Urban Growth Zone Schedule 7 land;

   2.5 Apply the Environmental Audit Overlay to potentially contaminated land within the Marshall Precinct upon final advice of the Environment Protection Authority;

3. **Amend the Schedule to Clause 72.04 to incorporate the following documents:**

   3.1 Marshall Precinct Structure Plan, July 2023;

   3.2 Marshall Development Contributions Plan, August 2023; and

   3.3 Marshall Native Vegetation Precinct Plan, October 2022.

4. **Apply a Design and Development Overlay Schedule and map to the land at 137 Barwarre Road, Marshall.**

5. **Request the Minister for Planning to authorise the preparation and exhibition of Amendment C278ggee.**

Carried

Financial Sustainability

10. It is proposed to apply a Development Contributions Plan (DCP) to the Marshall PSP area (being the land zoned Urban Growth Zone Schedule 7). DCPs were applied throughout the Armstrong Creek Urban Growth Area and some infrastructure attributable to Marshall is shared with the Horseshoe Bend Precinct DCP and North East Industrial Precinct DCP.

11. The Marshall DCP has been prepared by the City. Planning costs, such as fees paid to consultants to complete technical assessments that inform the DCP, are included in the DCP levy. This means the City will recover planning costs when developers undertake subdivision and development. Costs associated with any forthcoming panel hearing are also a contingent item in the DCP.

12. The Marshall DCP levy per net residential developable hectare is $989K and the levy per net commercial developable hectare is $858K. The total DCP infrastructure cost is $68.7M. A summary of DCP costs is provided in **Attachment 1.**

13. The DCP will become an incorporated document in the planning scheme which would legally bind Council to the provisions of the plan.

14. Contributions towards Armstrong Creek Growth Area community facilities will also apply in the form of a per dwelling levy consistent with Section 46L of the *Planning and Environment Act*. The total community infrastructure levy is $2.17M.

15. The DCP will enable the collection of levies to ensure the identified shared infrastructure is funded to enable the City and developers to provide the infrastructure. The City will act as the collecting agency and may deliver infrastructure or enter into agreements with developers to provide land and works in-kind.

Community Engagement

16. In reaching this report's position to recommend preparation and exhibition of Amendment C278ggee, the City has engaged directly affected landowners. Officers have written to landowners informing them of this report being listed on the agenda for the 26 September 2023 Council Meeting.

17. If Council resolves to support the recommendation, the public exhibition process will involve a mail out to all directly affected and nearby landowners, notices to prescribed ministers, authorities and agencies, notices in local newspapers, and notice on the City's website and the Victoria Government Gazette as required by the *Planning and Environment Act 1987*. Exhibition, subject to ministerial authorisation, is planned for late 2023.

18. Interested parties will be able to make submissions which are intended to be considered under Council delegation.

19. It is more than likely that all submissions will be referred to an Independent Panel appointed by the Minister for Planning. Submitters then have the opportunity to appear and present their case at the panel hearing. It is noted that all submissions referred to a panel are considered by the panel, irrespective of whether a submitter appears or not.

20. In addition to Council's notice obligations under the *Planning and Environment Act 1987*, there is a long history of engagement with Marshall PSP landowners, prospective developers, authorities and agencies. Engagement culminated in the

release of a draft Marshall PSP for public consultation in mid-2019 as highlighted above. Details can be found in the 9 July 2019 Council Minutes.

Social Equity and Sustainability

21. The amendment has appropriately considered social equity principles. The City has engaged with landowners and other stakeholders about the proposed amendment. Further engagement will occur as part of exhibiting the amendment.

22. The amendment will provide social benefits by facilitating residential development conveniently located to a broad range of services. The additional land supply will also provide opportunity for new residents to settle in the area and help ease housing affordability pressures. Marshall is expected to deliver greater housing diversity including apartments, townhouses and social housing.

23. Close proximity to the Marshall Train Station is a significant advantage for the precinct. The amendment will facilitate improved access and usability of the station and encourage walking and cycling.

Relevant Law/Policy/Legal Implications

24. There is strong support for the amendment in the Greater Geelong Planning Scheme. Most notably the land is already zoned Urban Growth Zone (UGZ). The purpose of the UGZ is to manage the transition of non-urban land into urban land in accordance with a precinct structure plan.

25. The strategic directions in Council's Municipal Planning Strategy at Clause 02.03 include to facilitate the orderly and controlled development of the Armstrong Creek Urban Growth Area, generally in accordance with the *Armstrong Creek Urban Growth Plan, Framework Plan (2008, updated September 2012 and June 2015)* Incorporated Document.

26. The Marshall Development Contributions Plan has been prepared in accordance with Clause 19.03-1S *Development and infrastructure contributions plans*.

27. Both the Marshall Native Vegetation Precinct Plan and the Marshall Precinct Structure Plan have been prepared in accordance with Clause 12.01-1S *Protection of biodiversity*.

28. The amendment complies with Ministerial Direction No. 1 (MD1) *Potentially Contaminated Land*. The land was historically used for agriculture, and some properties are now used for caravan and car bodies and fuel storage, as well as filling activities. There is a risk of contamination associated with these uses.

29. MD1 contains specific requirements for land which is determined to be potentially contaminated. Additional requirements apply for land proposed to be used for sensitive uses, defined as residential uses, child-care centres, kindergartens, pre-school centres or primary schools, even if ancillary to another use, and for secondary schools and children's playgrounds. Where an amendment allows these uses (whether or not subject to a permit) a process under the environmental audit system, administered by the Environment Protection Authority, is required to demonstrate that the land is suitable for its intended use.

30. In accordance with MD1 an Environmental Audit Overlay (EAO) is proposed for the Marshall PSP residential land subject to final advice of the Environment Protection

Authority. This approach is consistent with MD1 and MD19 *Amendments That May Significantly Impact the Environment, Amenity and Human Health*, and Planning Practice Note 30, which identifies the EAO as the preferred mechanism to defer a preliminary risk screen assessment or environmental audit.

Alignment to Community Plan and Vision

31. This report aligns with Our Community Plan 2021-2025 strategic priority:
Sustainable growth and environment.

32. This report aligns with the Community led 30-year Vision, “Greater Geelong: A Clever and Creative Future” community aspiration:
Sustainable development that supports population growth and protects the natural environment.

Conflict of Interest

33. No officer involved in the preparation of this report declared a general or material conflict of interest.

Risk Assessment

34. The amendment includes rezoning the southern portion of the Marshall Station VicTrack land from Transport Zone 1 to Urban Growth Zone 7. This land does not form part of the redeveloped station and carpark plans and preliminary discussions with Rail Projects Victoria have occurred. The VicTrack land is included in the Marshall PSP and Station Precinct Concept Plan. The land is integral to the concept plan design and contributes to the net developable area and forecast dwelling yield. Discussions with VicTrack shall proceed when the amendment is exhibited however it is not confirmed if the VicTrack land is or is not required for future rail and station related uses.

35. The Marshall PSP allows higher density residential development within walking distance to the Station Precinct. There are also areas of remnant native woodland close to the station that will be protected in future conservation reserves. This dynamic has created residential parcels that will require creative housing design and access solutions, including detailed assessment of bushfire hazard at subdivision and development stage. The entire precinct is designated a Bushfire Prone Area.

36. The conservation reserves were classified as woodland hazard in the Marshall PSP Bushfire Assessment and Development Report, May 2022. This classification requires low threat setbacks in order to achieve a BAL-12.5 standard for dwellings. There is a risk some of this residential land is not developable or the conservation reserves may need to be modified if the Bushfire Prone Area designation is not removed by the State Government as development of the precinct progresses.

37. Because of the complexities to deliver drainage infrastructure, which includes outfall structures outside the Marshall PSP area, the City may need to take the lead in the future to acquire private land in order to facilitate development. For this reason, the land required for drainage infrastructure has been valued and included in the Marshall DCP. For similar reasons, the land required for the East-West Connector Road and realigned Drews Road have been valued and included in the Marshall DCP.

Environmental Sustainability

38. The amendment is supported by technical assessments and planning controls to provide for sustainable dwelling and subdivision design, best practice stormwater management, native vegetation retention and improving habitat for native species. The Marshall PSP proposes a range of requirements and performance-based targets to achieve and maintain a net zero carbon footprint.

39. Environmental sustainability is further discussed in **Attachment 1**.

Attachments

1. Attachment 1 - Discussion Preparation of Amendment C 278 ggee (003) [**2.2.1** - 8 pages]
2. Attachment 2 - Marshall Future Urban Structure Plan [**2.2.2** - 1 page]
3. Attachment 3 - Urban Growth Zone Schedule 7 map [**2.2.3** - 1 page]
4. Attachment 4 - Marshall Precinct Structure Plan, July 2023 [**2.2.4** - 151 pages]

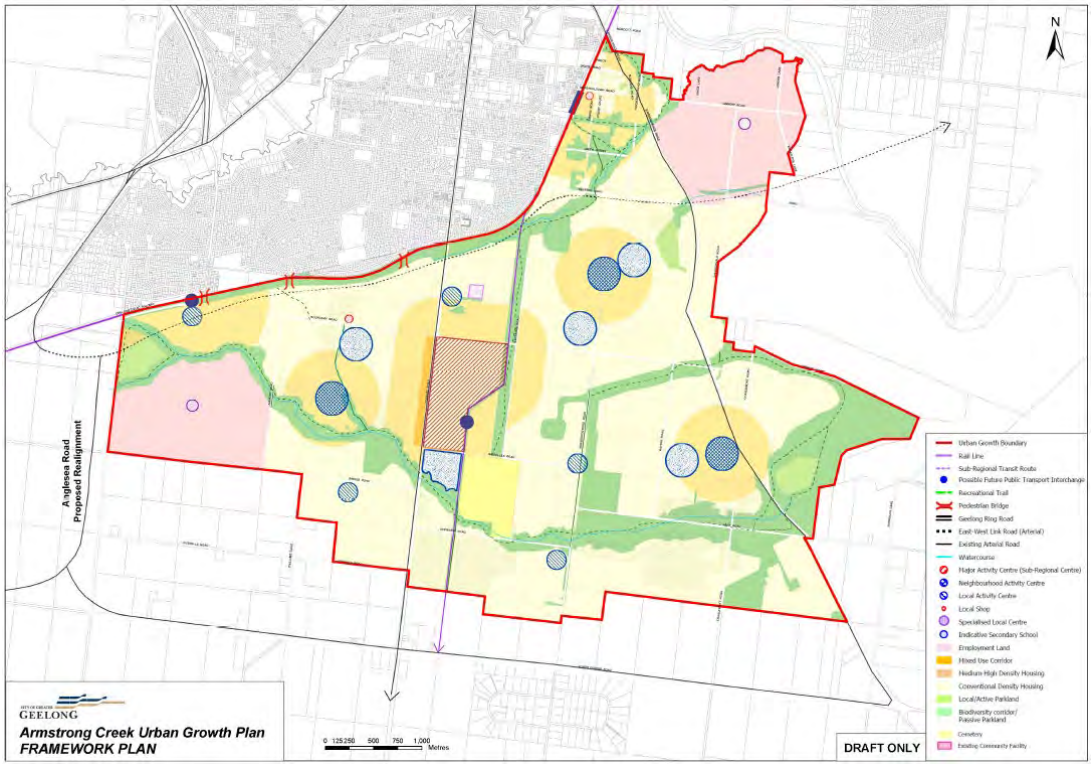
Attachment 1

Discussion: Preparation of Amendment C278ggee

Background to the Marshall Precinct Structure Plan

1. The Armstrong Creek Urban Growth Plan guides development of the area to provide housing for approximately 54,000 people and associated services and infrastructure. Armstrong Creek is identified as a key urban growth area in Council's Municipal Planning Strategy.

2. Development has substantially commenced generally in accordance with the plan, which is an Incorporated Document in the Greater Geelong Planning Scheme shown here:



3. Marshall is the northern-most precinct structure plan (PSP) covering 123 hectares. In 2017, due to the precincts' fragmented landownership, the City committed to prepare the PSP. Preparation of other Armstrong Creek PSPs were developer-led.

4. Council released a draft Marshall PSP for informal public consultation in mid-2019. Submissions were received from a mix of landowners, developers and Government agencies and authorities.

5. Directly affected landowner submissions were generally supportive of the plan, particularly the allocation of land uses for residential purposes and commercial uses in the northern part of the precinct accessed from Barwon Heads Road. Two landowners suggested the extent of land reserved for native vegetation conservation be modified.

6. Several submissions were received from surrounding landowners, mainly about existing traffic issues, gaps in the pedestrian and cycle network and environmental impacts of future development. Residents of Priory Court and St Cuthberts Court opposed any through vehicle access to the Marshall Precinct.

7. Comments were received from Barwon Water, VicTrack, the Department of Transport (now Department of Transport and Planning) and the Corangamite Catchment Management Authority highlighting corrections to the plan and providing relevant advice.

8. Since release of the 2019 draft Marshall PSP, Council has refined the plan informed by the submissions, new technical assessments and further planning review. Delay in completing the PSP was due to complexities in resolving the stormwater management strategy for the precinct, as well as updates to native vegetation and fauna survey work. These matters are discussed in the following sections of this report.

Marshall Precinct Stormwater Management Strategy

9. Spiire were engaged by Council to undertake a Stormwater Management Strategy (SWMS) for the Marshall Precinct Structure Plan. The SWMS is integral to the PSP and informs the Future Urban Structure (FUS) and Marshall Development Contributions Plan (DCP).

10. The SWMS has been prepared to identify a system which manages both stormwater water quality and stormwater quantity, including conveyance of flows through, and downstream of the precinct area.

11. The Marshall SWMS incorporates offline wetlands, retarding basins, sediment basins and main drainage pipes, and allows for the following environmental features:

    11.1 Formalisation of Marshall Creek into a constructed waterway, from the railway line in the west of the precinct down to the confluence with the Barwon River.

    11.2 Protection of the middle reach of Marshall Creek, which is flanked by high value Native Vegetation (including Bellarine Yellow Gums) to be retained. The flow regime through this reach will be maintained to protect the long-term health of this vegetation community.

    11.3 Creation of an outfall at the southeast corner of the precinct which outlets to Sparrovale – Nubijt yooree Wetlands, immediately downstream of Sparrovale Linear Wetland. This comprises a piped outfall, which will serve some Barwon Heads Road catchments and also the future North East Industrial Precinct. The pipe transitions to a waterway and extends through Sparrovale – Nubijt yooree Wetlands area, with the ultimate design to integrate with the masterplan.

    11.4 Volumetric reduction of stormwater has not been assessed or provided for in the Marshall SWMS. Recycled Water will be provided by Barwon Water to the precinct and this will be mandated for toilet flushing and garden tap supply. In the absence of any other large demands, such as sporting ovals, meaningful volumetric reduction of stormwater is considered unfeasible.

12. The SWMS is informed by flood mapping predicting 1% AEP existing conditions flood depths and extents across the Precinct and surrounds. There is shallow and broad flooding across the southern and central part of the Precinct. This is to be expected through this area which is relatively flat, with the absence of any substantial waterways or open channels. Further north and downstream, Marshall Creek becomes more defined and flood extents are more confined to this waterway corridor.

13. In addition to being flood-prone, there are several constraints present across the Precinct which create complexities from a stormwater management perspective. Section 2 of the SWMS provides a description of these constraints; being the railway line, AusNet transmission line easement, Barwon Water main outfall sewer and informal drainage lines and outfall to the Barwon River and floodplain.

14. Preparation of the SWMS considered interfacing major infrastructure projects. The Marshall Precinct is roughly triangular in shape and bounded by three transport

infrastructure projects: the Geelong to Warrnambool rail line to the west; Barwon Heads Road duplication to the east; and the planned Bellarine Link Road (Reserve Road) to the south. At the time of preparing the SWMS, major upgrade projects for each one of these transport links were underway. The SWMS also assessed the implications of the North East Industrial Precinct PSP and DCP, prepared by The City in 2010.

15. A critical feature of the Marshall Precinct is the existing on-site remnant vegetation and opportunity to provide habitat for native fauna. The native vegetation forms a major consideration for the SWMS, as it is critical this vegetation is not impacted.

16. A fauna assessment report found that development of the Marshall PSP is unlikely to significantly impact listed species. The report made several recommendations which have informed the SWMS, including:

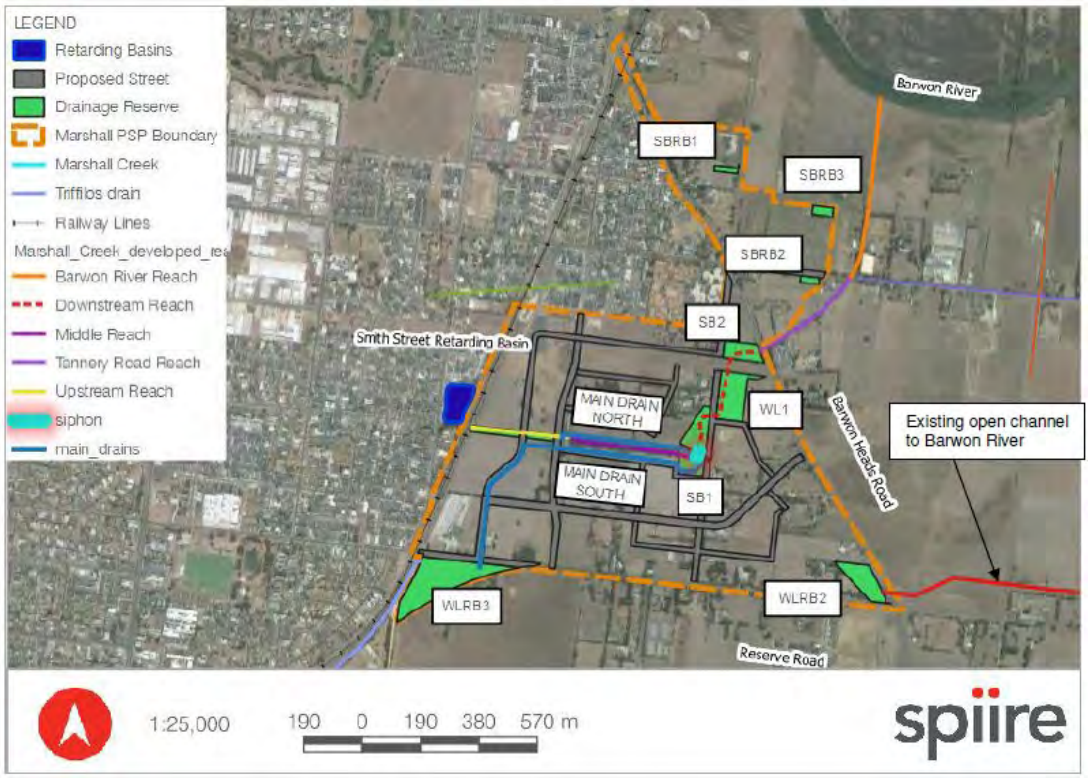
    16.1 That the development design retains existing native vegetation and fauna habitat.

    16.2 Improve water quality, manage flow rates and create appropriate hydrology for retaining wetlands within the landscape, and improving habitats for native wildlife such as Growling Grass Frogs and Latham's Snipe.

    16.3 Manage construction work to avoid direct and indirect impacts to waterways.

17. The final SWMS has therefore been considered in some detail, due to the high number of constraints, opportunities and interfacing projects. To supplement the strategy, a preliminary design for each significant SWMS asset (e.g.: wetlands and basins) has been undertaken, to ensure the requirements for each asset is understood, and to suitably inform the DCP.

18. The Marshall PSP SWMS layout is shown below:



Assessing Biodiversity

19. A feature of the precinct are the pockets of native vegetation and scattered trees. This includes mature Bellarine Yellow Gum and River Red Gum within the Smith Street reserve and on the verges of Drews Road. Remnant grassy woodland is located on several parcels linked to these reserves and identified in an Environmental Significance Overlay Schedule 1 *(areas of flora and fauna habitat and of geological and natural interest)*.

20. Most of this vegetation is proposed to be retained in conservation reserves. The Marshall Native Vegetation Precinct Plan (NVPP), October 2022, prepared by Ecology & Heritage Partners applies a holistic, landscape wide approach to retention and removal of native vegetation within the precinct area.

21. The objectives of the NVPP include to ensure there is no net loss to biodiversity as a result of the approved removal, destruction or lopping of native vegetation and to ensure that areas set aside to protect native vegetation are managed to conserve biodiversity and other values in accordance with the NVPP.

22. Alongside preparation of the NVPP, a fauna assessment report was completed by EcoLink in May 2022. The assessment included desktop review for potential impacts to Matters of National Environmental Significance under the EPBC Act, as well as targeted surveys for Growling Grass Frog, Latham's Snipe and native fish species.

23. The fauna report determined that development of the Marshall PSP is unlikely to significantly impact Growling Grass Frogs, which were not recorded during the current surveys, nor within the study area during the desktop assessment or during previous surveys. Other listed species were also unlikely to be impacted. Based on these findings, the report concluded that future development is unlikely to significantly impact any EPBC Act-listed fauna species.

24. To avoid and mitigate impacts to the Lake Connewarre wetland system and improve onsite biodiversity, the fauna report made several recommendations which informed the Marshall Stormwater Management Strategy.

Preparing the Marshall Future Urban Structure Plan

25. The future urban structure (FUS) plan for the Marshall Precinct is shown in Attachment 2 of this Amendment C278ggee Council Report. The plan is similar to the 2019 plan by providing for residential uses and strategically located commercial uses. The precinct will yield over 1,555 dwellings. The FUS plan forms part of the Marshall PSP recommended for adoption by Council and progression to a planning scheme amendment.

26. Fundamental to the plan is to take advantage of existing and planned infrastructure and natural features. This includes the redevelopment of the Marshall Train Station, convenient north-south Drews Road connection to Marshalltown Road and the Horseshoe Bend Precinct, frontage to Barwon Heads Road, and existing patches of remnant native vegetation, water bodies and scattered trees, including the Smith Street greenway reserve.

27. The FUS actively encourages walking and cycling leading to the station and local parks. The plan allows for increased housing densities in and around the Station Precinct, with off-road shared path connections through to community facilities, schools, and sports reserves adjacent to the precinct. This approach enables higher numbers of people to live within walking distance of their daily needs and promotes subdivision design that is more conducive to walking and cycling.

28. Key features of the Marshall FUS plan therefore include:

28.1 Delivery of a high use public and active transport precinct through transit-oriented development and design focused on a walkable catchment around Marshall Train Station and links with green spaces.

28.2 Provision of medium and high-density residential development that maximises the location of Marshall Train Station, provides a high amenity interface and integration with land uses including roads, parks, shopping and open space.

28.3 Provision for commercial development with frontage to Barwon Heads Road and on land close to the Barwon River floodplain and the North East Industrial Precinct.

28.4 Delivery of a permeable movement network with high amenity, human scale on-road and off-road connections incorporating blue-green infrastructure, that links with green spaces, enhance and prioritise public and active transport opportunities and reduces car dependency.

28.5 Preservation and enhancement of areas of significant biodiversity value through the retention of native vegetation and tree planting that connects to green links, open space and waterways.

28.6 Delivery of the Marshall Stormwater Management Strategy as discussed above.

29. The plan has considered submissions from the 2019 draft Marshall PSP. The plan only proposes pedestrian connection from the Marshall Precinct to Priory Court and St Cuthberts Court. Due to natural recruitment of native vegetation, the land required for conservation retention has increased in the final FUS plan. The significance of this vegetation also required the main east-west connector road alignment to shift south, where it intersects with Drews Road, so as to avoid vegetation removal.

30. The 2019 VicTrack submission raised concerns with the plan showing the possible southerly relocation of the Marshall Train Station platforms and the designation of patron car parking land for housing.

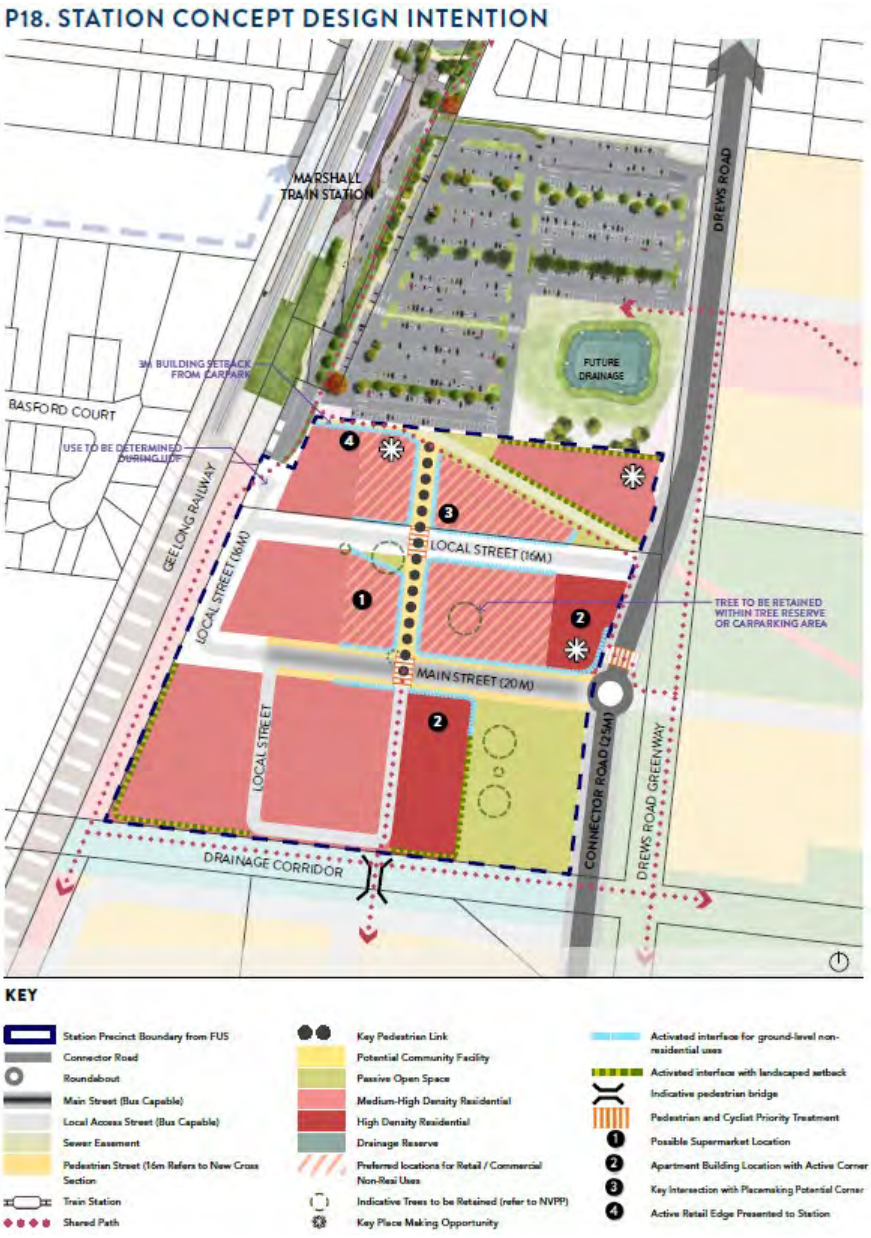
31. Following discussions with State Government officers and their consultants planning for the redevelopment of the station, the Marshall PSP has responded to the station future layout and function. The station is currently under construction.

32. The Marshall PSP Station Concept Design incorporates the State Government station redevelopment plan and proposes to rezone surplus land south of the car park to the Urban Growth Zone Schedule 7. This will enable proper integration between the station and the broader mixed-use and high-density residential precinct that forms part of the Marshall PSP.

33. The Station Concept Design plan is shown on the next page.

34. Both the FUS plan and the Station Concept Design identify future station access from outside the Marshall PSP, west of the railway line, on private land at 137 Barwarre Road, Grovedale. This relatively large residential property of 10,000sqm contains a single dwelling, with significant redevelopment potential and opportunity to provide a direct western connection to the station.

35. The planning tool proposed to be applied to 137 Barwarre Road is a Design and Development Overlay (DDO). The purpose of the DDO will be to facilitate improved pedestrian, cycling and vehicle connections between the established suburb of Grovedale and Marshall Station. This location was chosen as it aligns with the proposed station pedestrian overpass and is contained within a single ownership. The DDO will future-proof the site should it be redeveloped.



36. As part of the preparation of the FUS plan, the City engaged Ratio Consultants to update the traffic impact assessment previously produced in 2019. The findings of the assessment (March 2023) included that:

    36.1 The proposed transport network provides a well-connected and permeable road network, taking advantage of committed and planned investments in surrounding transport infrastructure.

    36.2 An extensive and well-connected bicycle and pedestrian network is provided across the precinct that connects and integrates with the pedestrian and bicycle networks within the adjacent PSP areas.

37. Roads have been designed around areas of protected native vegetation and scattered trees and provide cycling lanes on the main connecting roads to the Horseshoe Bend Precinct, Grovedale and Barwon Heads Road. Connector roads are planned to be bus capable.

Environmentally Sustainable Design

38. The City's *Climate Change Response Plan 2021-30* establishes a target of net zero community emissions by 2035. Similarly, the plan requires PSPs to deliver zero carbon and environmentally sustainable development (ESD) through 'ESD Action Plans'.

39. The Marshall PSP proposes a range of requirements and performance-based targets to achieve and maintain a net zero carbon footprint by addressing emissions across the design, construction and ongoing operations of the precinct.

40. To facilitate the delivery of sustainable and energy efficient homes, the Marshall PSP requires the submission of Residential ESD Design Guidelines at subdivision to guide the performance and design of dwellings. For non-residential and mixed-use buildings, the PSP prescribes the use of environmental performance rating tools to measure and demonstrate best practice in ESD from the design stage through to construction and operation.

41. The requirements and guidelines of the PSP also seek to ensure that ESD and zero carbon is embedded at the subdivision scale, prior to the establishment of new buildings and communities.

Marshall Development Contributions Plan

42. Like the Marshall PSP, the Marshall Development Contributions Plan (DCP) has been prepared by the City. The DCP sets out the funding requirements for developers to make contributions towards shared infrastructure sourced from the PSP.

43. The Marshall DCP will generate most of the funding to construct shared road intersection and drainage infrastructure, as well as part of the off-road path network and new local park improvements. Most of the funding is required to deliver drainage infrastructure and associated land.

44. The DCP levy per net residential developable hectare (Charge Area 1) is $989K and the levy per net commercial developable hectare (Charge Area 2) is $858K. The total DCP infrastructure cost is $68.7M.

45. Contributions towards Armstrong Creek Growth Area community facilities (Regional Library and Community Pavilion) will also apply in the form of a per dwelling levy consistent with Section 46L of the *Planning and Environment Act*. The total community infrastructure levy is $2.17M.

46. A summary of the DCP costs is shown on the following table:

SUMMARY - NET DEVELOPABLE AREA (NDA) By CHARGE AREA		
CHARGE AREA	TOTAL COST OF CONTRIBUTION	CONTRIBUTION PER NET DEVELOPABLE HECTARE
Charge Area 1	$60,290,883.48	$989,526.88
Charge Area 2	$8,469,935.08	$858,671.44
Total	$68,760,818.56	
SUMMARY - DEVELOPMENT INFRASTRUCTURE LEVY		
PROJECTS	TOTAL COST OF PROJECTS (MCA)	CONTRIBUTION PER NET DEVELOPABLE HECTARE (NDHA)
Transport	$4,561,238.57	$64,430.64
Drainage	$31,411,219.06	$443,705.16
Open Space	$7,972,891.35	$130,855.44
Land	$24,225,985.78	$342,208.77
Planning Costs	$589,483.80	$8,326.87
Total	$68,760,818.56	
SUMMARY - BREAKDOWN OF DEVELOPMENT INFRASTRUCTURE LEVY		
PROJECTS	TOTAL COSTS OF PROJECTS	CONTRIBUTIONS PER NET DEVELOPABLE HECTARE (NDHA)
LAND	$24,225,985.78	$342,208.77
CONSTRUCTION	$44,534,832.78	$647,318.11
Total	$68,760,818.56	
SUMMARY - COMMUNITY INFRASTRUCTURE LEVY		
	Community Infrastructure Total	ESTIMATED Levy per dwelling
Total	$ 2,173,781.97	$1,397.93

47. The table provides an overview of the project categories and charges included in the Marshall DCP. A more detailed explanation of apportionment, methods of calculation, and the description and costs of individual projects is included within the document. The DCP document and supporting technical reports will be exhibited as part of Amendment C278ggee.

48. Land for local parks shown in the Marshall PSP will be transferred to Council at the time of subdivision under Clause 53.01 of the planning scheme. The Marshall DCP is not the legal mechanism to deliver passive open space – and noting the Marshall PSP does not include any active open space. Other public reserves (encumbered open space for utility easements, roads, drainage and native vegetation conservation) will be transferred and vested in Council at no cost as part of developer subdivision and works.

MARSHALL PSP

FUTURE URBAN STRUCTURE

KEY

The Future Urban Structure Plan sets out the land uses and primary street network of the precinct.

CONTEXT

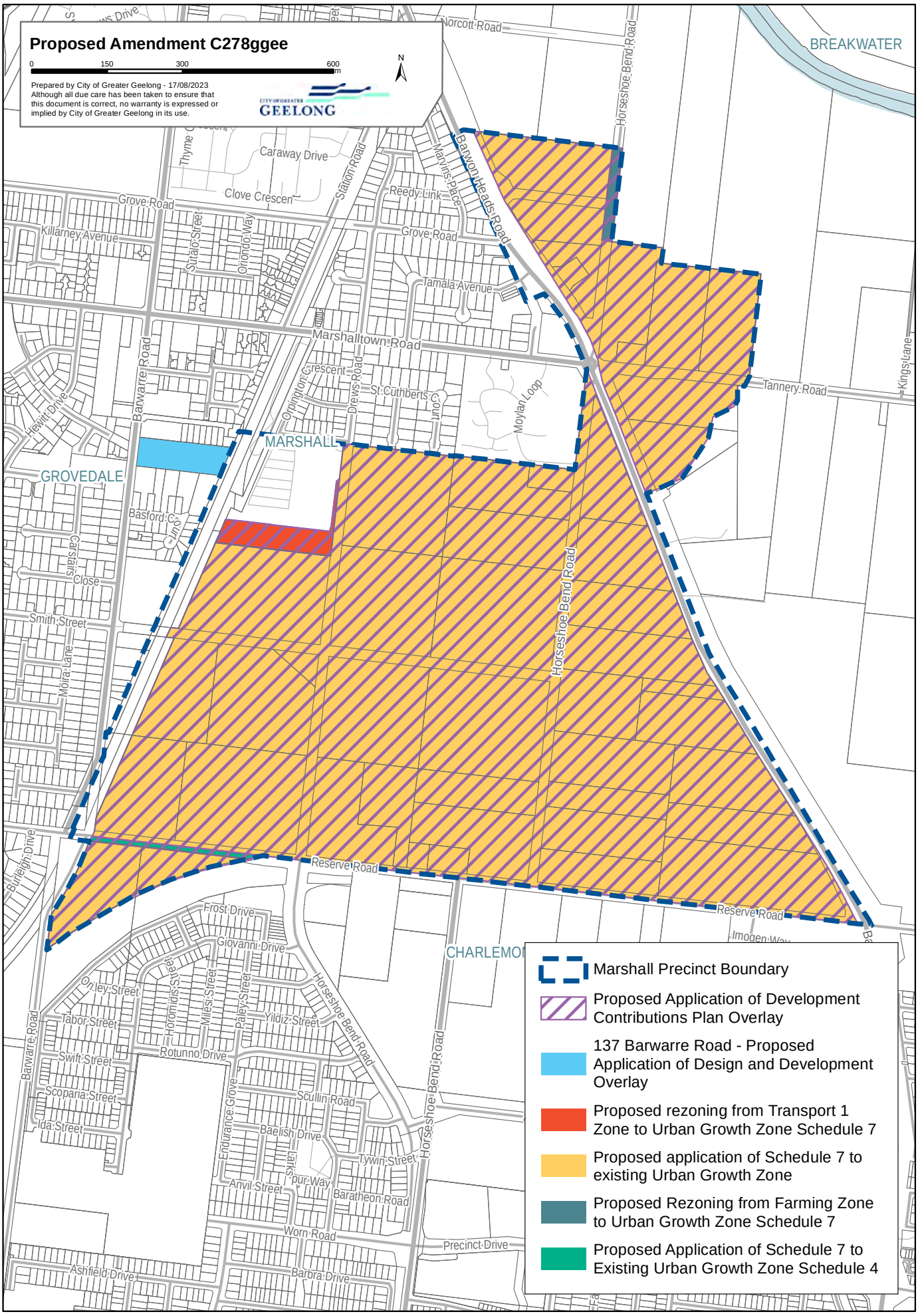
- Precinct Boundary
- Existing trees to be retained
- Railway and Station
- Flood Overlay
- Electrical Transmission Tower
- Station Carpark
- Property Boundary

LAND USE

- Conventional Residential
- Medium/High Density Residential
- Mixed Use - High Density Residential
- Road Reserve
- Commercial/Bulky Goods
- Credited (Unencumbered) Open Space
- Conservation Reserve
- Utilities Easements
- Drainage Reserve
- Constructed Waterway (Marshall Creek)

MOVEMENT

- Arterial Road
- Connector Street
- Connector Street (Modified)
- Local Access Street
- Station Precinct Road (Refer to Concept Plan)
- Local Access Street (No through Road)
- Road Truncation
- Major Road Project
- Signaled Crossing


Proposed Amendment C278ggee
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GROVEDALE
MARSHALL
CHARLEMONT
Norcott Road
Horseshoe Bend Road
Caraway Drive
Clove Crescent
Station Road
Marvins Place
Reedy Link
Barwon Heads Road
Grove Road
Killarney Avenue
Surfalo Street
Orlando Way
Tamala Avenue
Marshalltown Road
Barwarre Road
Orpington Crescent
Drews Road
St Cuthberts Court
Moylan Loop
Tannery Road
Kings Lane
Hewitt Drive
Basford Court
Carstairs Close
Smith Street
Moira Lane
Reserve Road
Burleigh Drive
Frost Drive
Giovanni Drive
Orzley Street
Horomids Street
Miles Street
Daley Street
Yildiz Street
Tabor Street
Swift Street
Rotunno Drive
Scoparia Street
Ida Street
Scullin Road
Baelish Drive
Endurance Grove
Tywin Street
Anvil Street
Baratheon Road
Worn Road
Precinct Drive
Ashfield Drive
Barbra Drive
Imogen Way
Marshall Precinct Boundary
Proposed Application of Development Contributions Plan Overlay
137 Barwarre Road - Proposed Application of Design and Development Overlay
Proposed rezoning from Transport 1 Zone to Urban Growth Zone Schedule 7
Proposed application of Schedule 7 to existing Urban Growth Zone
Proposed Rezoning from Farming Zone to Urban Growth Zone Schedule 7
Proposed Application of Schedule 7 to Existing Urban Growth Zone Schedule 4

THE CITY OF
GREATER GEELONG

MARSHALL
PRECINCT
STRUCTURE PLAN

JULY 2023

CITY OF GREATER GEELONG

ACKNOWLEDGEMENT OF COUNTRY

The City of Greater Geelong acknowledges the Wadawurrung People as the Traditional Owners of the land, waterways and skies of the Northern and Western Geelong Growth Areas. We pay our respects to their Elders, past and present.

We acknowledge all Aboriginal and Torres Strait Islander people who are part of our Greater Geelong communities today.

DISCLAIMER

The background information report mentioned is yet being prepared.

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TABLES & PLANS

TABLE

PLAN

1.0

INTRODUCTION

1.0 INTRODUCTION

The Armstrong Creek Marshall Precinct Structure Plan (PSP) has been prepared by the City of Greater Geelong (City) with the assistance of Government agencies, service authorities, major stakeholders and the community.

A Precinct Structure Plan is a plan for urban development that describes how land is expected to be used, how and where development can occur, and how and where services are planned to support development in order to deliver a high-quality urban environment.

The PSP is the northern most residential development precinct structure plan in the Armstrong Creek Urban Growth Plan (ACUGP), which was originally adopted by the City in May 2008. The ACUGP set the long-term strategic planning directions to guide the creation of sustainable urban growth within Armstrong Creek and is anticipated to provide housing for 54,000 people in 22,000 households. The majority of the Armstrong Creek Urban Growth Area (ACUGA) has since been planned, formalised and development has substantially commenced.

Located approximately seven kilometres south of Central Geelong, the precinct is bounded by significant transport infrastructure, including the Marshall Train Station and the Geelong to Waurn Ponds passenger rail line, as well as two significant arterial roads, Barwon Heads Road and the proposed Bellarine Link Road, see Plan 1 Regional Context.

The PSP:

- sets out plans to guide the delivery of quality urban environments generally in accordance with relevant Victorian Government policies and guidelines,
- builds upon the provisions of the Planning and Environment Act 1987, the State Planning Policy Framework and the Greater Geelong Planning Scheme (the Scheme);
- draws upon the *Precinct Structure Planning Guidelines: New Communities in Victoria* (VPA, 2021) (PSP Guidelines).
- enables the transition of non-urban land to urban land;
- sets the vision for how land may be developed, and the outcomes achieved;
- outlines the projects required to ensure that future residents, visitors and workers within the area can be provided with timely access to services and transport necessary to support a quality, affordable lifestyle;
- sets out objectives, guidelines and requirements for land use, subdivision and development.
- provides government agencies, the City, developers, investors and local communities with certainty about future development;
- is generally in accordance with the Scheme incorporated ACUGP, see Plan 2 Armstrong Creek Growth Area Framework Plan;
- acknowledges that development must also comply with other acts and approvals where relevant e.g., in the case of Aboriginal cultural heritage, compliance with the Aboriginal Heritage Act 2006 is required;

The PSP is informed by:

- the Planning Policy Framework as set out in the Greater Geelong Planning Scheme;
- ACUGP (revised 2015);
- Plan Melbourne, 2017-2050 (Victorian Government, 2017);
- Precinct Structure Plan Guidelines (VPA 2021);
- The G21 Regional Growth Plan (Geelong Region Alliance, 2013);
- Greater Geelong Settlement Strategy (August 2020);
- Marshall PSP background studies (listed in Section 6.2).

The following documents have been developed in parallel with the PSP to inform and direct the future planning and development of the Marshall Precinct:

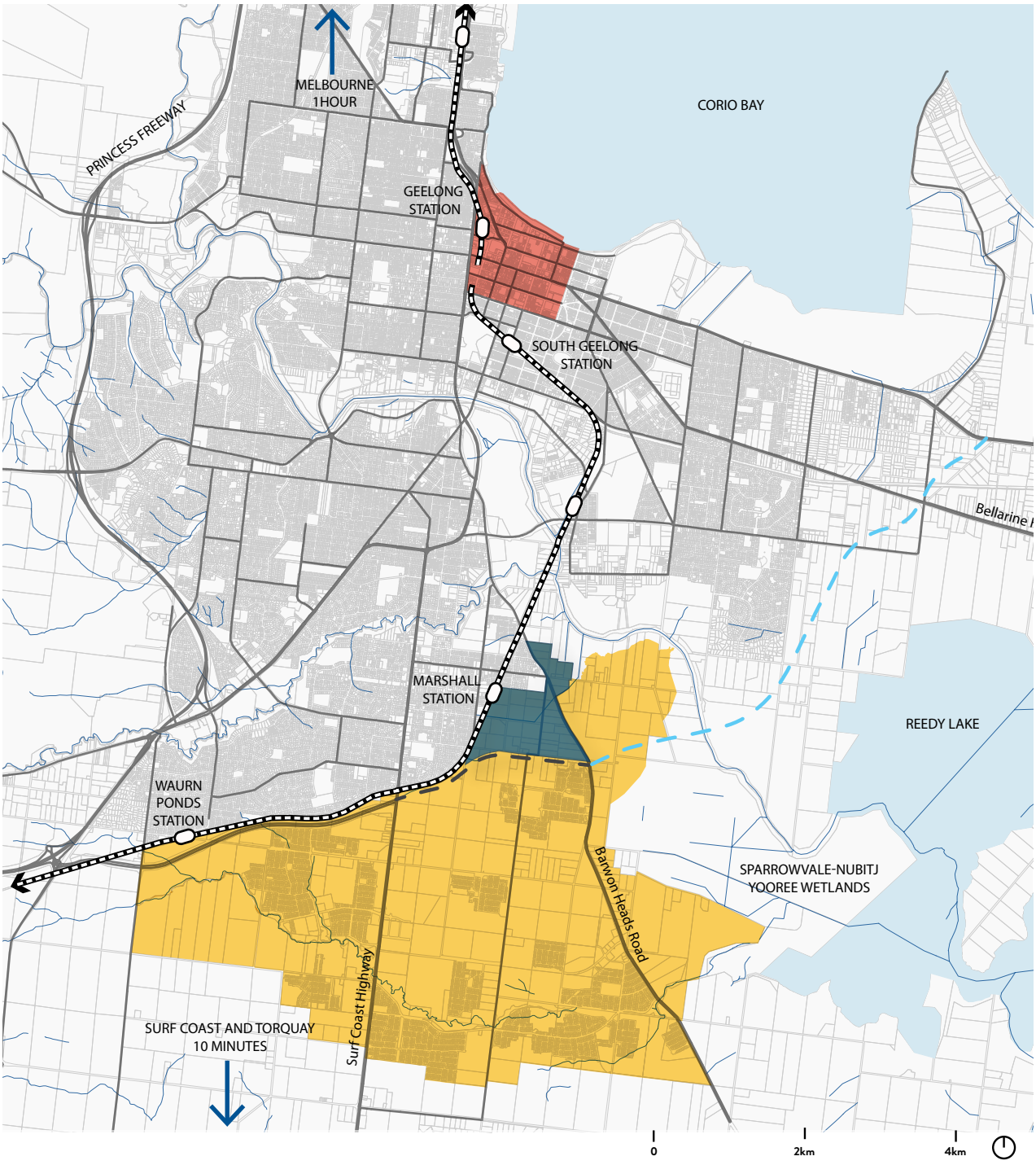
- Marshall Development Contributions Plan (MDCP) (August 2023);
- Marshall Native Vegetation Precinct Plan (NVPP), (October 2022).

The PSP and all associated plans are informed by the following strategic infrastructure projects proposed by external government agencies and may be subject to change without notice:

- Barwon Heads Road Duplication Project (lead agency: Major Road Projects Victoria)
- Bellarine Link Road Construction Project (lead agency: Major Road Projects Victoria)
- South Geelong to Waurn Ponds Rail Duplication Project (lead agency: Department of Transport)
- Armstrong Creek Transit Corridor Project (lead agency: Department of Transport)

Although all due care has been taken to ensure that this draft document is correct, no warranty is expressed or implied by City or in its use.

P1. REGIONAL CONTEXT



KEY

- Marshall Boundary
- Central Geelong
- Armstrong Creek Urban Growth Area
- Waterway / Drainage line
- Railway and Station
- Arterial Road
- Proposed Bellarine Link
- Bellarine Link Future Stage

1.1 ARMSTRONG CREEK URBAN GROWTH PLAN CONTEXT

The Armstrong Creek Urban Growth Plan – revised 2015 (Framework Plan) is a high-level strategic document which guides the urban development of the Armstrong Creek Urban Growth Area (ACUGA). The actions and objectives laid out in the framework plan guide the preparation of precinct structure plans for the ACUGA.

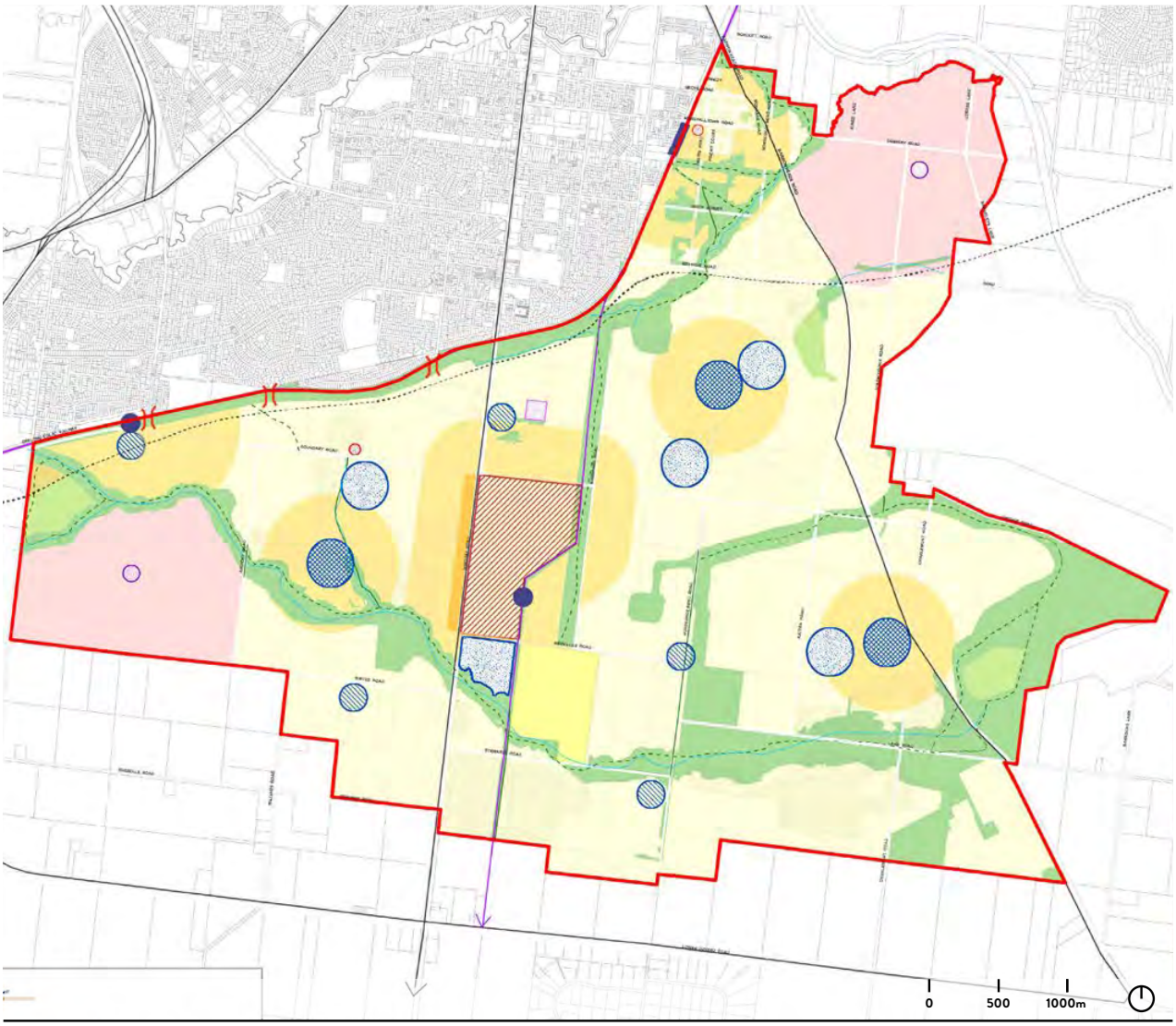
The Armstrong Creek Urban Growth Area is the largest contiguous growth area in Victoria, consisting of 2,500 hectares of developable land, and is one of the largest growth fronts in the country. The area was originally designated as a growth corridor in the 1980s by the Geelong Regional Commission and was confirmed as Geelong's future urban growth corridor in the City's Urban Growth Strategy, 1996.

At completion, ACUGA will:

- Provide housing for upwards of 54,000 people
- Provide approximately 22,000 residential homes
- Provide 22,000 jobs, with a focus on high technology jobs and developing synergies with Deakin University
- Be developed as a sustainable community, with a focus on walkability, public transport provision and sustainable water use
- Have physical and social infrastructure provided at an early stage, with an aim of building communities rather than just releasing land for development – there won't be just homes and jobs in the growth area, but schools, retail space, parks, open space, bike paths and a place for people to create a home and be part of a community
- Provide a boost to local employment during the construction phase
- Assist in addressing housing affordability issues currently experienced in the region
- Have significant public transport provision
- Provide for more sustainable housing choices

The ACUGA has been divided into eight precincts (Armstrong Creek East, Armstrong Creek West, Horseshoe Bend, Marshall, North East Industrial, Western Industrial, Armstrong Creek South and Armstrong Creek Town Centre). Precinct structure plans have been completed and incorporated in the Scheme for all precincts except Marshall and Western Industrial.

P2. ARMSTRONG CREEK GROWTH AREA FRAMEWORK PLAN



KEY

- Urban Growth Boundary
- Rail Line
- Sub-Regional Transit Route
- Possible Future Public Transport Interchange
- Recreational Trail
- Pedestrian Bridge
- Geelong Ring Road
- Existing Arterial Road
- Watercourse
- Major Activity Centre (Sub-Regional Centre)
- Neighbourhood Activity Centre
- Local Activity Centre
- Local Shop
- Specialised Local Centre
- Indicative Secondary School
- Employment Land
- Mixed Use Corridor
- Medium-High Density Housing
- Conventional Density Housing
- Local/Active Parkland
- Biodiversity Corridor/Passive Parkland
- Cemetery
- Existing Community Facility

1.2 A CLEVER & CREATIVE APPROACH

ZERO CARBON AND ENVIRONMENTALLY SUSTAINABLE DEVELOPMENT

The *City's Climate Change Response Plan 2021-30* establishes a target of net zero community emissions by 2035. Similarly, the Framework Plan requires PSPs to deliver zero carbon and environmentally sustainable development (ESD) through 'ESD action plans'. Rather than having a standalone action plan for Marshal PSP, ESD and zero carbon actions have been embedded throughout the PSP. The PSP proposes a range of requirements and performance based targets to achieve and maintain a net zero carbon footprint by addressing emissions across the design, construction and ongoing operations of the precinct.

To facilitate the delivery of sustainable and energy efficient homes, the PSP requires the submission of Residential ESD Design Guidelines at subdivision to guide the performance and design of dwellings. For non-residential and mixed use buildings, the PSP prescribes the use of environmental performance rating tools to measure and demonstrate best practice in ESD from the design stage through to construction and operation. The requirements and guidelines of the PSP also seek to ensure that ESD and zero carbon is embedded at the subdivision scale, prior to the establishment of new buildings and communities.

CREATING ZERO WASTE COMMUNITIES

The City's *Climate Change Response Plan 2021-30* establishes a target of net zero community emissions by 2035. The ACUGP requires reduction of consumption and emissions including demand reduction strategies and exploration of opportunities for local energy production such as combined heat, power and energy from waste, wind, solar and geothermal sources. Utilities should use up to date technology and utilise energy and water efficient design, renewable energy and avoid impacts on the local environment. Provision must be made for leading edge telecommunications.

The PSP seeks to mitigate waste streams by planning and managing construction processes to incentivise waste minimisation through material selection, reuse and resource recovery. It also seeks to mitigate the environmental impact of construction by requiring the use of locally sourced materials with high recycled content and low embodied carbon.

The City will be addressing zero waste to landfill as it applies to waste collection, transfer and treatment at a municipality scale with the delivery of the City's *Sustainability Framework and Action Plan (2020),* and the *Waste and Resource Recovery Strategy 2020-2030.*

CONNECTIVITY

The ACUGP prioritises safe, convenient and integrated active and public transport in the design of its neighbourhoods. It seeks to create neighbourhoods that encourage walking and cycling, reduce car dependency, promote community safety and connectivity, support the delivery of greening, canopy trees and water sensitive urban design.

To allow walking and cycling to be central to the design of neighbourhoods and enable a mode shift from private vehicles to active transport, the PSP proposes a suite of street types and intersection designs which prioritise walking and cycling. It will support dedicated bicycle lanes, bus rapid transit (BRT), and wide footpaths lined with canopy trees.

MAXIMISING CANOPY COVERAGE

The City's *Urban Forest Strategy 2015-2025* establishes a 25% canopy cover target for urban areas of the municipality. In response to this target and the aspirations of the ACUGP, the PSP promotes the retention of existing canopy trees and sets mandatory minimum canopy cover targets specific to land use and street type. This two-pronged approach seeks to exceed the 25% canopy target across the public realm in Marshall Precinct (including retained vegetation).

SUPPORTING COMPACT HEALTHY NEIGHBOURHOODS

To actively encourage walking, cycling and support greater residential densities in locations within walking distance of a mix of uses and activities, the PSP allows for increased densities in and around the station precinct activity centre, with effective transport links through to community facilities, schools, and sports (active) reserves adjacent to the precinct. This approach enables higher numbers of people to live within walking distance of their daily needs and promotes subdivision design that is more conducive to walking and cycling.

1.2 A CLEVER & CREATIVE APPROACH

HOUSING CHOICE AND DIVERSITY

Providing diverse and flexible housing options for the future community is vital. This PSP aims to ensure the applied zones for residential land do not preclude development going above and beyond the standard 'cookie cutter' homes. The existing Marshall Station offers the uncommon opportunity of a station in a greenfield setting. To ensure value capture of this transport linkage, higher density minimums have been set in surrounding residential areas.

AN INTEGRATED APPROACH TO MANAGING WATER

An integrated water management approach recognises the interrelationships between different types of water, and considers water cycle management within a specific environmental, social, cultural and economic context – recognising the needs of local catchments and waterways, communities and industries. It will contribute to cool urban landscapes which minimise Urban Heat Island (UHI) effect, create environments which enhance natural assets and protect and improve the habitat of local biodiversity within creeks and local tributaries.

The PSP seeks to minimise potable water use and stormwater runoff, providing recycled water to every dwelling, supporting passive hydrology of street trees and open spaces; enabling stormwater capture, harvesting and treatment through detention and retarding basins. The stormwater strategy enhances environmental flows to waterways and water bodies, including diverting water into the Sparrovale-Nubitj yoorree wetlands to prevent additional freshwater flows from impacting the salt-dependant Ramsar complex.

PROTECTING BIODIVERSITY

Areas of significant biodiversity value will be preserved and enhanced through the retention of native vegetation and appropriate tree planting, which will maintain and create connections for native fauna and humans. Significant trees (including Bellarine Yellow and River Red Gums) will be retained and protected in line with the NVPP. Opportunities such as landscaping and stormwater design, will be used to create habitat for indigenous species and minimise impact on existing significant areas.

ENABLING SMART CITIES

The PSP supports and enables the adoption of smart technologies and digital innovation to aid in community wellbeing, managing local assets and monitoring the precinct's sustainability performance.

1.3 HOW TO READ THIS DOCUMENT

The PSP guides land use and development principally where a planning permit is required under the Urban Growth Zone (UGZ) or any other provision of the Greater Geelong Planning Scheme that references this precinct structure plan.

1 STEP.
REVIEW THE URBAN GROWTH ZONE SCHEDULE

The Schedule 7 (UGZ7) of the Greater Geelong Planning Scheme sets out whether a planning permit is required for land use or development and associated conditions which must be met. The schedule also includes application requirements and decision guidelines which must be reviewed and addressed where a planning permit application is required and standard conditions which will be inserted to planning permits.

2 STEP.
UNDERSTANDING THE VISION & OBJECTIVES

A permit application and subsequent planning permit must respond to and implement the PSP vision and objectives outlined in Section 2.

3 STEP.
IMPLEMENTATION

The implementation section derives themes from the overarching visions and objectives to be achieved by the PSP. An application must meet the objectives associated with a theme before a permit can be issued.

Requirements must be adhered to in developing the land. Where they are not demonstrated in a permit application, requirements will usually be included as a condition on a planning permit whether or not they take the same wording as in the structure plan. A requirement may include or reference a plan, table or figure in the PSP.

Guidelines express how discretion will be exercised by the Responsible Authority in certain matters that require a planning permit. A guideline may include or reference a plan, table or figure in the precinct structure plan.

The requirements and guidelines ensure the objectives of the PSP are achieved.

The themes are:

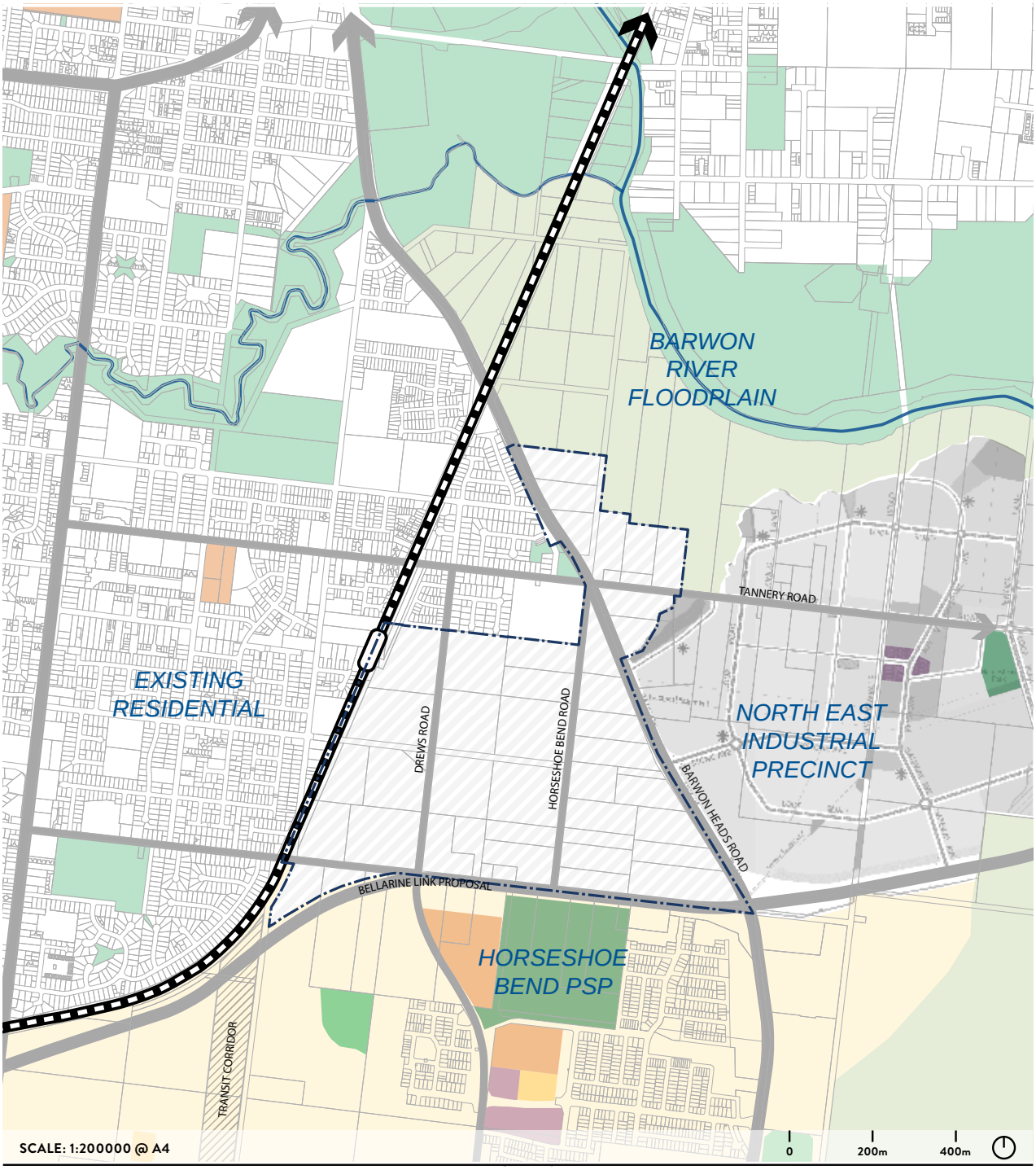
1. Character, Heritage & Housing
2. Open Space
3. Biodiversity
4. Transport and Movement
5. Integrated Water Management
6. Climate Resilient Communities
7. Circular Economy
8. Employment, Retail & Community Facilities
9. Energy and Technology
10. Delivery

4 STEP.
OTHER CONSIDERATIONS

Development must also comply with other statutes and approvals where relevant, e.g., the *Environmental Protection and Biodiversity Conservation Act, 1999* in the case of biodiversity, or the *Aboriginal Heritage Act 2006* in the case of cultural heritage, amongst others.

Not every aspect of land use and development is addressed in this structure plan and a Responsible Authority may manage use and development and issue permits in accordance with its powers under the Planning and *Environment Act 1987* and the Greater Geelong Planning Scheme. All Requirements and Guidelines are to be viewed in conjunction with the accompanying Plans and Tables.

P3. MARSHALL PRECINCT LOCAL CONTEXT



KEY

- Marshall PSP Boundary
- Future Residential
- Future Employment
- Farming Zone
- Open Space
- Education
- Community Facility
- Activity Centre
- Armstrong Creek Transit Corridor
- Waterway
- Marshall Railway Station
- Arterial Road
- Connector Street

1.4 LAND TO WHICH THIS PRECINCT STRUCTURE PLAN APPLIES

The Marshall Precinct is the final residential precinct to be developed in the ACUGA.

The precinct is located in the north-east section of the ACUGA as shown on Plan 2. It applies to approximately 124 hectares of land generally bounded by Barwon Heads Road to the east, Reserve Road to the South, the Geelong to Waurn Ponds passenger rail line to the west and the edge of current residential development to the south of Marshalltown Road. There is also a small area to the east of Barwon Heads Road, close to the intersection of Marshalltown Road and Tannery Road, see Plan 3 Marshall Precinct Local Context. This area is edged by the North-East Industrial Precinct and the Barwon River flood plain.

1.5 BACKGROUND INFORMATION

The Marshall Background Report provides detailed background information relating to the precinct and its features, including the local and regional context, history, heritage, landform, topography, biodiversity, drainage, open space, utility services and transport infrastructure as well as nearby economic and retail provision, and community infrastructure.

The report also summarises various technical studies that have informed the preparation of the PSP, see Plan 4 Precinct Features.

1.6 DEVELOPMENT CONTRIBUTIONS PLAN

The Marshall Development Contributions Plan (MDCP) will apply Marshall precinct and sets out the requirements for development to make contributions towards infrastructure which supports development.

It is a separate document, strategically supported by the PSP, which will be incorporated into the Greater Geelong Planning Scheme through Clause 72.04 Incorporated Documents. It will be implemented through Schedule 10 to Clause 45.06 Development Contributions Plan Overlay of the Greater Geelong Planning Scheme.

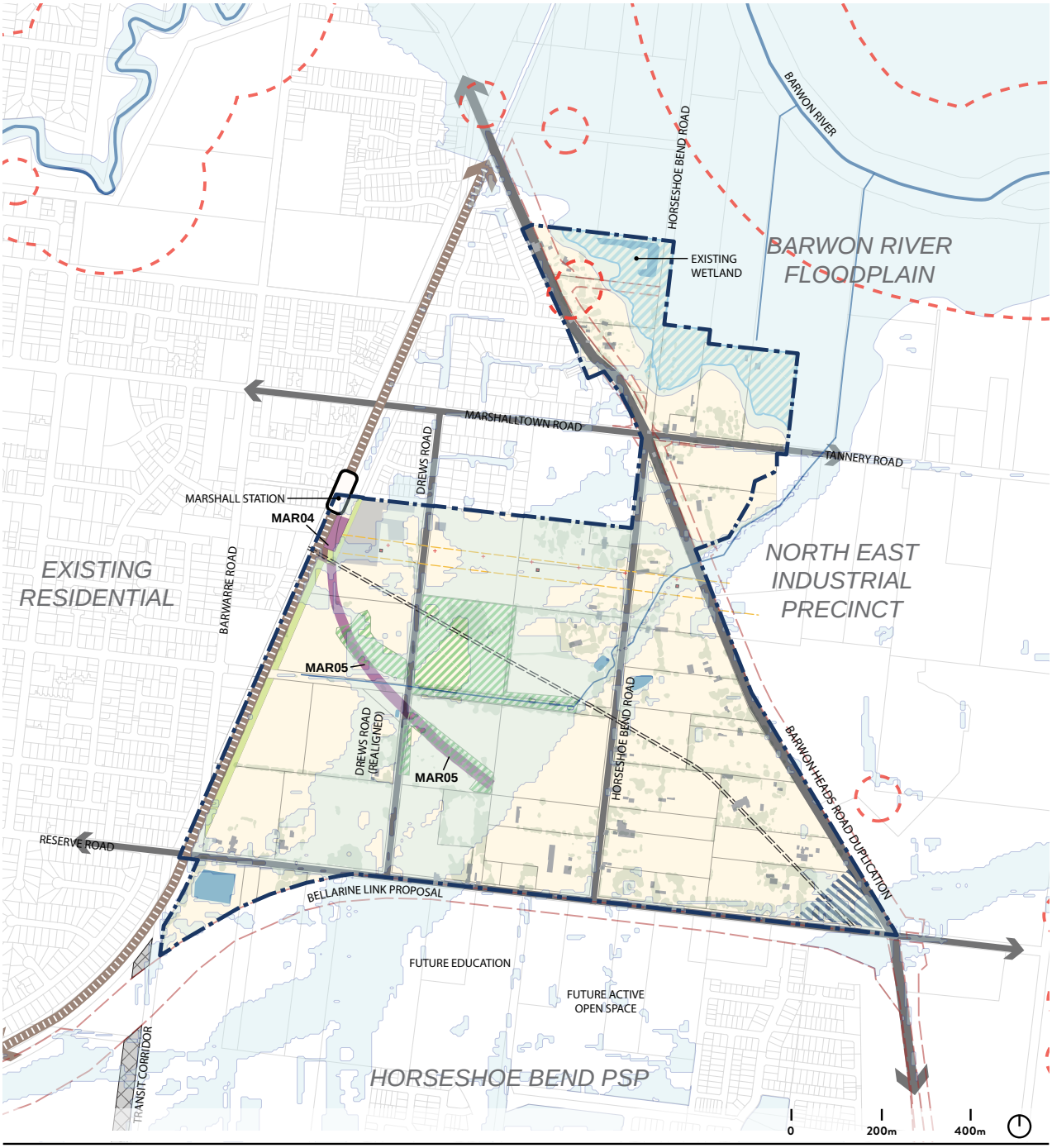
1.7 NATIVE VEGETATION PRECINCT PLAN

The Marshall Native Vegetation Precinct Plan (NVPP) has been prepared concurrently with the PSP to enable native vegetation matters to be considered in a coordinated manner across the precinct, consistent with the requirements of Clause 52.16 of the Greater Geelong Planning Scheme.

The NVPP identifies:

- Native vegetation which may be removed subject to the conditions and requirements of the NVPP.
- Native vegetation which has been nominated to be retained.
- The offsets that must be provided, and any other requirement that must be met, prior to removing affected native vegetation.
- Conditions that must be met in relation to vegetation that is to be protected and retained.
- The NVPP will be incorporated into the Greater Geelong Planning Scheme under Clause 72.04 Incorporated Documents, and is a stand-alone document to the Precinct Structure Plan.

P4. PRECINCT FEATURES



KEY

- Precinct Boundary
- Railway and Station
- Flood Overlay
- Flood Prone Areas Flood Extent
- PAO (Public Acquisition Overlay)
- ESO (Environment Significance Overlay)
- LSIO (Land Subject to Inundation Overlay)
- Heritage Area & Local Registry Place No.
- Electricity Easement & Transmission Tower
- Power Poles
- Sewer Easement
- Barwon Water Easement
- Existing Roads
- Existing Scattered Trees
- Existing Built Form
- Station Carpark
- Waterway
- Waterbody
- Armstrong Creek Transit Corridor
- Areas of Aboriginal Cultural Sensitivity

Bushfire Prone Area – All Precinct is Bushfire Prone

2.0

OUTCOMES

2.1 VISION

Marshall will be a distinctive residential and commercial neighbourhood that responds to its unique location. Development will capitalise on convenient access to Marshall Station and arterial roads, as well as remnant vegetation and other open space features. Marshall will become a sustainable, connected, walkable and visually interesting place set within a semi-natural environment.

The Marshall PSP will continue the work of the Armstrong Creek Urban Growth Plan (June 2015), providing a diversity of housing types and densities and a mixed-use activity centre within a walkable neighbourhood with strong active and public transport links. The Marshall PSP enacts the vision of the ACUGA by providing for a sustainable community that sets new benchmarks in best practice urban development and protecting and enhancing natural and cultural features to create a distinct urban character. Marshall will be a well-connected and attractive neighbourhood which includes a range of residential densities that seamlessly links the Armstrong Creek urban development to the south with the existing Greater Geelong urban area to the north.

The vision for PSP is illustrated in Plan 5 Future Urban Structure.

2.2 OBJECTIVES

The development of the Marshall PSP is guided by the following objectives:

01	To transition rural, semi-rural and public utility land uses within Marshall into an attractive, liveable, sustainable and integrated urban environment.
02	To establish requirements and guidelines for high quality design outcomes in relation to; amenity, development, management and integration of housing, roads, paths, open spaces, parks, waterways, native vegetation, retail, community facilities and public transport in Marshall.
03	To deliver a high use public and active transport precinct through transit-oriented development and design focused on a walkable catchment around Marshall Train Station and links seamlessly with green spaces.
04	To provide medium and high-density residential development that maximises the location of Marshall Train Station, provides a high amenity interface and integration with land uses including roads, schools, parks, shopping and open space.
05	To deliver sustainable subdivisions and developments that support carbon neutrality, including the application of Residential ESD Design Guidelines and use of best practice environmental performance rating tools, and achieve net zero greenhouse gas emissions in the ongoing operation of the precinct.
06	To preserve and enhance areas of significant biodiversity value through the retention of native vegetation and tree planting that appropriately connects to green links, open space and waterways, providing a sympathetic interface with surrounding urban development.
07	To deliver built form that where appropriate respects and enhances local environmental, cultural and heritage assets, while showcasing high quality universal and environmentally sustainable design.
08	To deliver a permeable movement network with high amenity, engaging and human scale on-road and off-road connections incorporating blue-green infrastructure, that links seamlessly with green spaces, enhance and prioritise public and active transport opportunities and reduces car dependency.
09	To deliver a sustainable integrated water management system that integrates with the function of the Barwon River, reduces reliance on reticulated potable water, increases the re-use of alternative water, minimises flood risk, ensures waterway health, integrates with open space, establishes connections for native fauna and human movement, and protects native vegetation.
10	To establish infrastructure requirements and coordinate logical development sequencing and staging with the delivery of key infrastructure.
11	To embrace innovation and consider variations to the Marshall PSP if they are clever, creative, comply with all objectives, and generate an outcome that exceeds the relevant Requirements and equal to or exceeds the relevant Guidelines

2.3 FUTURE URBAN STRUCTURE

P5. FUTURE URBAN STRUCTURE

KEY

The Future Urban Structure Plan sets out the land uses and primary street network of the precinct.

CONTEXT

- Precinct Boundary
- Existing trees to be retained
- Railway and Station
- Flood Overlay
- Electrical Transmission Tower
- Station Carpark
- Property Boundary

LAND USE

- Conventional Residential
- Medium/High Density Residential
- Mixed Use - High Density Residential
- Road Reserve
- Commercial/Bulky Goods
- Credited (Unencumbered) Open Space
- Conservation Reserve
- Utilities Easements
- Drainage Reserve
- Constructed Waterway (Marshall Creek)

MOVEMENT

- Arterial Road
- Connector Street
- Connector Street (Modified)
- Local Access Street
- Station Precinct Road (Refer to Concept Plan)
- Local Access Street (No through Road)
- Road Truncation
- Major Road Project
- Signaled Crossing

2.4 SUMMARY LAND USE BUDGET

Table 1 Summary Land Use Budget provides a summary of the land required for transport, open space, drainage, conservation areas and other encumbered land and identifies the total amount of land available for development.

The Gross Developable Area (GDA) of the precinct is 122.960 hectares, 57.57% of which is available for development. This translates to a Net Developable Area (NDA) of 70.793 hectares, of which 60.92 hectares are residential. 9.864 hectares of land within Marshall PSP is available for Commercial and Bulky Goods development. Plan 6 Precinct Land Use Budget shows the land uses from property to property within the precinct.

Table 2 Residential Development Yield shows the calculations of estimated residential development. Based on an average minimum residential development yield of 30 dwellings per net developable hectare, Marshall PSP will generate upwards of 1,555 dwellings to accommodate approximately 3,000-5,000 new local residents.

T1. SUMMARY LAND USE BUDGET

Although all due care has been taken to ensure that these figures are correct, no warranty is expressed or implied by City or in its use.

DESCRIPTION	HECTARES	% OF PRECINCT
TOTAL PRECINCT AREA (HA)	**122.960**	**100%**
TRANSPORT		
Arterial Road	5.949	4.84%
Arterial Road Intersection (Barwon Heads Road)	0.311	0.25%
Arterial Road Intersection (Bellarine Link)	0.576	0.47%
Arterial Road Intersection (HSB/Drews/Reserve Road)	0.251	0.20%
Connector Road Intersection	0.619	0.50%
Drews Road Connector Road	1.390	1.13%
East-West Connector Road	2.707	2.20%
Existing Rail Reserve	1.780	1.45%
Part of Transport or Barwon Water Easement	0.691	0.56%
Retained Existing Road Reserve	5.322	4.33%
Transport Hub	3.205	2.61%
SUB TOTAL TRANSPORT	**22.803**	**18.54%**
OPEN SPACE		
UNCREDITED OPEN SPACE		
Barwon Water Easements Adjacent to Rail Reserve	1.173	0.95%
Conservation	7.538	6.13%
Drainage (Within Existing Road Reserve)	0.699	0.57%
Drainage (Within High Voltage Electricity Utility Easement)	0.246	0.20%
Flood Overlay Land	4.876	3.97%
High Voltage Electricity Utility Easement	2.275	1.85%
Main Outfall Sewer Utility Easement	0.807	0.66%
Waterway, Wetland And Drainage Reserve	8.847	7.20%
SUB TOTAL UNCREDITED OPEN SPACE	**26.461**	**21.52%**
CREDITED OPEN SPACE		
Local Park	2.903	2.36%
SUB TOTAL CREDITED OPEN SPACE	**2.903**	**2.36%**
SUB TOTAL OPEN SPACE	**29.366**	**23.88%**

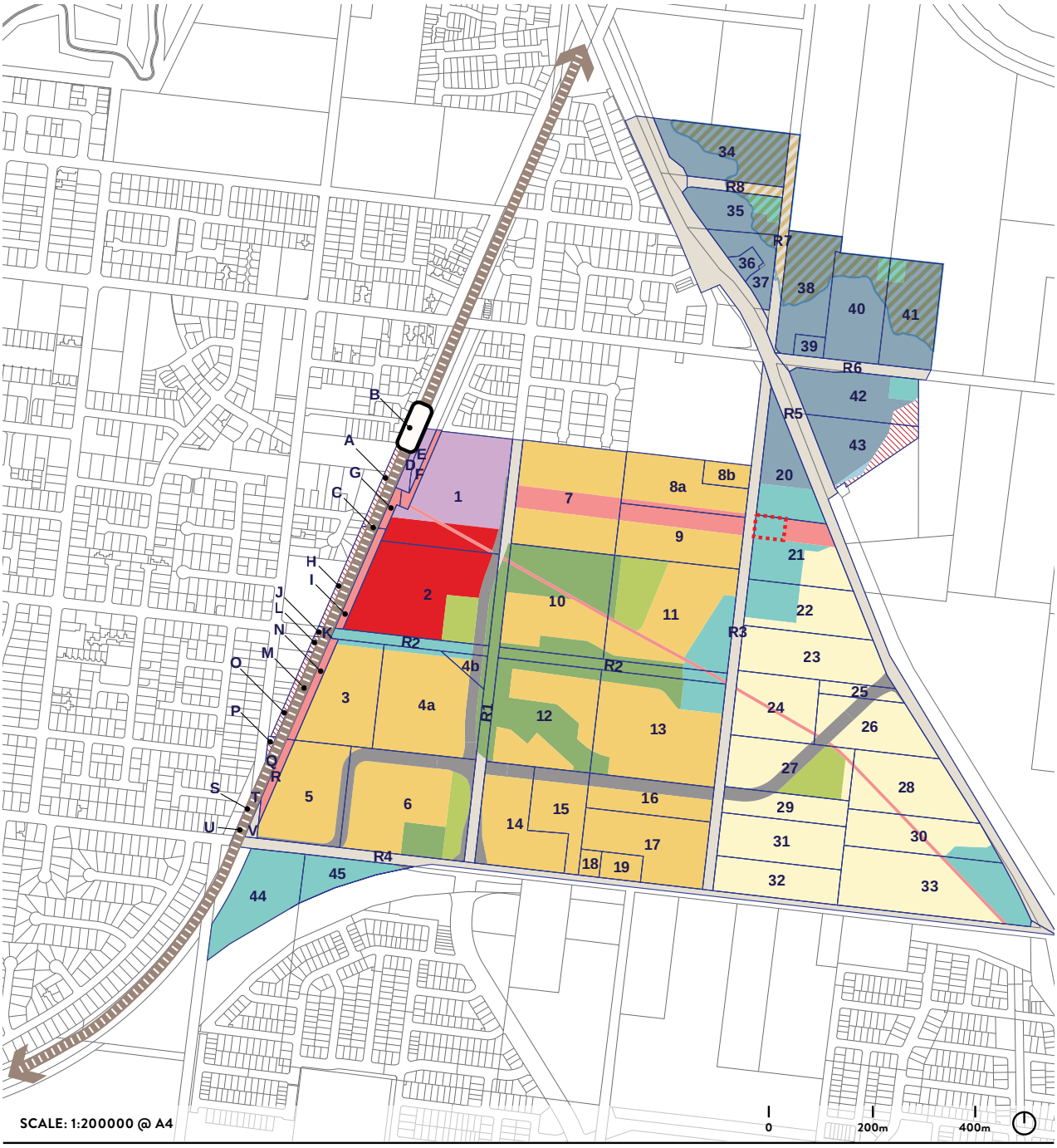
DESCRIPTION	HECTARES	% OF PRECINCT

TOTAL NET DEVELOPABLE	HECTARES	% OF PRECINCT
TOTAL NET DEVELOPABLE AREA (NDA) HA	70.793	58%
TOTAL NET DEVELOPABLE AREA – STATION PRECINCT HA	4.489	3.65%
TOTAL NET DEVELOPABLE AREA – RESIDENTIAL (NDAR) HA	56.440	45.90%
TOTAL NET DEVELOPABLE AREA – EMPLOYMENT (NDAE) HA	9.864	8.02%

T2. RESIDENTIAL DEVELOPMENT YIELD

DESCRIPTION		APPLIED ZONE	NDA (HA)	MINIMUM DENSITY (DWELLINGS/HA)	MINIMUM FORECAST DWELLINGS
Station Precinct		MUZ	4.489	50	224
Medium-Higher Density Residential	Within 400m catchment of Station Precinct	RGZ1	35.378	30	972
	Beyond 400m catchment of Station Precinct			25	
Conventional Residential		GRZ1	21.062	17	358
TOTAL NET DEVELOPABLE AREA (NDA) HA			**60.929**		**1,555**

P6. PRECINCT LAND USE BUDGET



KEY

CONTEXT

- Property Boundary
- #12 Armstrong Creek Precinct Boundary

EXCLUDED & ENCUMBERED LAND

- Land excluded from Land Budget (NEIP PSP Area) *
- Existing Road Reserve Retained as Road
- Conservation Reserve
- Utilities Easements
- Drainage Reserve
- Station & Carpark TRZ 1
- Proposed DCP Connector Road
- Barwon River Floodplain
- Drainage area included on Transmission Easement

NET DEVELOPABLE LAND

- Conventional Residential
- Medium/Higher Density Residential
- Mixed Use - High Density Residential
- Commercial/Bulky Goods
- Credited (Unencumbered) Open Space

* Refer to property-specific land use budget table for more detailed landuse classification

3.0

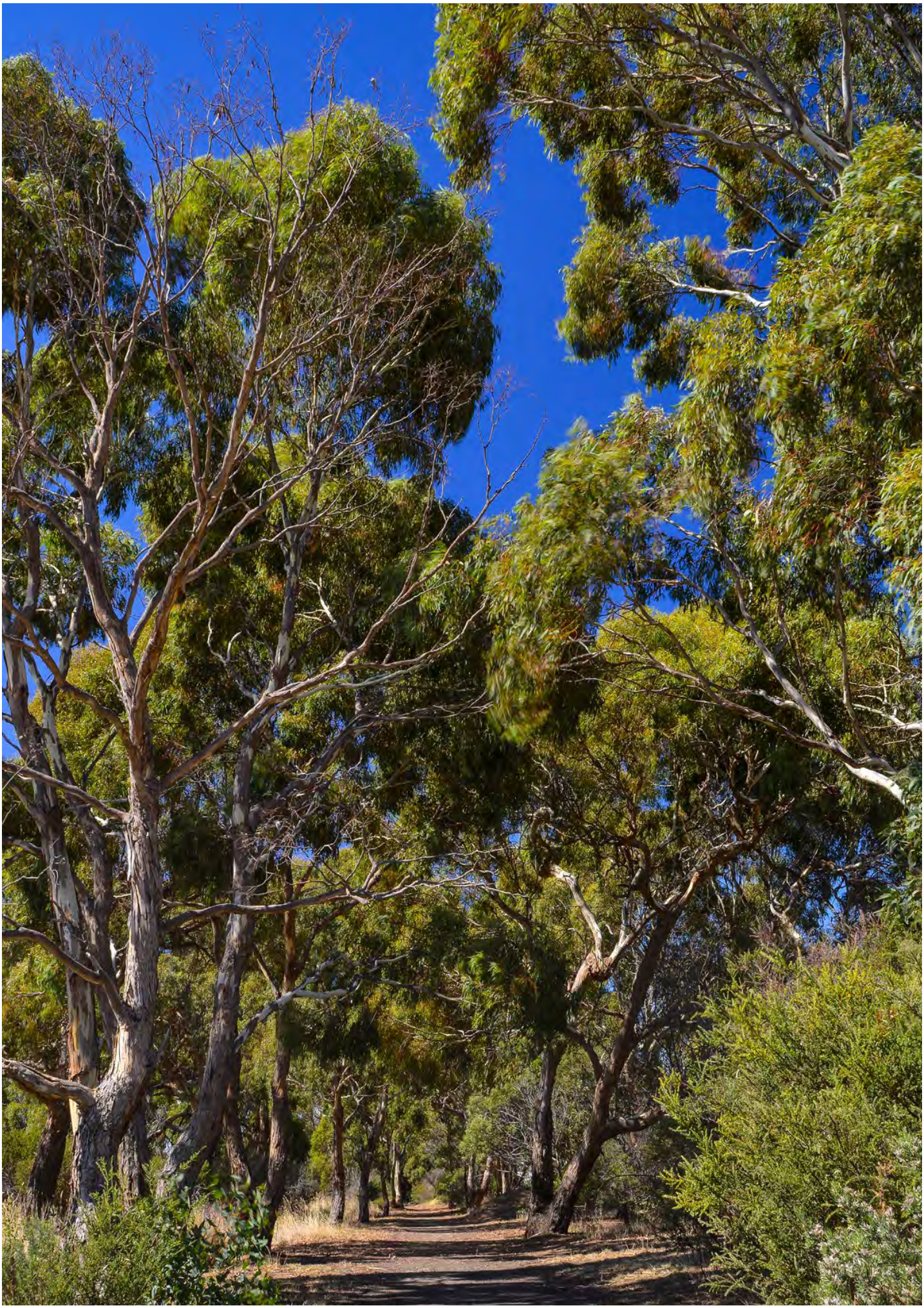
IMPLEMENTATION

3.0 IMPLEMENTATION

The implementation section is divided into a series of themes derived from the overarching vision and objectives of the PSP.

THE THEMES ARE:

1.  CHARACTER, HERITAGE AND HOUSING
2.  OPEN SPACE
3.  BIODIVERSITY
4.  TRANSPORT AND MOVEMENT
5.  INTEGRATED WATER MANAGEMENT
6.  CLIMATE RESILIENT COMMUNITIES
7.  CIRCULAR ECONOMY
8.  EMPLOYMENT, RETAIL AND COMMUNITIES
9.  ENERGY AND TECHNOLOGY
10.  DELIVERY



3.1 CHARACTER, HERITAGE AND HOUSING

CHARACTER REQUIREMENTS

R1

All public landscaped areas must be planted and designed to the satisfaction of the Responsible Authority.

R2

Native street trees must be provided on both sides of all roads and streets (excluding laneways) at regular intervals appropriate to tree size at maturity, to ensure a connected street tree canopy, unless otherwise agreed by the Responsible Authority.

R3

Existing non-native trees (trees not recognised by the Native Vegetation Precinct Plan (NVPP)) must be retained where possible and located within the public domain, including parks and road reserves, unless otherwise agreed by the Responsible Authority.

R4

Trees in parks and streets must be:

- Retained if they are existing indigenous trees already onsite;
- Planted considering space and resources requirements so as not to compete with existing indigenous trees;
- Planted using locally appropriate species and be consistent with any guidance provided on the relevant cross section within the PSP;
- Planted in modified and improved soil, the subsoil must be ripped and cultivated to a depth of 400mm to combine with existing soil/bases to support tree establishment;
- Comprise a mix of native and exotic, flowering and non-flowering species, as appropriate to the location and design;
- Planted with the location and type of tree considering passive solar / orientation benefits; and,
- Contribute towards achieving the canopy targets for the precinct as per Section 4.4.1 Canopy Cover Targets and Calculations.

R5

Subdivision of land adjacent to a sensitive visual interfaces, including all open space, must provide an interface outcome consistent with the appropriate Streetscape Cross Sections in Section 4.3 Road Design Characteristics and Cross Sections.

R6

Subdivision of land within the precinct must provide and meet the total cost of delivering all standard infrastructure requirements, including, but not limited to:

- Local bus stop infrastructure (locations to be agreed in writing by the Responsible Authority);
- Landscaping of all existing and future connector roads and local streets;
- Bicycle parking as required;
- Appropriate scale and style of lighting along all roads, shared and pedestrian paths, and public open spaces;
- Local street or pedestrian path crossings of waterways unless included in the MDCP or outlined as the responsibility of another agency in Table 9 Precinct Infrastructure Plan;
- Delivery of Shared Paths unless included in the MDCP or outlined as the responsibility of another agency in Table 9 Precinct Infrastructure Plan;
- Provision of water tapping, potable and recycled water connection points for any potential open space including the land located within the electricity transmission line easement; and,
- Conservation Reserves, including along Drews Road, Reserve Road and East-West Connector to deliver treatments in accordance with Section 4.3 (Cross Sections D, G, M N and O).

To the satisfaction of the Responsible Authority

R7

Subdivision of land and internal road design must provide:

- Safe and effective internal vehicular, pedestrian and all active transport circulation;
- Active interfaces with adjoining streets, open space and waterways; and,
- Appropriately designed and dimensioned to accommodate all services, allowing for tree planting with unencumbered and larger root zones.

R8

All subdivisions abutting arterial transport routes; the proposed Bellarine Link Road, Barwon Heads Road and the Geelong to Warrnambool Railway line, are required to provide an internal local road and lot frontage priority to establish a passive surveillance interface with the transport route. In the event of a proposed lot abutting two arterial transport routes, the lot must face Bellarine Link Road.

R9

Lots and dwellings, where possible, must front (in order of priority where a lot fronts multiple elements):

1. Controlled arterial roads
2. Geelong to Warrnambool Railway line and Marshall Train Station
3. Conservation areas
4. Public open space
5. Waterways and drainage reserves
6. Connector roads
7. Local access streets
8. Electricity and sewer easements

The siding of lots to waterways, open space, conservation areas and primary street frontages must be avoided where possible.

3.1 CHARACTER, HERITAGE AND HOUSING

CHARACTER GUIDELINES

G1

With respect to tree planting:

- Tree planting and design guidelines for public landscaped areas, streets, parks and open spaces are to be in accordance with Section 4.4 Indicative Street Tree Planting, which shows the list of preferred tree species to be used. Native species are preferred unless exotic species can be justified i.e., enhanced seasonal solar access. Any native trees that are permitted to be removed and offset by the NVPP shall also be considered as habitat trees for be considered for relocation in proposed open space within the precinct;
- Trees planted close to a waterway and within the open space corridor, are to be within a 10 metre wide tree protection strip;
- No trees or vegetation that reach a mature height of above 1.5 metres are to be planted within the high voltage electricity easement;
- Ensure that street trees planted are in keeping with the size and scale of the street so as to reinforce the movement hierarchy and local character;
- Ensure that no tree plantings generate weed issues in waterways and conservation areas; and,
- Any car parking areas shall include tree planting which meet or exceed canopy targets for the precinct as per Section 4.4.1 Canopy Cover Targets and Calculations.

To the satisfaction of the Responsible Authority.

G2

Street networks within subdivisions are to maximise the number of connections and direct views toward key precinct features, with built form or existing natural elements (such as trees) used as focal points for view lines along streets, having consideration to the need for a legible and permeable active transport and road network.

G3

With respect to general subdivision design:

- Preserve the opportunity for additional landscaping in existing wider road reserves;
- Focus on east-west street layouts to improve solar orientation while not prejudicing street tree canopy requirements. Lot layout should maximise the northern lengths of lots for internal solar gain as well as solar energy production potential. All dwellings should receive appropriate external shading to northern and western building facades;
- Subdivision is to deliver built form that provides an attractive street address, encourages passive surveillance and visual interest (e.g. through variation in lot widths); and,
- Those subdividing land are responsible for demonstrating how residential minimum density requirements are achieved within the boundary of each subdivision application. For subdivision proposals not within the Station Precinct, a lower-than-average density may be accepted if it can be clearly demonstrated that the density average will be achieved across a broader subdivision area, on land holdings currently owned or controlled by the proponent, through the provision and approval of a density strategy.

To the satisfaction of the Responsible Authority.

G4

With respect to fencing:

- Side fencing to public places should be at least 25% permeable and should not exceed 1.5 metres in height; and,
- No lots shall be designed with back fences facing roads, the rail line, open space, conservation areas, waterways and drainage, electricity and water easements.

G5

A consistent suite of lighting and public furniture is to be used across neighbourhoods and shall;

- In the Station Precinct, comply with Section 4.2;
- Be appropriate to the type and role of street or public space;
- Not permit a colour and style that brands the landscape to a development, or associated companies brand or marketing style;
- Be sustainably sourced by developers and/or be made of recycled materials where possible;

To the satisfaction of the Responsible Authority.

3.1 CHARACTER, HERITAGE AND HOUSING

HERITAGE REQUIREMENTS

R10

Proponents must consider and address Aboriginal cultural heritage in the design of development and must liaise with the designated Registered Aboriginal Party (or the relevant Traditional Owner Groups and Aboriginal Victoria in its absence) to ascertain whether heritage interpretation is appropriate in these identified locations, and how the heritage site(s) shall be incorporated into the design of the subdivision.

HERITAGE GUIDELINES

G6

- Any sites identified as of Aboriginal cultural heritage significance shall be interpreted in accordance with the design requirements of the Registered Aboriginal Party and, if appropriate, incorporated into the subdivision sympathetically and in consideration of, and integration with, adjacent land uses to the satisfaction of the Responsible Authority and the Registered Aboriginal Party;
- Any subdivision and/or development of land proposed that is adjacent to an identified post European contact heritage site should preserve a suitable area as part of urban development, and where possible, integrate it with the heritage site through adaptive re-use;
- The racecourse railway corridor (MAR05), preserved in the conservation reserve to the east of Drews Road, to include appropriate interpretive signage;
- The pipe works (MAR04) located within the Station precinct to be recognised in an appropriate display and integrated in the train station approach;
- The Smith Street trail to retain its existing character and the history of its establishment and maintenance to be recognised through interpretive signage within the Conservation Reserve; and,
- Any future recognised heritage features currently not shown on the PSP maps, to be considered, retained and integrated into surrounding development.

HOUSING DIVERSITY, DENSITY & CHOICE REQUIREMENTS

R11

Subdivisions which retain larger lots around existing dwellings must be demonstrate that the future subdivision of these larger lots can appropriately integrate with the surrounding subdivision layout.

R12

The Station precinct must facilitate high density housing development, co-location or integration of community, open space and shopping facilities, in appropriate locations, providing an accessible and high amenity interface with Marshall Train Station, as well as open space corridors co-locating with active transport, connecting Marshall Train Station to the north-south connector road (Drews Road) and the wider open space network. Subdivision of land and internal road design within the Station precinct requires the preparation of an urban design framework as outlined in Section 4.2 Station Precinct Urban Design Framework Requirements and Guidelines.

R13

Housing development for land within the Medium-Higher Density Residential Area, must achieve a minimum of 30 dwellings per net developable hectare if within the 400m walkable catchment of the Station Precinct as indicated on Plan 7 Character, Heritage and Housing, and a minimum of 25 dwellings per net developable hectare elsewhere, on appropriately designed lots. Housing on the land identified in Plan 7 must be delivered in accordance with Tables 2 and 3.

R14

For subdivision of land and internal road design within the Conventional Residential area, housing on the land identified in Plan 7 must be delivered in accordance with Tables 2 and 3.

R15

Permit applications for subdivision of land, or development of land for residential or mixed-use purposes, must submit a Social and Affordable Housing Delivery Strategy.

The above requirement does not apply to:

- Subdivision of land into less than three lots;
- Subdivision or development of land for which a contribution towards social housing and affordable housing has already been provided to the satisfaction of the Responsible Authority;
- Development of land for less than three dwellings;
- Buildings or works to an existing dwelling, provided the number of dwellings is not increased; and,
- Where any other provision of the Greater Geelong Planning Scheme, or the *Planning and Environment Act 1987* (or any other Act), requires an affordable housing contribution to be made in respect of the proposed development.

The Strategy must address the following:

- The contribution towards social housing and affordable housing to be provided, including the amount and form of the contribution;
- How the contribution towards social housing and affordable housing will be achieved and secured, including the identification of intended agencies, the owner/s of land and the Responsible Authority entering into an agreement pursuant to section 173 of the *Planning and Environment Act 1987*, timeframes, built form, and a response to each of the matters specified by the Minister by notice published in the Government Gazette in accordance with section 3AA(2) of the *Planning and Environment Act 1987*;
- The location of the social housing and affordable housing, ensuring that social housing and affordable housing are dispersed across residential areas;
- A summary of the range of housing types, densities and sizes;
- Staging requirements to ensure that social housing and affordable housing are provided in a timely manner as development occurs; and,
- Principles to ensure that the social housing and affordable housing dwellings are well designed, provide for a range of housing types to respond to local housing needs, and are integrated with the remainder of the development.

Note: Council requires a contribution towards social housing in the first instance and encourages a contribution towards affordable housing in addition to social housing.

Note: the terms 'social housing' and 'affordable housing' are defined at section 3AA of the *Planning and Environment Act 1987* and are to be afforded those definitions for the purpose of this document.

3.1 CHARACTER, HERITAGE AND HOUSING

HOUSING DIVERSITY, DENSITY & CHOICE REQUIREMENTS

R16

A contribution towards social and affordable housing must provide for the delivery of social and affordable housing that is:

- within the Marshall Precinct;
- in a form that is functionally and physically indistinguishable from conventional dwellings within the Marshall Precinct; and,
- in a form which is to the satisfaction of the Responsible Authority.

R17

Prior to the certification of a plan of subdivision for the first stage of residential subdivision, Residential ESD Design Guidelines must be prepared and submitted to the satisfaction of the Responsible Authority. The Residential ESD Design Guidelines must be applied as a restriction on the relevant plan of subdivision.

R18

The Residential ESD Design Guidelines prepared for residential subdivision must include requirements for:

- All new residential buildings to be constructed to be all electric in operation;
- At least 75% of the development's total site area with a combination of the following elements to reduce the impact of the urban heat island effect:

  Green Infrastructure:

  - Roof and shading structures with cooling colours and finishes that have a solar reflectance index (SRI) of: For roofing with less than 15 degree pitch, a SRI of at least 80]
  - For roofing with a pitch of greater than 15 degrees, a SRI of at least 40;
- Water features or WSUD items;
- Hardscaping materials with SRI of minimum 40;
- All new residential lots to allow for future provision of Electric Vehicle Charging Points (EVCPs) of one per dwelling;
- Unless otherwise approved in writing by the Responsible Authority, all EVCPs must be in accordance with Smart City Specifications (2022);
- All new dwellings with up to two bedrooms to have installed a 3kW minimum capacity solar photovoltaic (PV) system. An additional 1kw capacity solar photovoltaic (PV) system is required for each additional bedroom proposed; and,
- Apartment buildings to have installed a solar PV system with a capacity of at least 25W per square metre of site coverage or 1kW per dwelling.

R19

With respect to specialised housing guidelines, residential villages and retirement villages are to be considered on the basis that:

- Internal layout and design does not create a large scale private separation between the development and the wider precinct;
- Internal layout and design does not present a barrier to flexible movement through the surrounding road and pedestrian trail network.
- Cohesive integration with the proposed urban structure, including the open space and the transport network, is absolute;
- It is located within acceptable walking distance from the train station and easily accessible to bus capable streets;
- Meets the minimum tree canopy requirements of 'residential' detailed in Section 4.4.1 Canopy Cover Targets and Calculations; and,
- That the interface between private and public does not needlessly contribute to (or be perceived to contribute to) social friction, social exclusion, and heightened safety risks.

HOUSING DIVERSITY, DENSITY & CHOICE GUIDELINES

G7

Permit applications for subdivision of land, or development of land for residential, commercial or mixed-use purposes, should provide a contribution towards social housing to:

- Include social housing units in the project at the rate of 0.045 sqm (or 4.5%) for each square metre of commercially saleable or leasable floorspace (GFA) in the building(s) in question, with these social housing units being delivered at zero consideration to a registered community housing provider, or;
- Provide any other delivery model of the contribution, such as transfer of *serviced lots or a monetary contribution* to the Geelong Affordable Housing Trust or which is of equal value (as independently assessed) to the Primary Obligation or;
- Provide a cash-in-lieu payment into the Geelong Affordable Housing Trust at the rate of $117, indexed annually to movements in relevant dwelling prices in Geelong, for each square metre of saleable or leasable floorspace, or;
- Provide a cash-in-lieu payment into the Geelong Affordable Housing Trust at the rate of $696,604, indexed annually to movements in relevant dwelling prices in Geelong, per net developable hectare for subdivision projects, or;
- A combination of the above to reflect the value of partial dwellings indicated by the formula.

G8

A contribution towards social housing and affordable housing should be achieved by entering into an agreement with the Responsible Authority (and a registered housing agency, where applicable) pursuant to section 173 of the *Planning and Environment Act 1987* prior to the commencement of works, to the satisfaction of the Responsible Authority.

T3. LOCATION BY PREFERRED HOUSING TYPOLOGY

SUB PRECINCT	APPLIED ZONE	HOUSING TYPES
Station Precinct	Mixed Use	• Multi-unit apartments. • Limited multi-unit terraces, row houses and villas.
Medium-Higher Density Residential	Residential Growth	• Some multi-unit apartments in areas of higher amenity. • Small lot housing including townhouses, attached, semidetached and some detached houses. • Larger lots to be provided abutting arterial roads.
Conventional Residential	General Residential	• A mix of small lot housing including townhouses, attached, semidetached and detached houses. • Dual occupancies and duplexes. • Smaller dwellings to be located in areas of highest amenity (i.e. facing open spaces). • Larger lots to be provided abutting arterial roads.

P7. CHARACTER, HERITAGE AND HOUSING

KEY

CONTEXT

- Precinct Boundary
- Railway and Station

LANDUSE

- Conventional Residential
- Medium/Higher Density Residential
- Mixed Use - High Density Residential

HERITAGE AND CHARACTER

- Public Space at Heart of Station Precinct
- Distance to Station Precinct Heart
- Areas of Aboriginal Cultural Sensitivity
- European Heritage Area
- Existing Trees to be Retained
- Flood Overlay

INTERFACES

- 1 – Passive Open Space / Utilities
- 2 – Drainage Open Space
- 3 – Conversation
- 4 – Arterial of Transport Corridor
- 5 – Flood Overlay

3.2 OPEN SPACE

REQUIREMENTS

R20

Unencumbered land for public open space must (subject to R21) be provided in the locations identified in Plan 8 Open Space and Biodiversity, Table 1 Summary Land Budget and Table 4 Open Space Delivery Guide (LP01, LP02, LP03 and LP04). Open Space Contributions will be based on this table.

R21

Where land is identified as Credited (Unencumbered) Open Space on Plan 8 Open Space and Biodiversity and in the table to 4.1 Property Specific Land Budget is;

- Equal to 10% of the lot's Net Developable Area – Residential (NDAR), the land must be transferred to Council at no cost;
- Less than 10% of the lot's NDAR, the relevant land must be transferred to Council at no cost, and a cash contribution must be made to Council to bring the total contribution to a value of 10% NDAR;
- Greater than 10% of the lots NDAR, the relevant land must be transferred to Council at no cost to Council. Council will contribute an amount to the applicant equivalent to the value of the land provided in excess of 10% NDAR, but no greater than difference between 10% NDAR and the amount of land shown as a Credited (Unencumbered) Open Space on Plan 8 Open Space and Biodiversity and in the table to 4.1 Property Specific Land Budget.

The permit applicant may alter the distribution of public open space as shown in this PSP if appropriately justified to the satisfaction of the Responsible Authority.

The value of land for equalisation purposes is to be assessed as an equivalent proportion of the value of the whole land, and in accordance with Sections 18a and 19 of the Subdivision Act.

R22

A developer may elect to provide unencumbered public open space in addition to that shown on Plan 8 Open Space and Biodiversity and the land budget but it will neither be included in nor affect the equalisation scheme. It must be provided and embellished entirely at the cost of the developer.

R23

The design of spaces will not prejudice the biodiversity values of habitat conservation areas and wherever possible to integrate with such areas to enhance recreation / conservation experiences / opportunities.

R24

All local parks must be located, designed and developed in accordance with the relevant description in Table 4, the subsequent scope set out in the Marshall DCP, and the Geelong Play Strategy: Part 2 and other relevant local open space strategies to the satisfaction of the Responsible Authority.

R25

Any subdivision or development application that includes a local park (LP01, LP02, LP03 and /or LP04 as identified on Plan 8) must provide a concept plan showing the contours and the area required for proposed recreational elements including playgrounds, shelters, landscaping, paths and accompanying seating areas to the satisfaction of the Responsible Authority.

R26

Encumbered land for public open space must be provided specifically in the locations identified in Plan 8, Table 1 and Table 4.

All encumbered land must be vested at no cost to Council, to facilitate management, maintenance, and appropriate co-location of passive open space, shared user paths and drainage assets, to the satisfaction of the Responsible Authority.

All encumbered land for public open space forms an integral component of the integrated open space and active transport network and must remain designated as open space if, for any reason, the encumbrance on the land, is no longer applicable.

R27

The open space network must:

- Provide flexible recreational opportunities that allow for the anticipated range of local uses required by the community and connects to the active sporting facilities proposed in Horseshoe Bend Precinct Structure Plan abutting the southern boundary of Marshall Precinct;
- Maximise the amenity and value of encumbered open space through the provision of shared paths, trails and other appropriate recreation elements.

To the satisfaction of the Responsible Authority.

R28

All encumbered and unencumbered public open space (excluding conservation areas) must be designed and developed to a standard that satisfies the requirements of Council prior to the transfer of the public open space, including:

- Removal of all existing and disused structures, foundations, pipelines, and stockpiles, excluding those structures recognised in the heritage register;
- Clearing of rubbish and non-native vegetation (weeds), levelled, topsoiled and grassed with warm climate grass. Non-native trees that are not considered environmental weeds should be retained in open space unless removal is required to facilitate open space outcomes.
- Remediation of any contamination;
- Provision of water tapping, potable and recycled water connection points. Sewer connection points shall also be provided to land identified as a community facility;
- Landscaping, including the provision of drought resistant trees and shrubs listed in Section 4.4 Indicative Street Tree Planting;
- Provision of vehicular exclusion devices (fence, bollards, or other suitable method) and maintenance access points;
- Installation of park furniture including shelters, furniture, rubbish bins, local scale playground equipment, local scale play areas, drinking fountains and kick about spaces and appropriate paving to support these facilities, consistent with the type of public open space listed in Table 4 Open Space Delivery Guide;
- Appropriate boundary fencing where the public open space abuts private land, or as required by the Responsible Authority; and,
- All trees nominated for retention (regardless of their status) must be independently assessed by a suitably qualified arborist (min AQF L5) to ensure that they are worthy of being a material constraint to the development and fit for purpose to the satisfaction of the Responsible Authority.

R29

All landscaped areas must be designed in accordance with relevant guidelines, including the use of storm water and / or recycled water where possible, to the satisfaction of the Responsible Authority.

R30

All lots must:

- Provide for a primary point of access from a footpath or shared path proximate to the lot boundary, when directly fronting open space.
- Not back on to any form of open space to ensure public safety and surveillance is maintained.

R31

Appropriately scaled, energy efficient LED lighting must be installed along all major pedestrian thoroughfares traversing the public open space and cycling network to the satisfaction of the Responsible Authority.

3.2 OPEN SPACE

GUIDELINES

G9

With respect to all encumbered and unencumbered public open space delivery:

- Open spaces to be designed and developed to assist in promoting a 'sense of place' and community for people of all ages, providing opportunities to meet and interact in appropriate spaces in suitable ways and times.
- All parks should be located, designed and developed generally in accordance with the relevant description in Table 4 Open Space Delivery Guide, unless otherwise approved by the Responsible Authority.
- Installation of park furniture, play equipment, kick-about spaces and appropriate paving to support these facilities is to be consistent with the classification and hierarchy of the open space as listed in Table 4 and the City's Sustainable Communities Infrastructure Development Guidelines and all relevant updates.
- Design and layout of waterway corridors and other encumbered open space to maximise the potential for integration of recreational uses, utility infrastructure and storm water quality assets, where it does not conflict with the primary function of the land.
- Trees at 75% maturity to shade no less than 25% of the open space.
- Where fencing of local parks is required, it can be low-scale and be designed to guide appropriate movement and access rather than as a barrier. Design and materials shall complement the park setting.
- Path networks associated with open space to include way finding signage which clearly identifies key destinations and communicates necessary information to all users.
- Open space to cater for a broad range of users by providing a mix of spaces and planting to support both structured and unstructured recreational activities and play opportunities for all ages and abilities.
- Any pedestrian link through a dedicated trail, drainage reserve or adjoining the road network to include a provision of park seating at appropriate intervals.
- Must meet one or more criteria applicable to low threat vegetation in Table 7 Vegetation Classification Criteria as per AS3959 2018
- Refer to Section 4.4.2 Indicative Tree Planting for appropriate tree planting in open space and other environments.

G10

With respect to interface with conservation areas and biodiversity:

- Spaces abutting habitat conservation areas to be designed to protect those areas from unplanned walking/cycling and vehicular use and from pest weed and plant infestation.
- Street trees and public open space landscaping will contribute to habitat for indigenous fauna species, in particular arboreal animals and birds, where practical.

G11

With respect to boundary with roads:

- Open spaces (other than cross-block links/walkways) will have a road frontage to all boundaries except where addressed directly by purpose designed active-frontage alternative land uses. Where this occurs, lots shall:
  - Directly face the open space and allow for vehicular access via a rear laneway with the provision of a paper road fronting the open space.
  - Allow for a primary point of access from a footpath or shared path of a minimum width of 1.5m along the frontage of the lot.
  - Either have no front fence or include permeable fencing of a low height to facilitate public safety and surveillance.
- Or a suitable alternative to the satisfaction of the Responsible Authority.
- Design of spaces to ensure safety of users in respect of traffic on adjoining roads.
- Construction of a minimum 1.5m wide pedestrian path around the perimeter of the open space within the road reserve (not open space), connecting and linking to any other surrounding paths of points of interest.
- Streetscape planting and paths to complement and integrate with the abutting open space design.

G12

With respect to adjacent development:

- Open space to be enhanced by careful design of adjacent residential, community and commercial development.
- Development adjacent to open space areas to address and promote use and surveillance of the parkland.
- Development adjacent to open space to be well articulated
- and facilitate passive surveillance with windows, balconies and pedestrian access points directly fronting the open space.
- Rear and side fencing and blank walls of abutting development are not permitted, except for cross-block links/walkways that are no deeper than two residential blocks.
- A road at the interface between public open space (particularly those that form habitat conservation areas) and other land is the appropriate transition mechanism between the two uses.
- Landscaping of adjoining development to complement the open space landscape design.

G13

With respect to integrated water management:

- Walking/cycling links and other recreation facilities are co-located with the drainage system to maximise land use sustainability.
- Pedestrian bridges and boardwalks to be incorporated into the path network to facilitate permeability of neighbourhoods.
- Paths, including shared paths, to be designed to be at least above a minimum of the 1% Average Exceedance Probability (AEP) flood event to the satisfaction of the Responsible Authority.
- Bridges and boardwalks to be designed and constructed above the 1% AEP flood event level to the satisfaction of the relevant authority and the Responsible Authority.
- The layout and design of the waterways, wetlands and retarding basins (including the design of paths, bridges and boardwalks and the storm water drainage system) to integrate open space with natural systems

G14

With respect to structures:

- Structures should be sited above the 1% AEP flood event level and designed to integrate with and complement rather than dominate the landscape.

G15

With respect to public safety:

- Open spaces to be designed to maximise visibility and surveillance, provide safe movement and to increase activity and to be well maintained to encourage use by a wide range of people.
- The use of the design principles of 'Crime Prevention through Environmental Design' to guide the design of spaces and the infrastructure they contain and encourage best practice thinking in the design and functionality of these open spaces and associated infrastructure.
- Surrounding land uses to provide passive surveillance of adjoining open space and planting design to promote a highly visible public realm.
- The detailed design of open spaces adjacent to development to complement and enhance the function and safety of that development.
- Paths to facilitate clear, direct and easy movement to and from key destinations.
- Lighting in open spaces is encouraged along key walking / cycling links for safe pedestrian movement throughout the network but discouraging inappropriate use of main parkland areas after dark.
- Light fittings to be energy efficient and 'cut-off' type to direct light where it is required, emit white light and reduce unnecessary spill to sides or above. Light fittings to be LED (or better technology if available).

3.2 OPEN SPACE

GUIDELINES

G26

With respect to landscape character:

- A predominantly indigenous and Australian native planting theme will characterise the open space network.
- Exotic species may be appropriate in certain locations with the approval of the Responsible Authority.
- Species chosen to be appropriately robust to perform adequately in the local urban environment and micro-climate.
- Exotic and Australian native species to be considered to achieve particular planting effects such as highlight planting at entries and key focal points as well as avenues, complementing the road and active transport hierarchies.

G17

With respect to other elements and infrastructure:

- The appropriate design and siting of landscape elements and infrastructure will effectively complement the area.
- Infrastructure, including but not limited to, playgrounds, shelters, and picnic tables are to be clustered in nodes. Park planting themes will enhance and complement these nodes.
- Park seating to be provided about every 400 metres along key paths.
- Opportunities will be considered for appropriate public art, to the satisfaction of the relevant department of the City.

G18

With respect to signs and furniture:

- Parks will be signed clearly with the park name according, to the satisfaction of the Responsible Authority;
- Generally, additional signs within parks to be kept to a minimum with locations focused on key access or heritage interpretation points and major pedestrian / cycle routes; and
- Furniture and materials to be co-ordinated and complement the overall landscape design theme.

G19

With respect to water sensitive urban design:

- The design and layout of spaces should maximise water use efficiency, stormwater quality and long-term health of vegetation through the use of water sensitive urban design (WSUD) initiatives.
- WSUD principles to include excess run-off water from within or where appropriate, external to the space being directed to support watering regimes rather than being diverted to drains.
- Warm season grasses should be used within passive reserves to minimise recycled, harvested and potable water use.
- Incorporate stormwater harvesting in specific locations to tie in with tree watering requirements i.e., medium strips.

P8. OPEN SPACE AND BIODIVERSITY

KEY

CONTEXT

- Precinct Boundary
- Existing Trees to be Retained
- Railway and Station
- Flood Overlay
- Electrical Transmission Tower

OPEN SPACE

- Credited (Unencumbered) Open Space
- Conservative Reserve
- Utilities Easements
- Walkable Catchment of Reserve

T4. OPEN SPACE DELIVERY GUIDE

TITLE	AREA (HA)	TYPE	LOCATIONAL ATTRIBUTES	DELIVERY RESPONSIBILITY
LP01 Northern Local Park	0.975	Passive open space (Credited)	Adjacent to fenced Conservation Reserve (CR03) and integrated with SUP04.	Development Proponent
LP02 Eastern Local Park	0.799	Passive open space (Credited)	Adjacent to East West Connector Road with good access to SUP04.	Development Proponent
LP03 Southern Local Park	0.582	Passive open space (Credited)	Adjacent to East West Connector Road, Drews Road and fenced Conservation Reserve (CR05), and integrated with SUP05.	Development Proponent
LP04 Station Precinct Local Park	0.547	Passive open space (Credited)	Integrated with Station Precinct UDF and protection of existing native trees.	Development Proponent
CR01 Smith Street Greenway	0.435	Conservation Reserve (Uncredited)	Contains remnant vegetation and environmental values to be protected. Located directly north of LOS01.	Development Proponent
LOS01 Smith Street Greenway	0.766	Linear Open Space (Uncredited)	Smith Street road reserve between Drews Road and SB01, inclusive of walking trail (SUP01).	Development Proponent
CR02 Drews Road Greenway	0.255	Conservation Reserve (Uncredited)	Contains remnant vegetation and environmental values to be protected. Located directly east of LOS02.	Development Proponent
LOS02 Drews Road Greenway	0.764	Linear Open Space (Uncredited)	Drews Road road reserve (to be closed to vehicles) located north of East-West Connector Road and parallel to new realigned road, Inclusive of SUP05.	Development Proponent
CR03 Northern Conservation	2.027	Conservation Reserve (Uncredited)	Contains remnant vegetation and environmental values to be protected. Located adjacent to LP01.	Development Proponent
CR04 Southern Conservation	2.158	Conservation Reserve (Uncredited)	Contains remnant vegetation and environmental values to be protected. Located south of LOS01 including at historic racecourse railway area.	Development Proponent
CR05 Reserve Road Conservation	0.506	Conservation Reserve (Uncredited)	Contains remnant vegetation and environmental values to be protected. Located adjacent to LP03 and Reserve Road.	Development Proponent
E01 Barwon Water Main Outfall Sewer	0.807	Existing Easement (Uncredited)	6m wide easement running diagonally through the centre of the precinct. SUP04 located adjacent to sections of the easement.	Development Proponent
E02 High Voltage Transmission Line Easement	2.276	Existing Easement (Uncredited)	40m wide AusNet easement running east – west through the northern portion of the precinct. SUP02 located within easement along northern edge.	Development Proponent
E03 Barwon Water Easement	1.181	Existing Easement (Uncredited)	Shared user path parallel to railway line connecting Marshall Station Precinct to Reserve Road.	Responsible State Government Transport Authority

3.3 BIODIVERSITY

REQUIREMENTS

R32

All development must be generally in accordance and not undermine the strategic intent of the Marshall NVPP.

R33

Conservation reserves as indicated on Plan 8 Open Space and Biodiversity must be handed over to Council at no cost. All land designated for conservation reserves must be improved to a standard that satisfies the requirements of the Responsible Authority prior to the transfer of land, including:

- Removal of all existing and disused structures, foundations, pipelines, and stockpiles, excluding those structures recognised in the heritage register;
- Clearing of rubbish and non-native vegetation (weeds), levelled, topsoiled and grassed with warm climate grass (unless Conservation Reserve requirements dictate otherwise). Non-native trees that are not considered environmental weeds should be retained;
- Remediation of any contamination; and
- All trees nominated for retention (regardless of their status) must be independently assessed by a suitably qualified arborist (min AQF L5) to ensure that they are worthy of being a material constraint to the development and fit for purpose to the satisfaction of the Responsible Authority.

R34

All Conservation Reserves must be managed to a standard that satisfies the requirements of the NVPP, including the following:

- Designed to integrate with surrounding open space to form a contiguous linear connection allowing for wildlife migration.
- Provision of appropriate low scale and permeable, permitting suitable access, surveillance and public safety.
- Existing hydrological conditions are to be maintained, including but not limited to, the provision of a background hydrology drainage system from surrounding areas of urban development. All delivery infrastructure shall result in zero disturbance to vegetation.
- Provision of interpretive signage informing the biodiversity value of the conservation area, including but not limited to, a requirement for no domestic animal intrusion.
- Public lighting must be designed and baffled to prevent light spill and glare within and adjacent to the Conservation Reserve, unless otherwise agreed.
- Public paths or service infrastructure shall be designed and located at the edge of the Conservation Reserve, or in a location that results in zero disturbance to vegetation.
- No utility services to be located within Conservation Reserve or Greenways. No additional services in Greenways.
- Buffers are required around areas of conservation.

To the satisfaction of the Responsible Authority.

R35

Development within or adjacent to a Conservation Reserve must be in accordance with cross sections shown in Section 4.3 and requires the preparation of a Conservation Reserve Concept Plan, to the satisfaction of the Responsible Authority.

R36

The protection of trees identified as retained and / or protected in Plan 9 includes a tree protection zone in which development must not occur. Where work occurs adjacent to a tree protection zone, every measure must be taken to ensure the tree is retained. Any development proposed within or adjacent to a Tree Protection Zone (TPZ) must submit a Tree Protection and Construction Management Plan, that includes the following:

- Completion of a preliminary arboricultural assessment of the subject tree(s).
- Establish an up-to-date TPZ through the tree protection distance method outlined in the current Australian Standard AS4970 to assess stability and growth requirements.
- Determination of the preferred design and layout to highlight conflicts associated with the location of the existing tree.
- Details of measures to be used that will limit and manage earthworks in proximity to the tree identified for retention.
- Conditions and permit requirements established in the Marshall NVPP for retention.

3.3 BIODIVERSITY

REQUIREMENTS

R37

Interfaces with areas of native vegetation to be retained must be:

- designed in a way that prevents any impacts from civil works; and,
- allows for appropriate edge design;

To the satisfaction of the Responsible Authority

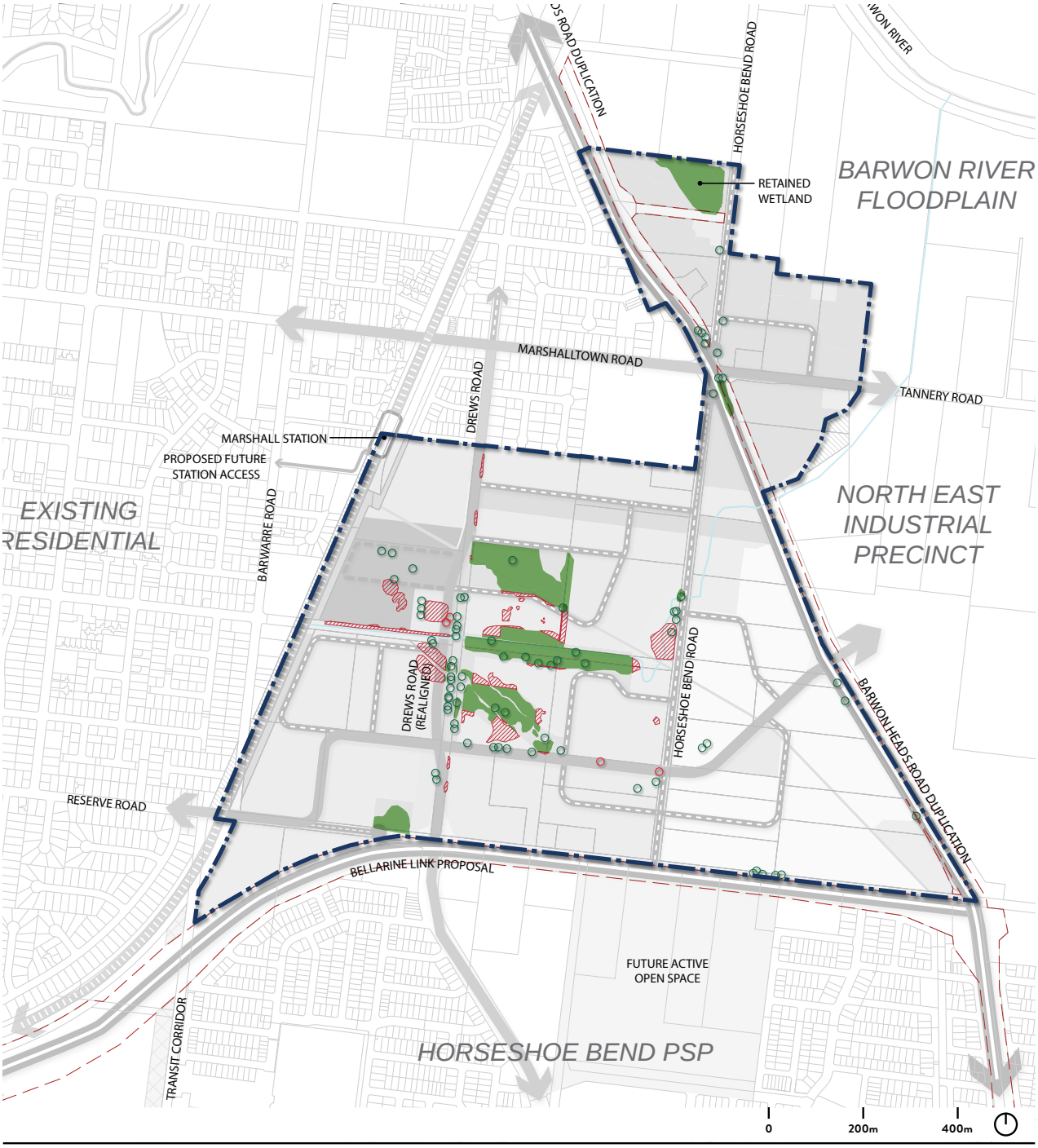
GUIDELINES

G20

With respect to R33, a conservation reserve concept plan should address:

- Where appropriate, public open space areas to be located adjacent to Conservation reserves and waterways to assist with their buffering.
- Planting adjacent to the Conservation Reserve, waterway corridors and retained indigenous vegetation to use indigenous species.
- Street trees and public open space landscaping to contribute to habitat for indigenous fauna species, in particular animals and birds that use trees as habitat.
- Drainage of stormwater wetlands to be designed to minimize the impact of urban stormwater on the biodiversity values of the Conservation Reserve, including the maintenance of background hydrology.
- Trees that may be removed under the NVPP should remain in situ until development commences.

P9. NATIVE VEGETATION PRECINCT PLAN



KEY

CONTEXT

- Precinct Boundary
- Railway and Station

NATIVE VEGETATION

- Existing Trees to be Retained
- Existing Trees to be Removed Subject to Approval
- Vegetation to be Retained
- Vegetation to be Removed subject to Approval

3.4 TRANSPORT AND MOVEMENT

ROAD & RAIL NETWORK REQUIREMENTS

R38

With respect to Geelong to Waurn Ponds railway line, the development must:

- Respond to and integrate with the commuter rail line and Marshall station, within the existing railway reservation.
- Respond to and integrate with a future transit corridor connection south to Armstrong Creek and Torquay, within and extending south from the existing railway reservation.

To the satisfaction of the Responsible Authority.

R39

With respect to the design and construction of the proposed Bellarine Link arterial road, development must:

- Recognise the location of the road within, and south of, the existing alignment of Reserve Road shown in Plan 10 Road Network and Public Transport, with intersection flaring being the only land required within the precinct for road construction.
- Integrate the interim and ultimate road design in accordance with the cross sections shown in Section 4.3 Road Design Characteristics and Cross Sections (Cross Section P).
- Provide a signalised intersection at Drews Road and the realigned Horseshoe Bend Road (south of Reserve Road – within Horseshoe Bend Precinct) as part of the interim road construction in accordance with Section 4.3 (IT01).
- Respond to and integrate with the provision of a left in / out intersection at Horseshoe Bend Road (north of Reserve Road) as part of the interim and ultimate road construction.
- Respond to and integrate with the design and provision of potential Bellarine Link drainage infrastructure in the location shown in Plan 12 Integrated Water Management.
- Respond to and integrate with a signalised pedestrian and cycling crossing at the intersection of Horseshoe Bend Road (north of Reserve Road), connecting Marshall Precinct with open space, schools, community facilities and the neighbourhood activity centre, immediately south of Reserve Road.
- Include a shared user path network on the northern side of the road that connects to the Marshall open space network.
- Allow for the provision and development of appropriate service frontage road(s) to the north of the road within the boundary of Marshall Precinct.
- Facilitate the delivery of a safe environment that integrates, enhances and encourages pedestrian and cycling movement, through logical and contiguous connections between the road, the precinct and the wider network.
- Respond to interim Reserve Road upgrades in accordance with cross section K of the Horseshoe Bend Precinct Structure Plan.

To the satisfaction of the Responsible Authority.

R40

With respect to Barwon Heads Road, development must:

- Respond to and integrate with the road design in accordance with the cross sections shown in Section 4.3 (Cross Section M), including the provision of an on-road cycle path and suitable pedestrian and cycling connection points into the precinct.
- Respond to and integrate with the signalised intersections at Reserve Road/Bellarine Link Road and Marshalltown/ Tannery Road.
- Respond to and integrate with the access road to the north of Tannery Road within the Commercial/Bulky Goods Precinct.
- Provide for a signalised intersection at the junction of the East-West Connector Road in accordance with the requirements in Section 4.3 (IT02).
- Respond to and integrate with the truncation of Horseshoe Bend Road north, south of the Marshalltown Road/Tannery Road, ensuring no additional access points from lots in the Commercial/Bulky Goods Area on to Barwon Heads Road, unless otherwise approved by the Head, Transport for Victoria.
- Respond to and integrate with all road project access solutions for any lots within and surrounding the PSP area.
- Provide appropriate frontage local road(s) to the west of Barwon Heads Road within the boundary of the PSP. A service frontage road is not required on the eastern side of Barwon Heads Road to access the Commercial/ Bulky Goods Area unless otherwise required and approved by the Head, Transport for Victoria.
- Facilitate the delivery of a safe environment that integrates, enhances and encourages pedestrian and cycling movement, through logical and contiguous connections between the road, the precinct and the wider network.

To the satisfaction of the Responsible Authority.

R41

The connector street network must be located as per the alignment shown in Plan 10 and include:

- Design at a size and function that facilitates bus capable public transport movements.
- Construction in accordance with Section 4.3 (Cross Sections A, B, C, F, and M) including an on-road cycle path network and suitable pedestrian and cycling crossing points that prioritise cycle and pedestrian movements over vehicular traffic.
- Where a shared path is contained within the road reserve, development should seek to minimise the conflict users of this path experience from abutting development. For example, the number of vehicle crossovers should be minimised, or avoided altogether by considering rear-loaded dwellings. Drews Road as the key north-south connector in the precinct, including the location of a green corridor providing off road pedestrian and cycling, preserving native vegetation, connecting to Reserve Road and the proposed new location of Horseshoe Bend Road (south of the precinct), tapering into a local road design north of the electricity easement, in accordance with Section 4.3 (IT01 and Cross Sections B, C, and D).
- The East-West Connector Road (RD04) aligned directly south of the Southern Conservation Reserve (CR04) and connecting Barwon Heads Road to Reserve Road.
- The Horseshoe Bend Road local access street generally along the current alignment, including the provision of an appropriate roundabout intersection treatment.
- Tannery Road as a connector road extending east from Barwon Heads Road into the North East Industrial Precinct in accordance with Section 4.3 (Cross Section F).
- Supporting the use of the connector roads as the major traffic movement network through the provision of appropriate traffic management infrastructure to slow movements on Drews Road and the East-West Connector Road including; the provision of appropriate roundabouts at the intersection of Drews Road and the East-West Connector Road, and Station Precinct Main Street.
- Design roundabouts in a manner that slows vehicles, with raised pedestrian priority (e.g., wombat) crossings, ensuring absolute connectivity and continuity of pedestrian paths, shared user paths and bicycle paths.
- The existing Reserve Road alignment functioning as a Connector Road requiring treatment in accordance with Section 4.3 (Cross Sections A and E).

R42

The local street network in subdivision proposals must:

- Respond and integrate to the constraints outlined that have informed the road network in Plan 10 including, but not limited to; utility easements, the open space network and Conservation Reserves in accordance with the Section 4.3 (Cross Sections E, F, H, I, J, K, L, M, N, O, Q and R) and the Train Station Precinct in accordance with Section 4.2 Station Precinct Urban Design Framework Requirements and Guidelines and Section 4.3 (Cross Section H).
- Facilitate a permeable, safe and low speed local street network that encourages walking and cycling and logical connections to off road walking and cycling networks.
- Provide logical and convenient access to local points of interest and destinations including open space and Marshall Train Station.
- Not include any additional roads crossing through the open space network, including credited open space, conservation areas, the Central Waterway, all drainage infrastructure and the Main Outfall Sewer and high voltage electricity easements.
- Ensure that the proposed local road network connects logically and seamlessly with the existing local road network to the immediate north of the precinct (including Section 4.3 Cross Section D).
- A permeable urban structure is strongly encouraged. Block lengths should generally be between 120 and 200m, and towards the shorter end of this range in areas of higher density. Excessive offset T -intersections are not supported. Provide convenient and direct access to the connector road network through neighbouring properties, where a property does not otherwise have access to the connector network or signalised access to the arterial road network.
- Facilitate effective and logical integration with neighbouring properties. Subdivision design should not preclude neighbouring property's ability to develop a holistically efficient movement network.

3.4 TRANSPORT AND MOVEMENT

ROAD & RAIL NETWORK REQUIREMENTS

R43

All signalised intersections must be designed in accordance with an up-to-date Road Network Planning Guidance and Policy Principles handbook, or future documents that supersede this document, to the satisfaction of Responsible Authority.

R44

All streets must be constructed to property boundaries where an inter- parcel connection is intended or indicated, by any date or stage of development required or approved by the Responsible Authority. Provision must be made for temporary vehicle turning until the inter-parcel connection is delivered.

R45

Vehicle access to lots fronting arterial roads must be provided from a local service frontage road in accordance with the appropriate cross section in Section 4.3, at a maximum length of 120 metres, or longer if it can be proven there will be less than 300 vehicle movements per day, to the satisfaction of the Responsible Authority

R46

Frontage roads must be the primary interface between the development and utility easements and open space in accordance with the relevant cross section at Section 4.3. If a circumstance arises where a lot facing these interfaces cannot be avoided, the development must front the open space (a rear facing development will not be supported).

ROAD & RAIL NETWORK GUIDELINES

G21

Variations to the standard cross sections required in Section 4.3 may be acceptable, to the satisfaction of the Responsible Authority, in the following ways:

- Varied street tree placement.
- Varied footpath or carriageway placement.
- Introduction of elements to create a boulevard effect.
- Varied carriageway or parking bay pavement material.
- Differing tree outstand treatments.

Alternative cross sections shall ensure that:

- Minimum required carriageway dimensions are maintained to ensure safe and efficient operation of emergency vehicles on all streets as well as buses on connector streets.
- The performance characteristics of standard cross sections as they relate to pedestrian and cycle use are maintained.
- The proposed location of services are shown and achieve the dedicated off road and shared path network in Plan 10.
- Minimum street tree canopy requirements are met on each road.
- Relevant minimum road reserve widths for the type of street are maintained.

G22

With respect to intersection treatments, pavement design and general construction, refer to the up-to-date Victorian State Government Greenfield Engineering Design and Construction Manual or future documents that supersede this document, to the satisfaction of the Responsible Authority.

ROAD & RAIL NETWORK GUIDELINES

G23

Where a single street spans across multiple properties that street may consist of multiple cross sections so long as a suitable transition has been allowed for between each. Where that street has already been constructed or approved for construction to a property boundary, the onus is on the development connecting into that street to adopt a consistent cross section until that suitable transition can be made.

G24

Where a local frontage road faces the Barwon Water Main Outfall Sewer Easement, the road may be designed so that lots can side face the easement in a "mews" road design approach.

G25

Where a lot is 7 metres or less in width, vehicle access should be via a rear laneway (refer to Section 4.3 Cross Section Q and Clause 56.06-8 Standard 21 of the Greater Geelong Planning Scheme), unless otherwise agreed by the Responsible Authority.

G26

Street layouts to provide multiple convenient routes to destinations such as the train station and public open space.

G27

Cul-de-sacs, although not generally supported, may be considered if it can be shown that there is no other way to suitably access the land subject to subdivision to the satisfaction of the Responsible Authority.

G28

The frequency of vehicle crossovers on widened verges (i.e., a verge in excess of six metres) can be minimised through the use of a combination of:

- Rear loaded lots with laneway access.
- Vehicle access from the side of a lot.
- Combined or grouped crossovers.
- Increased lot widths.

G29

Shared zone design principles are recommended to be incorporated for areas across the precinct that will experience a high volume and mix of pedestrians, cyclists and cars to create a more flexible and equitable transport environment.

G30

With respect to car parking in the Station Precinct and Medium Density Residential Area, innovative solutions that minimise crossovers and reliance on on-street parking will be supported.

- Station precinct car parking to propose inclusion of WSUD solutions within parking areas.

3.4 TRANSPORT AND MOVEMENT

ACTIVE TRANSPORT NETWORK REQUIREMENTS

R47

Design of all streets and arterial roads must give priority to the requirements of pedestrians and cyclists by providing:

- Footpaths of at least 1.5 metres on both sides of all streets and roads unless otherwise specified by the PSP.
- Shared user paths, pedestrian trails or bicycle paths where shown on Plan 11 Active Transport Network or as shown on the relevant cross-sections in Section 4.3.
- Safe, accessible and convenient crossing points at all connector roads and local street intersections, as well as at key desire lines and locations of high amenity, including within and toward the Station Precinct and connecting to areas of open space.
- Pedestrian and bicycle priority at intersections of minor streets and connector roads through strong and consistent visual and physical cues and supportive directional and associated road signs.
- Dedicated off-road shared user paths at a minimum of 3 metres in width (unless a cross section indicates otherwise), including strong and consistent visual and physical cues and supportive directional signs.
- Safe pedestrian/cyclist 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.
- Pedestrian priority crossings on all slip lanes.
- Safe, convenient and appropriately signed transition between on and off-road bicycle networks.

To the satisfaction of the Responsible Authority.

R48

Shared and pedestrian paths adjacent to, or within a shared open space network featuring a waterway or wetland, must:

- Be delivered by development proponents consistent with the network shown on Plan 11.
- Be above 1:10 year flood level with any crossing of the waterway designed to be above the 1:100 year flood level to maintain hydraulic function of the waterway or wetland.
- Be constructed on each side of the waterway or wetland to an all-weather standard.
- Be constructed at a minimum of 3 metres in width.

To the satisfaction of the Responsible Authority.

R49

A shared user path must be provided adjacent to the edge of the Barwon Water Main Outfall Sewer easement (i.e., not on the easement) and:

- Be constructed at a minimum of 3 metres in width.
- Include a landscape buffer at a minimum width of 2.7 metres between any proposed paper road or side lot interface when a frontage road is not provided.
- Include pedestrian priority crossovers to all parking areas.

R50

All shared user paths in the precinct must be contiguous and not impeded by the construction of a residential cross over or local street crossing, with the exception of the local streets shown on Plan 10.

R51

Bicycle parking facilities, which include way finding signage, must be provided by development proponents in convenient locations at key destinations including adjacent to local parks and in developments adjacent to the Marshall Train Station and Station Precinct Main Street.

PUBLIC TRANSPORT REQUIREMENTS

R52

A road nominated on Plan 10 as a bus capable road shall be constructed (including partial construction where relevant) in accordance with the relevant street cross section in Section 4.3.

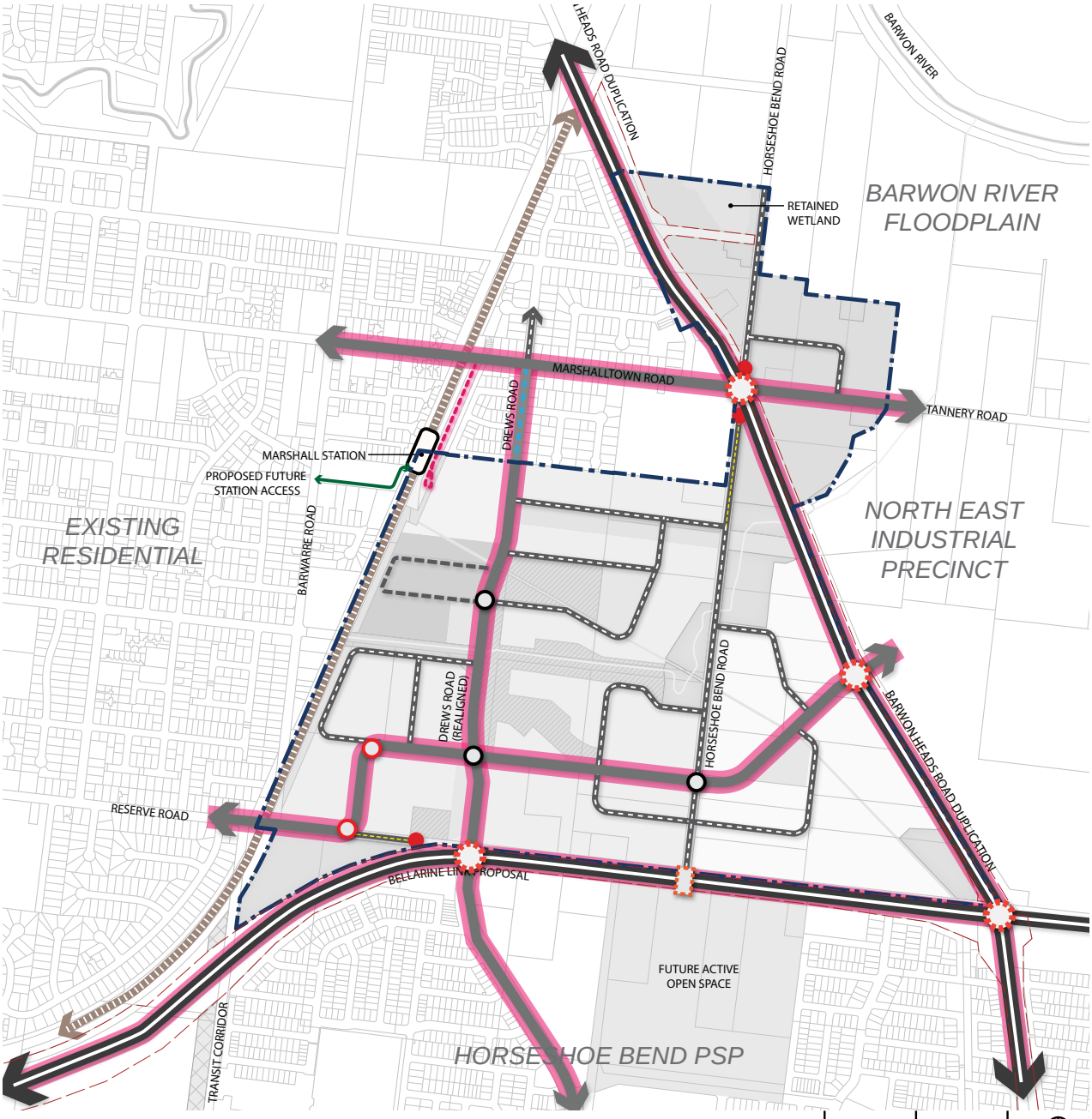
R53

Any roundabouts on roads shown as bus capable shall be constructed to accommodate ultra-low-floor buses in accordance with the most up to date Public Transport Guidelines for Land Use and Development, or future documents that supersede this document, to the satisfaction of Responsible Authority.

R54

Bus stop facilities shall be designed as an integral part of the Station Precinct and open space network, located appropriately to create a cohesive network and a facility that integrates seamlessly with surrounding and co-located land uses to the satisfaction of the Responsible Authority.

P10. ROAD NETWORK AND PUBLIC TRANSPORT



KEY

Refer to Appendix for Cross Section Concepts and Location Map.

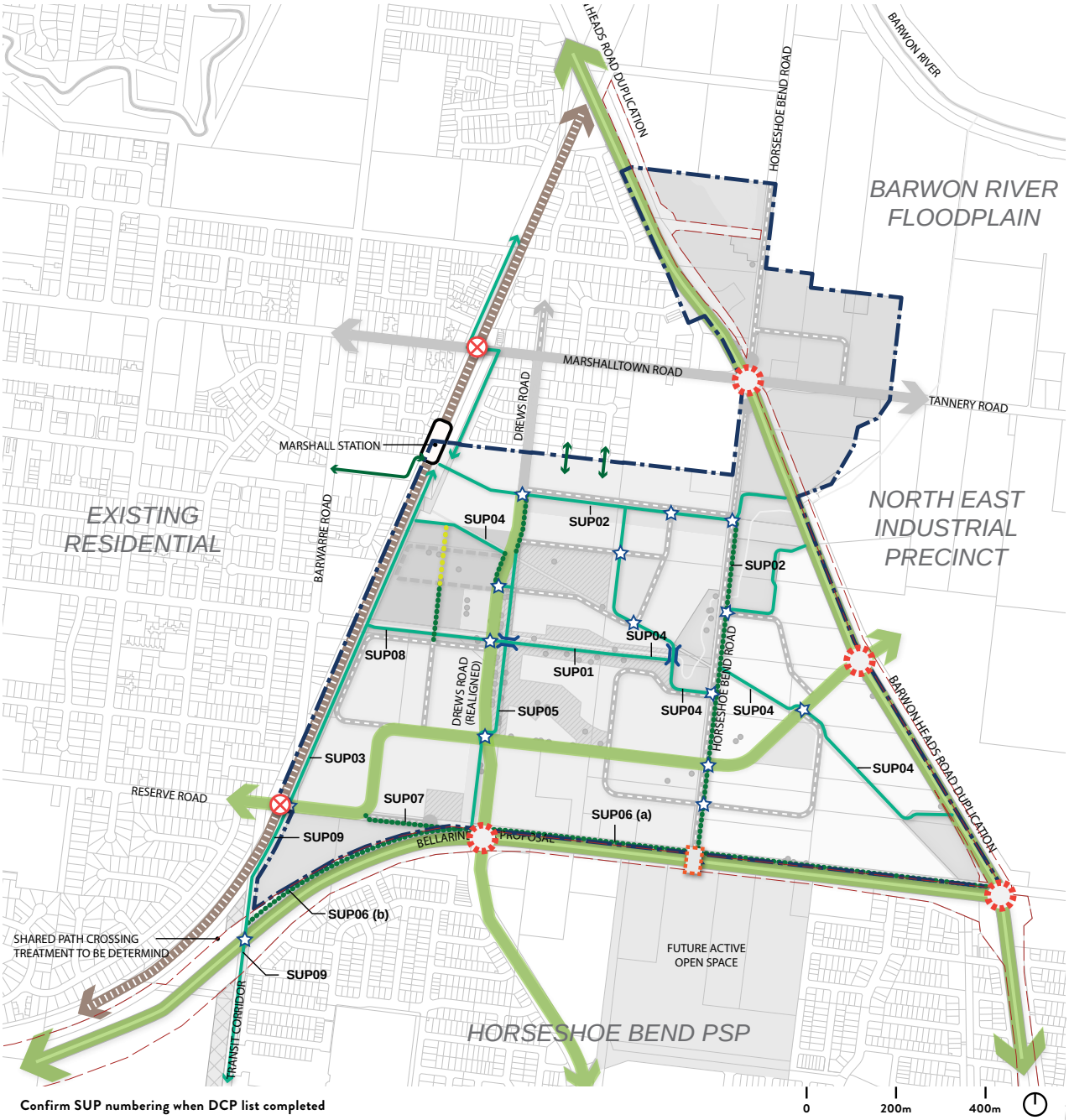
CONTEXT

- Precinct Boundary
- Railway and Station

MOVEMENT

- Arterial Road
- Connector Street
- Connector Street (Modified)
- Local Access Street
- Station Precinct Road (Refer to Concept Plan)
- Local Access Street (No Through Road)
- Bus Capable Road
- Bus Access Route to Station
- Road Truncation
- Roundabout
- Potential Roundabout
- Signalised Intersection
- Major Road Project
- Signaled Crossing

P11. ACTIVE TRANSPORT NETWORK



KEY

CONTEXT

- Precinct Boundary
- Railway and Station

MOVEMENT

- On-Road Bike Lanes
- Off-Road 3m Shared Path
- Shared Path within Road Reserve (Refer to Cross Sections)
- Pedestrian Street (Detailed Design to be resolved in UDF)
- Proposed Pedestrian Access from Outside of Precinct
- Signalised Intersection
- Pedestrian Signal
- Rail Level Crossing
- Major Road Project
- Shared Path Bridge
- Shared Path Crossing (pedestrian and cyclist priority treatment to be provided)

3.5 INTEGRATED WATER MANAGEMENT

REQUIREMENTS

R55

All lots must be connected to a reticulated recycled water system to provide for the supply of recycled water from a suitable scheme for toilet flushing and garden watering.

R56

The storm water management system must be designed in accordance with Plan 12 Integrated Water Management and the *Marshall Stormwater Management Strategy, December 2022*, to meet the following:

- Ensure safe development at 1% Average Exceedance Probability (AEP).
- Ensure that developed conditions do not increase predeveloped flow rates.
- Appropriate crossings of arterial and connector roads.
- Overland flow paths and piping within road reserves connected and integrated across property/parcel boundaries.
- City freeboard requirements for overland flow paths will be adequately contained within the road reserves.
- Appropriately sized and located wetland and sediment treatment basins.
- Appropriate catchment wide management, handling flows entering Marshall Precinct and ensuring no detrimental downstream impacts between Marshall Precinct and Barwon River.
- Include WSUD options to retain water in the streetscape with emphasis on blue and green infrastructure to be incorporated.
- Appropriate integration with open space, areas of conservation, existing infrastructure and the existing stormwater network.
- Provision of appropriate infrastructure between the precinct, Barwon River and Sparrovale-Nubitj yoorree Wetlands, to ensure changes to flow and quality conditions, including erosion risk, flood damage, loss of environmental habitat, access and legal rights to assets, and ensuring all associated permits are managed and mitigated.

To the satisfaction of the Responsible Authority.

R57

Stormwater conveyance and treatment must be designed in accordance with the *Marshall Stormwater Management Strategy, December 2022*, to the satisfaction of the Responsible Authority.

R58

The final layout and design of stormwater infrastructure including but not limited to; constructed waterways, wetlands, retarding basins, stormwater quality treatment infrastructure, and associated paths, boardwalks, bridges, and planting, must be designed to the satisfaction of the Responsible Authority and include appropriate measures to mitigate the risk of erosion.

R59

Stormwater runoff from the development must meet or exceed the performance objectives of the *Best Practice Environmental Management Guidelines for Urban Stormwater Management* (1999) and the *Urban stormwater management guidance* (2021) prior to discharge to receiving waterways as outlined on Plan 12 Integrated Water Management, unless otherwise approved by the Responsible Authority.

R60

Water use efficiency must be optimised in the design of streets and open spaces through passive hydrology methods with the landscape (topography, natural overland flow paths) to ensure the long-term viability of vegetation.

R61

Street trees and canopy trees within open spaces and car parking areas at street level must be passively irrigated through an appropriate WSUD solution.

R62

Development must comply with the relevant and up to date drainage and integrated water management policies and strategies implemented by the Responsible Authority, including any approved region-wide integrated water management plan. This includes consideration and provision of the infrastructure required between the precinct and the respective receiving water bodies, to ensure appropriate actions are taken to minimise and manage the following:

- Erosion risk to the drainage channel between the precinct and Barwon River.
- Flood damage to council infrastructure and private property from changed flow conditions across property boundaries.
- Loss of environmental habitat.
- Access and legal rights over drainage easements for management and maintenance.
- Permits from the Corangamite Catchment Management Authority for formal discharge into the designated waterway.

R63

Stormwater conveyance and treatment must ensure impacts to native vegetation and conservation reserves are avoided. Natural or pre-development hydrological patterns must be maintained in these areas and urban development catchments close to these areas, through alternative water management techniques, such as collecting localised stormwater for native hydrology, to ensure that pre development conditions are maintained or improved within these areas.

R64

The stormwater system must be designed to improve habitat conditions for native fauna by:

- Creating appropriate hydrology for retaining wetlands within the landscape, and improving habitat for native wildlife such as Growling Grass Frogs and Latham's Snipe, in accordance with *Growling Grass Frog Habitat Design Standards, March 2017*;
- Creating wetlands and biobasins which are constructed early in the development process to ensure flows are managed and treated appropriately prior to discharge throughout the entire life of the development of the Marshall PSP;
- Developing hydrological regimes that maintain fauna habitats (e.g. supporting aquatic vegetation, semi-aquatic vegetation, as well as terrestrial vegetation), encourage native fish passage, and provide a suitable hydrological regime to manage pest animals. This can include periods of drying to kill predatory exotic fish such as Eastern Gambusia.
- Designing wetlands (and possibly water treatment facilities such as the retarding basins/biobasins) to be connected through a series of ponds, and to incorporate desirable and varied water depths and habitat variability (including swales which may be preferred by Latham's Snipe);
- Designing hydraulic structures consistent with *Growling Grass Frog Crossing Design Standards* (DELWP, 2017).

R65

Stormwater assets required by arterial road and rail construction projects must be located in a manner that can facilitate co-location of drainage assets in accordance with the *Marshall Stormwater Management Strategy, December 2022*, and to the satisfaction of the Responsible Authority.

R66

Any stormwater infrastructure constructed adjacent to or crossing the main outfall sewerage pipeline must be provided to the satisfaction of Barwon Water.

R67

Any stormwater infrastructure constructed adjacent to or crossing the 40 metre wide electricity transmission line easement must be provided to the satisfaction of AusNet Services. Any permitted tree and shrub planting on the easement must be consistent with AusNet Services '*AusNet Services - Your guide to planting near electricity lines*'.

3.5 INTEGRATED WATER MANAGEMENT

REQUIREMENTS

R68

Development staging and sequencing must provide for the timely and coordinated delivery of ultimate waterway and drainage infrastructure, including stormwater quality treatment, in accordance with the drainage staging requirements of Table 9 Precinct Infrastructure Plan and the *Marshall Stormwater Management Strategy, December 2022*, in a manner that facilitates development of adjacent land holdings.

R69

Where R68 is demonstrated to not be practically possible, and subject to R121, development proposals must demonstrate how any interim solution manages and treats storm water generated from the development and how this will enable delivery of the ultimate drainage solution. Interim drainage infrastructure will be limited to works that form part of the ultimate solution (e.g. partial construction of a basin).

Any temporary outfalls reliant on adjacent land holdings will not be considered unless the applicant obtains prior written approval from the adjacent landowner to utilise the land for drainage purposes. Temporary solutions must not be located on future public land.

Maintenance of any approved temporary outfalls must be the sole responsibility of the developer and have an agreement in place permitting appropriate maintenance, removal and returning of the site to appropriate conditions.

All to the satisfaction of the Responsible Authority.

R70

An Integrated Water Management Plan must be provided at the planning permit application stage and demonstrate:

- Building scale capture and reuse, street level amenity improvement through reduction of heat island effect (increased greening and tree canopy) and slowing runoff, cleaning and reuse where appropriate.

R71

The Integrated Water Management Plan submitted as part of the application must:

- Assess the existing surface and subsurface drainage conditions on the site;
- Nominate the location, type and surface area (m2) of proposed WSUD treatment systems, including how each internal sub-catchment area is to be treated and connected to a WSUD element, e.g. road surfaces to passively irrigate open space/street trees, and/or treated via tree pits, biofilters, wetlands;
- Include modelling of all IWM and WSUD infrastructure, including a summary of model parameters used, justification where appropriate and results, as well as a copy of all MUSIC model files (*.sqz) with corresponding MUSIC Auditor reports showing compliance to BPEM targets;
- Include a Construction Environment Management Plan that addresses the recommendations from the report: Fauna Surveys, *Marshall Precinct Plan Area, Marshall, Version B, May 2022*;
- Provide an Asset Maintenance Plan for IWM/WSUD infrastructure that includes 'as constructed' asset design elements/components, maintenance frequency and actions required to maintain assets in good operational order for the expected life of the asset, including inspection checklists for maintenance.

The Asset Maintenance Plan must outline:

- works, including temporary outfall provisions, to the satisfaction of the Responsible Authority;
- how the design of all assets takes into consideration maintenance and access requirements and seeks to minimise ongoing maintenance and operating needs and costs; and
- how the assets will be maintained and protected during the construction delivery phase and defects liability period prior to practical completion and asset handover.

R72

The design and construction of the Main Drain North and Main Drain South must not impact native vegetation within conservation reserves. The construction of both Main Drains must be within the road reserve and avoid conservation reserve areas.

GUIDELINES

G31

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 biodiversity and natural systems to the satisfaction of relevant authorities.

G32

Drainage and stormwater assets should be designed and incorporated into the overall street or path network as a visual feature and complement and build on the existing landscape features of the precinct to the satisfaction of the Responsible Authority.

G33

Where practical, and where primary waterway, open space and conservation functions are not adversely affected, IWM initiatives should be co-located with the precinct open space network.

G34

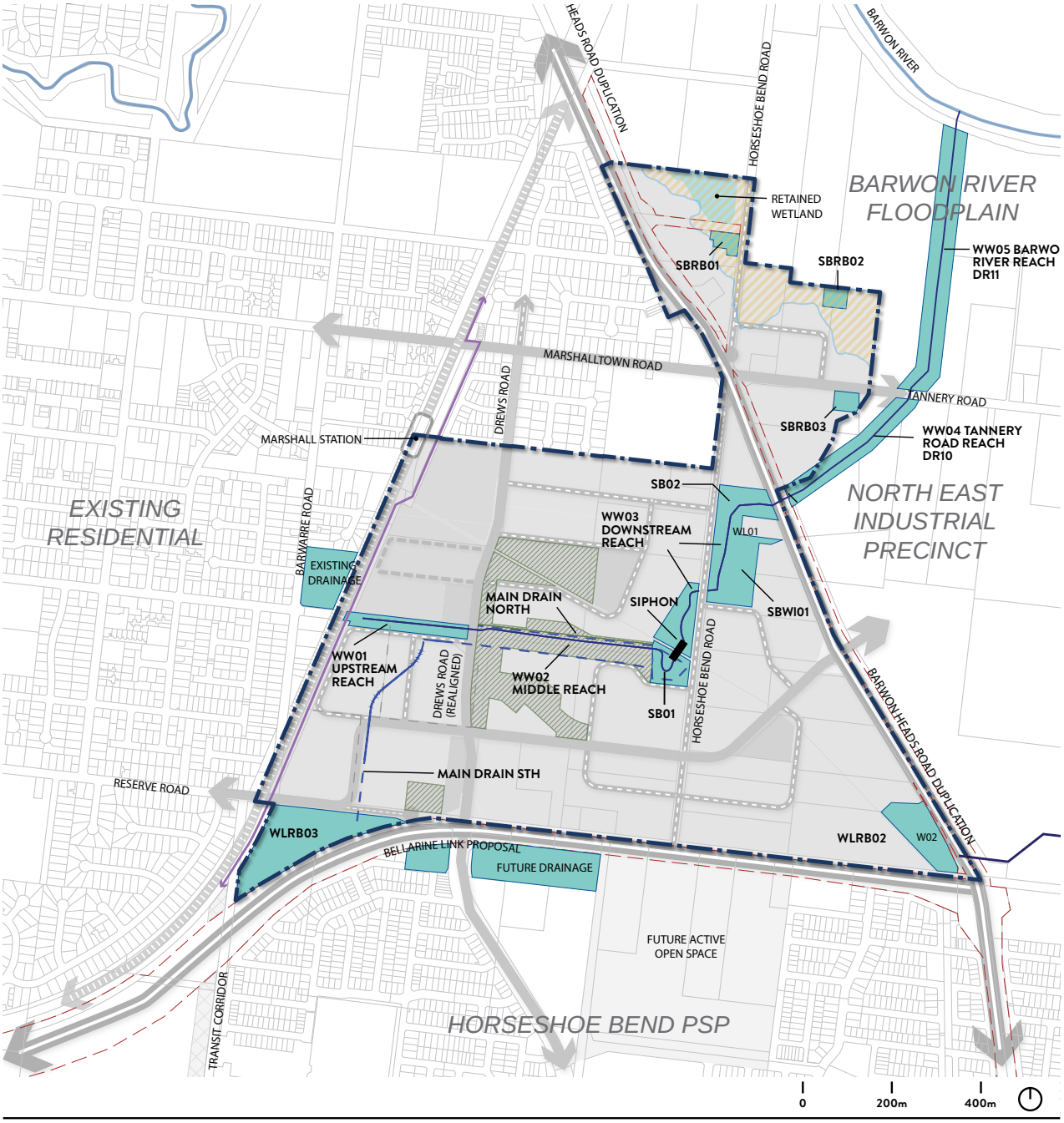
Streets are the primary interface between development and waterways /waterbodies. Public open space and lots with a direct frontage may be provided as a minor component of the waterway interface only where necessary for logical subdivision design. Where lots with direct frontage are provided, a set back up to 5.0 metres from the waterway corridor is recommended to provide pedestrian and service vehicle access to those lots, to the satisfaction of the Responsible Authority.

T5. INTEGRATED WATER MANAGEMENT ASSET SUMMARY

ASSET ID	ASSET TYPE	AREA (HA)
WLRB03	Sediment Pond, Wetland and Retarding Basin	2.90
WW01 Upstream Reach	Constructed Waterway	0.824
WW02 Middle Reach	Marshall Creek (Middle Reach)	1.16
SB01	Sediment Basin	0.61
WW03 Downstream Reach (upstream of Horseshoe Bend Road)	Constructed Waterway	0.87
WW03 Downstream Reach (downstream of Horseshoe Bend Road, upstream of Barwon Heads Road)	Constructed Waterway	1.43
WL01	Wetland	0.94
SBWL01	Sediment Basin and Wetland	0.23
SB02	Sediment Basin	0.36
WW04 Tannery Road Reach	Constructed Waterway	1.55
WW05 Barwon River Reach	Constructed Waterway	3.25
SBRB01	Sediment Pond and Retarding Basin	0.24
SBRB02	Sediment Pond and Retarding Basin	0.23
SBRB03	Sediment Pond and Retarding Basin	0.22
WLRB02	Sediment Pond, Wetland and Retarding Basin	1.22
WW06 Sparrovale – Nubijt yooree Wetlands Reach	Constructed Waterway	n/a
Main Drain North	Main Drain	n/a
Main Drain South	Main Drain	n/a
Siphon	Siphon under Main Outfall Sewer	n/a

The City of Greater Geelong is the Responsible Authority for all assets in Table 5.
* land area figures in Table 5 as per *Marshall Stormwater Management Strategy, December 2022.*

P12. INTEGRATED WATER MANAGEMENT



KEY

Note: While both main drain north and south are shown located in conservation area, these will ultimately be located in future road reserves.

CONTEXT

- Precinct Boundary
- Railway and Station

INTEGRATED WATER MANAGEMENT

- Flood Overlay
- Drainage Asset
- Proposed Main Drain - Indicative Location
- Waterway/Drainage Line
- Existing Water Pipe

3.6 CLIMATE RESILIENT COMMUNITIES

URBAN HEAT & TREE CANOPY COVER REQUIREMENTS

R73

Trees nominated to be retained in the NVPP must be retained within open spaces, road reservations or other public space with Tree Protection Zones accommodated in accordance with AS 4970-2009.

R74

A development and/or subdivision application must demonstrate that the requirements of Section 4.4 Canopy Cover and Tree Species List are met. The canopy cover requirements are calculated as per Section 4.4.1 Canopy Cover Targets and Calculations. Section 4.4.2 outlines the Marshall Structure Plan Tree Species List.

R75

All trees planted in the conservation areas must be indigenous to the region and the location of planting must have regard to the habitat needs of indigenous fauna.

R76

Street designs must maximise the provision of structural soil areas for tree growth generally in accordance with the Street Cross Sections contained in Section 4.3 Road Design Characteristics and Cross Sections.

R77

Trees with a mature canopy diameter greater than 12m must use a bioretention swale with permeable paved surface.

URBAN HEAT & TREE CANOPY COVER GUIDELINES

G35

Tree species selection should be varied and based on the specimen's ability to easily establish and achieve their genetic potential in the local climate.

G36

Tree species utilised on roads adjacent the conservation areas should support and enhance the biodiversity values of the conservation areas.

G37

Tree planting should be located to maximise shade on paved surfaces.

G38

Feature street trees should be selected where appropriate to serve as local landmarks and to add definition to key nodes, activity centre, park frontages, and key intersections and entrances.

G39

As per Section 4.3 Road Design Characteristics and Cross Sections, tree planting should form part of the raised verge and footpath or have adequate collision impact barriers to reduce likelihood of tree damage.

3.6 CLIMATE RESILIENT COMMUNITIES

BUSHFIRE RESILIENCE REQUIREMENTS

R78

Where a lot capable of accommodating a dwelling is adjacent to a bushfire hazard area identified on Plan 13 Bushfire Classifications, a suitable road must be provided between the hazard area and the lot on which the dwelling may be developed, to the satisfaction of the Responsible Authority.

R79

All roads and streets within the precinct are to provide suitable access for FRV and CFA fire response vehicles.

Residential subdivision adjacent to the bushfire hazard areas shown on Plan 13 Bushfire Classifications must provide safe egress routes away from the fire hazard area to the satisfaction of the Responsible Authority and the CFA.

R80

If fencing is proposed as part of a development application within the Commercial 2/Bulky Goods area, bushfire resistant timber or other bushfire resistant materials must be used in the construction of those fences.

BUSHFIRE RESILIENCE GUIDELINES

G40

Where residential land adjoins a bushfire threat area as shown on Plan 13 Bushfire Classifications the required separation distances specified in AS3959-2009 should be achieved by:

- widening the identified road cross section in the PSP to provide for larger nature strips and/or
- incorporating larger front or side setbacks

Fuel path disruptions such as roads and paths should be utilised to reduce the need for setbacks within privately owned residential lots.

G41

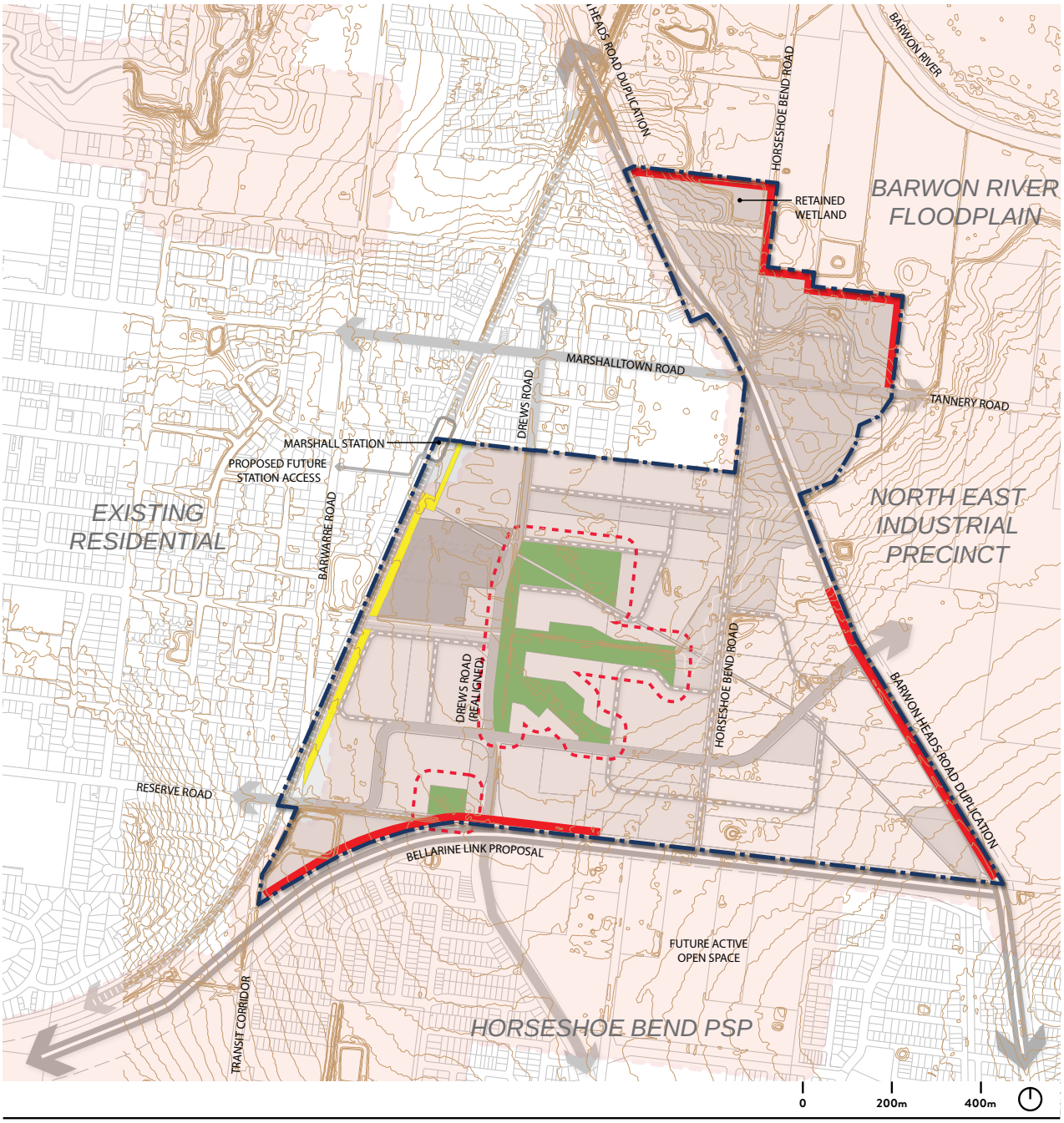
Landscape design and plant selection in open spaces, including waterways and drainage corridors should not increase bushfire risk.

G42

Fire wise tree species as determined by the CFA guidelines Landscaping for Bushfire: Garden Design and Plant Selection (June 2021 or as amended) should be selected for planting.

Note: Bushfire Resilience Requirements and Guidelines are subject to review as development progresses, where reliably low threat or non-vegetated areas will be created. This will result in large parts of the precinct being able to be excised from the Bushfire Prone Area (BPA). DEECA review and excise areas from the BPA approximately every 6 months, particularly in growth areas where the hazard will be removed as urban development occurs. Land becomes eligible for excision from the BPA if it satisfies state-wide hazard mapping criteria.

P13. BUSHFIRE CLASSIFICATIONS



KEY

CONTEXT

- Precinct Boundary
- Railway and Station
- Contours 0.5m

BUSHFIRE THREATS

- Bushfire Prone Area
- 33m Dwelling Setback from Conservation Area (Subject to Detailed Assessment at Subdivision and/or Development Stage).
- 19m Dwelling Setback from Grassland Area
- Conservation Reserve
- Barwon Water Easement. Bushfire Threat to be Reviewed at Subdivision.

T6. VEGETATION CLASSIFICATION OF BUSHFIRE HAZARD AREAS AND SETBACKS FOR HABITABLE BUILDINGS TO ACHIEVE BAL 12.5.

VEGETATION CLASSIFICATION (AS3959:2018)	DWELLING-VEGETATION SETBACK DISTANCE (DEFENDABLE SPACE)
Grassland	19m
Woodland	33m

T7. VEGETATION CLASSIFICATION CRITERIA AS PER AS3959 2018

AS 3959 categories vegetation on the basis of its ability to contribute to bushfire spread or intensity. Vegetation classifications relevant to the Marshall Precinct are described in the table below. Vegetation is classified on the basis of its structure and composition at maturity.

CLASSIFICATION	APPLICABLE CRITERIA
Low threat vegetation (excluded from BAL assessment)	To classify vegetation as exempt, there must be an assurance that the vegetation will continue to be managed in its low-threat state into perpetuity. Vegetation categories exempt from BAL assessments are: **(a)** Vegetation of any type that is more than 100m from the site **(b)** Single areas of vegetation less than 1 ha in area and not within 100m of other areas of vegetation being classified vegetation. **(c)** Multiple areas of vegetation less than 0.25ha in area and not within 20m of the site, or each other or of other areas of vegetation being classified vegetation. **(d)** Strips of vegetation less than 20m in width (measured perpendicular to the evaluation exposed to the strip of vegetation) regardless of length and not within 20m of the site or each other, or other areas of vegetation being classified vegetation. **(e)** Non-vegetated areas, that is, areas permanently cleared of vegetation including waterways, exposed beaches, roads, footpaths, buildings and rocky outcrops. **(f)** Vegetation regarded as low threat due to factors such flammability, moisture content or fuel load. This includes grassland managed in a minimal fuel condition, mangroves and other saline wetlands, maintained lawns, golf courses (such as playing areas and fairways), maintained public reserves and parklands, sporting fields, vineyards, banana plantations, orchards, market gardens (and other non-curing crops), cultivated gardens, commercial nurseries, nature strips and windbreaks. **Notes**: 1. Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attach (recognizable as short cropped grass for example to a nominal height of 100mm) 2. A windbreak is considered a single row of trees used as a screen or to reduce the effect of wind on the leeward side of the trees
Woodland	Trees 10m to 30m high; 10% to 30% foliage cover dominated by eucalypts and/or Callitris with a prominent grassy understorey. May contain isolated shrubs.
Grassland	All forms (except tussock moorlands), including situations with shrubs and trees, if the overstorey foliage cover is less than 10%. Includes pasture and cropland. Note that grassland managed in minimal fuel conditions and non-curing crops are regarded as low threat vegetation for the purpose of Clause 2.2.3.2 (AS3959) Forms: Open Woodland/Low Open Woodland/Open Shrubland/Low Open Shrubland/ Hummock Grassland/Closed Tussock Grassland/Tussock Grassland/Open Tussock/Sparse Open Tussock/Dense Sown Pasture/Sown Pasture/Open Herbfield/Sparse Open Herbfield.

Note: for the purposes of the PSP 'site' in item (a) means the building facade or building envelope.

3.7 CIRCULAR ECONOMY

REQUIREMENTS

R81

Prior to the certification of a plan of subdivision for the first stage of subdivision, the permit holder must demonstrate, through ISCA Materials Calculator 2.1 or another life cycle assessment tool such as eTool or similar, how the subdivision addresses resource recovery and recycling, minimises levels of embodied carbon in construction materials, encourages a whole-of-lifecycle approach, and supports a carbon neutral neighbourhood by:

- Retention of existing built form or other infrastructure where reuse is feasible;
- Increasing the recycled content of road materials, including road base;
- Reducing the amount of embodied carbon in road construction;
- Increasing the use of recycled content in any concrete and pipes used;
- Reducing the amount of embodied carbon in any cement and aggregates used;
- Significantly reducing the amount of embodied carbon in any pipes;
- The selection of street furniture with high levels of recycled content;
- The use of locally sourced materials, particularly the use of local materials for road base;
- Avoiding the use of timber which is not certified by the Forest Stewardship Council or Program for the Endorsement of Forest Certification; and
- Use of materials that are certified low volatile organic compound.

R82

Prior to the certification of a plan of subdivision for the first stage of subdivision, the permit holder must provide a Construction & Environmental Management Plan which:

- Demonstrates the steps being taken to reduce emissions from construction activities
- Demonstrates the proposed management and recycling of construction waste in a manner which maximises resource recovery and recycling during construction phase, minimises levels of embodied carbon within construction materials, and encourages a whole-of-lifecycle approach.

3.8 EMPLOYMENT, RETAIL AND COMMUNITY FACILITIES

EMPLOYMENT & RETAIL REQUIREMENTS

R83

A small scale, convenience style Local Activity Centre is provided, which must:

- Be located within the Station Precinct.
- Comply with Section 4.2 Station Precinct Urban Design Framework Requirements and Guidelines.
- Permit a maximum as of right of 2,750 sqm of retail floor space that includes no more than 2,000 sqm for a supermarket and the balance for specialty shops and food and drink premises. An application that proposes to exceed the floor space maximum of 2,750 sqm must be supported by an Economic Impact Assessment that responds to Clause 17.02-1L. Council may waive the requirement for the submission of an Economic Impact Assessment where the development is for a shop use (excluding supermarket) that results in the development exceeding the maximum retail floor space for the Local Activity Centre of 2,750 sqm.
- Support up to 2,250 sqm of non-retail uses (excluding residential) including a mix of small-scale office, medical, gym, childcare uses, etc.
- Provide a maximum overall Local Activity Centre floor area of no more than 5,000 sqm.
- Support ground level retail co-location with high density residential development in a Main Street structure that provides for activated street frontages, prioritises pedestrian connections, facilitates diverse architecture and provides on-street parking in discrete locations.
- Demonstrate the relationship and connectivity of the Centre with co-located and surrounding land uses, including the train station and open space.
- Not permit electronic gaming machines.
- Provide all car parking and loading facilities to all commercial building at the rear so as to present an attractive address to the street.
- Ensure all goods and materials, storage areas and refuse areas are not visible from public areas, including open space and street sightlines.

To the satisfaction of the Responsible Authority.

R84

A Commercial/Bulky Goods Area is provided east of Barwon Heads Road that supports development which must:

- Be consistent with the general requirements of the Planning Scheme "Commercial 2" zone.
- Provide appropriate crossovers and connections onto Barwon Heads Road and to remove redundant vehicle crossings.
- Provide a logical local street network that prioritises connections on to Tannery Road, Horseshoe Bend Road (north of Tannery Road) and the new access road constructed as part of the Barwon Heads Road duplication project, as well as considering the proposed and existing connections into the North East Industrial Precinct.
- Comply with the Planning Scheme requirements for the existing Floodway Overlay.
- Require all buildings to be located at the front of any site to present an attractive address to Barwon Heads Road and Tannery Road.
- Require most car parking and all loading facilities to be located at the rear of any buildings to present an attractive address to Barwon Heads Road and Tannery Road.
- Require a minimum landscaped of five metres to provide an attractive and integrated interface with Barwon Heads Road and Tannery Road.
- Require all goods and materials, storage areas and refuse areas to not be visible from street sightlines.
- Comply with the Sustainability Management Plan at R17 and G8.

To the satisfaction of the Responsible Authority.

R85

With respect to the Commercial/Bulky Goods Area west of Barwon Heads Road (i.e., 25 Horseshoe Bend Road, PSP Property ID 20 as per Plan 6), development must:

- Comply with all of the relevant requirements in R92.
- Avoid permitting direct access onto Horseshoe Bend Road from Barwon Heads Road; and,

- if vehicle access from Horseshoe Bend Road is proposed, ensure vehicles are unable to continue through to Barwon Heads Road; and,
- Vehicle access from the property must be accompanied by a Transport Impact Assessment and subject to further review and approved by the Head, Transport for Victoria and Council.
- Provide vegetated screening, or other acoustic screening to the satisfaction of the Responsible Authority, along Horseshoe Bend Road that reduces noise and light pollution to a level that is appropriate with a residential interface.

R86

Any development proposed within the Commercial / Bulky Goods Area requires the preparation of a Concept Plan which must:

- Address the recommendations of the Commercial/Bulky Goods
- Area Development Guidelines (G53).
- Address appropriate access and interface with Barwon Heads Road and Tannery Road.
- Demonstrate suitable connections and integration with surrounding lots and land uses.
- Demonstrate appropriate access management outcomes for all modes of transport.
- Demonstrate suitable connections toward and integrating with Barwon River, and all land between the development and the river.
- Provides land uses that do not compromise the function of existing surrounding land uses, including those within the North East Industrial Precinct.
- Complies with all other relevant requirements of the PSP.

To the satisfaction of the Responsible Authority.

R87

The location of land uses, building design, and interface treatment in the commercial and Station Precinct areas shown on Plan 5 Future Urban Structure, must ensure there are no negative impacts on the amenity of nearby residential areas.

R88

Key locations including arterial and connector intersections or areas adjacent to the open space network must incorporate features of interest into the built form and surrounding landscape, including:

- Variations in built form elements (such as building heights, use of parapets, awnings, shade structures, balconies, and roof elements).
- Articulation of building facades.
- Feature colours and materials.

R89

The local convenience centre within the Station Precinct must:

- Provide for a range of tenancies suitable for a mix of local convenience retail, health, community and other services to meet local needs.
- Have a minimum built form of two-storeys or co-location with residential dwellings at two to five storeys, and ensure that all buildings are well articulated and of a high-quality urban design as per the requirements and guidelines in Section 4.2 Station Precinct Urban Design Framework Requirements and Guidelines.

R90

Any application for subdivision or development of non-residential (commercial) or mixed-use buildings must commit to the use of a best practice environmental performance rating tool, such as a Green Star Buildings rating of 5 stars, or an equivalent rating achieved through a similar tool.

In the case of subdivision, this tool must be applied as a restriction on the relevant plan of subdivision.

In the case of development:

- commitment to use of the relevant best practice environmental performance rating tool must be submitted prior to a planning permit being granted; and
- a certificate from the relevant best practice environmental performance rating tool must be submitted prior to the commencement of works,

To the satisfaction of the Responsible Authority.

3.8 EMPLOYMENT, RETAIL AND COMMUNITY FACILITIES

EMPLOYMENT & RETAIL GUIDELINES

G43

It is recommended that the Commercial /Bulky Goods Area facilitates:

- Buildings that address (in order of priority where a lot fronts multiple elements):
  - Arterial Roads
  - Waterways and public open space
  - Connector Roads
  - Local roads
- Subdivision that provides for the creation of a range of lot sizes to cater for a diversity of commercial uses.
- All development adjacent to or fronting existing or proposed residential dwellings to ensure an appropriate interface by not providing loading access, reducing the size of fencing, and ensuring the location of storage and service items is not visible from residential areas.
- Ancillary offices to be located at the front of buildings; may include a facade addressing the street frontage of the lot; and provide for improved pedestrian access and engagement with the public domain.
- Any visitor car parking and access areas in the front setback area to be setback a minimum of 3m from the street frontage to enable provision of sufficient landscape strips at the street frontage. All vehicles may be able to enter/exit the site in a forward direction.
- Where fencing is required forward of building lines and along public streets, it may be visually permeable and not greater than 1.2 metres in height.
- Buildings to be designed with an integrated appearance so as to avoid the appearance of clutter.
- Any expanse of continuous wall visible to the street to have appropriate articulation, landscaping and other elements to provide relief and visual interest.
- A consistent landscaping theme to be developed along streets and access ways. Variations in street tree species may be used to create visual cues in appropriate locations such as at the termination of view lines and parks.
- Streets to be aligned to create views and direct connections to open spaces and waterways.
- Water tanks, service infrastructure and other structures (including plant and equipment) that are not part of the building to be located behind the building line or, where this is not possible, behind constructed screening using durable and attractive materials.(including plant and equipment) that are not part of the building to be located behind the building line or, where this is not possible, behind constructed screening using durable and attractive materials.

COMMUNITY FACILITIES REQUIREMENTS

R91

Access to schools and facilities to the immediate west in Grovedale and the immediate south in Horseshoe Bend Precinct Structure Plan must be easily accessible with a minimum of two safely accessible pedestrian and cycling crossings at the proposed Bellarine Link Road and three safely accessible pedestrian and cycling crossings at the Geelong to Waurn Ponds Rail line, including at Marshall Train Station.

COMMUNITY FACILITIES GUIDELINES

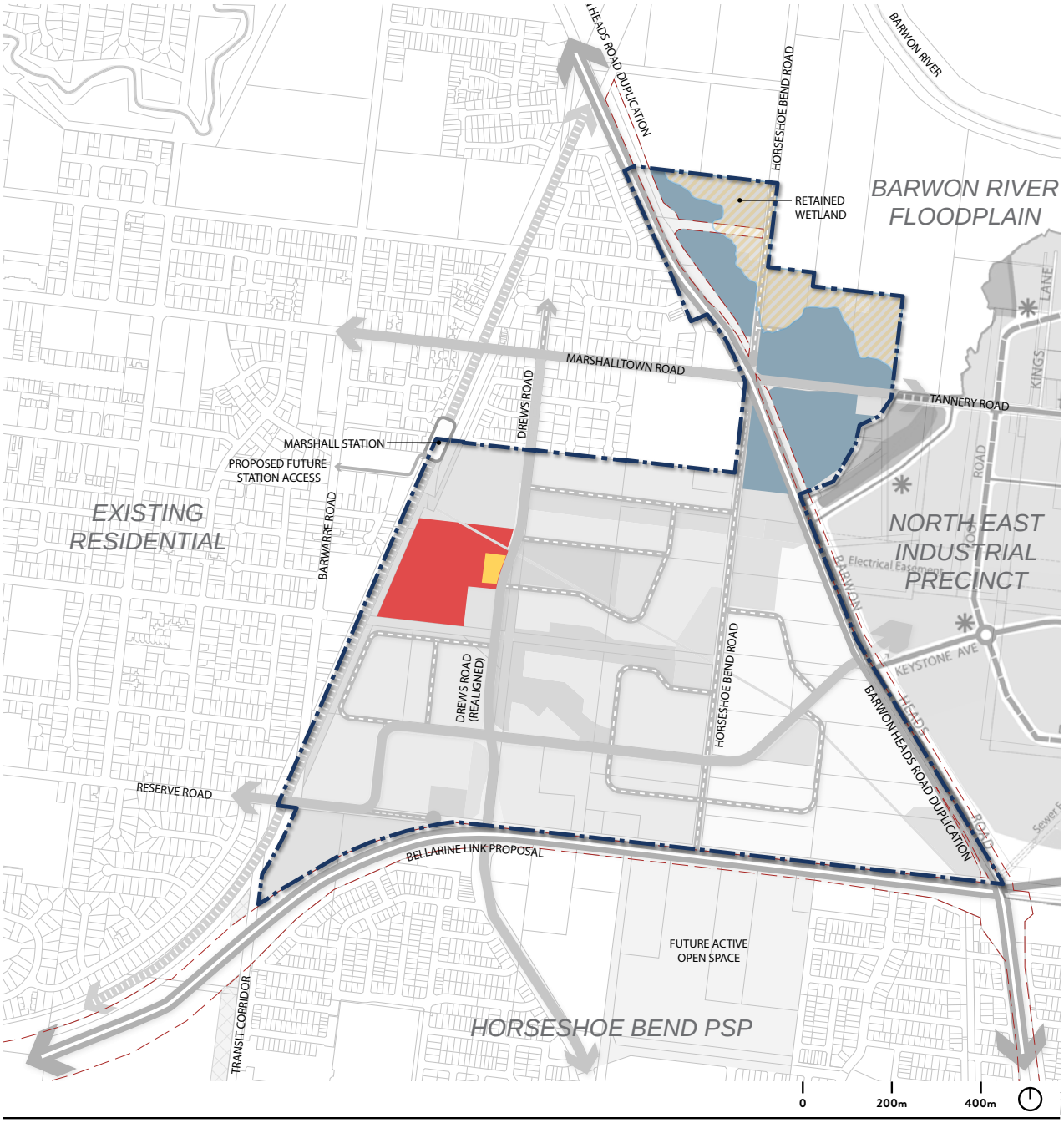
G44

Community facilities should be located within the Station Precinct or within the 800-metre walking catchment of the Train Station, if it is located adjacent to the open space network.

T8. ANTICIPATED EMPLOYMENT CREATION IN THE PRECINCT

LAND USE	MEASURE	JOBS	QTY IN PRECINCT	ESTIMATE JOBS
Station Precinct Retail	Jobs/100 m2	1	2,750m2	27
Commercial/Bulky Goods Area	Jobs/Ha	20	9.9 Ha	198
Home Based Business	Jobs/dwelling	0.1	1,555+ dwellings	155
TOTAL				**380**

P14. EMPLOYMENT, RETAIL AND COMMUNITY FACILITIES



KEY

CONTEXT

- Precinct Boundary
- Railway and Station
- Flood Overlay

EMPLOYMENT, RETAIL AND COMMUNITY

- Station Precinct (Mixed Use)
- Commercial/Bulky Goods
- Potential Community Centre

3.9 ENERGY AND TECHNOLOGY

SUSTAINABLE ENERGY & ZERO CARBON REQUIREMENTS

R92

Trunk services are to be placed along the alignments shown on Plan 15 Utility Services, subject to any refinements as advised by the relevant servicing authorities.

R93

All lots must be provided with potable water, recycled water, electricity, reticulated sewerage, drainage and telecommunications to the satisfaction of the relevant servicing authority.

R94

Any subdivision and/or development within the PSP must not connect to any existing or future reticulated gas networks.

R95

Infrastructure in the precinct must be designed to support delivery of a carbon neutral neighbourhood. Infrastructure required to support renewable energy generation within the precinct must be shown on relevant plans, as applicable.

R96

An application to use or subdivide land or construct a building or construct or carry out works must be accompanied by a Zero Carbon Operational Energy Plan which addresses the following, to the satisfaction of the Responsible Authority:

- How the precincts layout, infrastructure and / or buildings are designed to deliver an all electric precinct;
- Infrastructure and mechanisms (such as solar panels, embedded networks, PPAs etc) proposed to ensure development within the precinct is zero carbon in operation; and
- Infrastructure proposed to manage and monitor energy loads (e.g. load management systems, community batteries etc).

R97

Prior to certification, functional layout plans of the road network (plans and road cross sections) submitted must show the location of:

- Underground services
- Driveways/ crossovers
- Shared, pedestrian and bicycle paths
- Streetlights and
- Street trees.

The design and placement of utilities and services must be generally in accordance with the PSP and demonstrate how the relevant requirements and guidelines from Chapter 3.6.1 Urban Heat and Canopy Cover are met. The cross sections must nominate above and below ground placement of services, streetlights and trees.

R98

All subdivision permit applications must identify above ground utilities (such as electricity substations, kiosk and sewer pumps) to ensure effective integration with the surrounding neighbourhood and landscape and to minimise impact on amenity. All to the satisfaction of the Responsible Authority and relevant authorities.

R99

Delivery of underground services must be coordinated, located, and bundled (utilising common trenching) to facilitate the planting of trees (ensuring 25% tree canopy coverage in streets) and other vegetation within road verges, including the appropriate timing of services within the proposed road reserves for the Bellarine Link Road construction project and the construction of intersections with respect to these two projects. Common trenching must be set to a minimum depth of 800mm for power to allow for the nominated 600mm root place depth for trees (AS4970-2009).

3.9 ENERGY AND TECHNOLOGY

SUSTAINABLE ENERGY & ZERO CARBON REQUIREMENTS

R100

Utilities must be placed outside of existing and proposed waterways, open space and conservation areas to the satisfaction of the Responsible Authority.

R101

All new electricity supply infrastructure (excluding substations and cables of a voltage above 66kV) must be provided underground. Where existing above ground electricity cables of 66kV voltage are retained along roadways and open space areas, underground conduits are to be provided as part of the road upgrade to allow for future under-grounding of the electricity supply, to the satisfaction of the Responsible Authority. Provision of street and path lighting powered by renewable energy, such as solar PV, is encouraged.

R102

Any utility infrastructure constructed adjacent to or crossing the Barwon Water Main Outfall Sewer Easement or the High Voltage Electricity Easement must:

- Have no impact on the function of the integrity of the easement and its functional infrastructure.
- Adhere to the easement requirements of the Responsible Authority, including crossing at 90 degrees and being engineered to protect the integrity of the easement and its PV functional infrastructure.

R103

Any plan of subdivision west of Barwon Heads Road must contain a restriction which provides that no dwelling or commercial building can be constructed on any allotment unless the building incorporates dual plumbing for recycled water supply for toilet flushing and garden watering.
Any plan of subdivision east of Barwon Heads Road must contain a restriction which provides that no commercial building can be constructed on any allotment unless an appropriate alternative water solution (such as rainwater harvesting) is incorporated.

R104

Deviation of the Barwon Water Main Outfall Sewer pipeline must occur in the alignment shown on Plan 15. It is to be constructed east toward and across Barwon Heads Road connecting the pump station proposed within the North East Industrial Precinct, then reconnecting to the Main Outfall Sewer south of Barwon Heads Road as a condition of subdivision within the area shown on Plan 17 Development Staging as "K", and be completed before development in this area can commence.

R105

Where native vegetation is located under overhead powerlines, existing above ground electricity cables must be removed and re-routed underground as part of any subdivision or planning permit (this excludes cables greater than 66kV).

SUSTAINABLE ENERGY & ZERO CARBONS GUIDELINES

G45

It is recommended that utilities required to be constructed above ground are located outside of street view lines and screened with appropriate vegetation.

G46

Street and other public lighting should utilise cut-off fittings to minimise light spill beyond the required illuminated area.

G47

It is recommended that utility easements are only provided to the rear of lots where there is no practical alternative.

G48

Opportunities for alternative infrastructure and utility delivery models that achieve best practice ESD and support the development of a carbon neutral neighbourhood are encouraged.

G49

Provision of neighbourhood scale renewable energy generation or green energy power purchasing agreements are strongly encouraged as part of the pathway to achieve carbon neutrality. Neighbourhood scale renewable energy generation will be considered as an alternative to the requirement for individual solar PV systems required under the Residential ESD Design Guidelines.

G50

Provision of neighbourhood scale battery storage and virtual power plants for excess renewable energy produced within the precinct is strongly encouraged.

3.9 ENERGY AND TECHNOLOGY

SMART CITIES & DIGITAL CONNECTIVITY REQUIREMENTS

R106

Smart city infrastructure (both above and below ground) must respect the primary function and use of the land and passively integrate into the public realm and natural landscape. The infrastructure must not detract from visual amenity of the public realm or inhibit convenient pedestrian and vehicular connections and accessibility.

R107

A minimum of 5% of all off-street parking provided for non-residential subdivision or development exceeding 5,000 square metres must have EV charging infrastructure and signage installed. This must be shown on a plan submitted as part of any permit application for subdivision.

Unless otherwise approved in writing by the Responsible Authority, at least 20 percent of all off-street car parking spaces (or a minimum of one space must be capable of supporting the provision of an appropriate moderate speed EV charging outlet. Appropriate EV infrastructure and cabling must be provided to ensure peak demand is managed for example, distribution use metering systems, scalable load management systems, and cable trays or conduit installation."

R108

Public lighting (street and path lighting) must be energy efficient and be powered by renewable energy generation, such as solar PV.

R109

All pits and cabinets of utilities in the precinct must have adequate space for Internet of Things (IoT) sensors to the satisfaction of the Responsible Authority and other relevant authorities.

R110

In and above ground parking sensors must be provided for parking bays in the activity centre to help inform demand responsive pricing and provide information on real time availability.

SUSTAINABLE ENERGY & ZERO CARBONS GUIDELINES

G51

Infrastructure, including smart city infrastructure, should be serviced by in situ renewable energy generation and storage, such as solar PV and batteries, where possible.

G52

Where possible telecommunications conduits should be collocated with other utility infrastructure, such as electricity, to optimise use of underground space.

G53

Smart streetlights are encouraged to include sensors which allow lights to change their schedule in the event of cloud cover or other cause of darkness.

G54

Smart furniture assets, including but not limited to smart bins, and benches are encouraged in the activity centre, high-use thoroughfares and open spaces.

G55

Road design, line markings, traffic signs and other road infrastructure should, where practical meet best practice standards for autonomous vehicles including shuttle services.

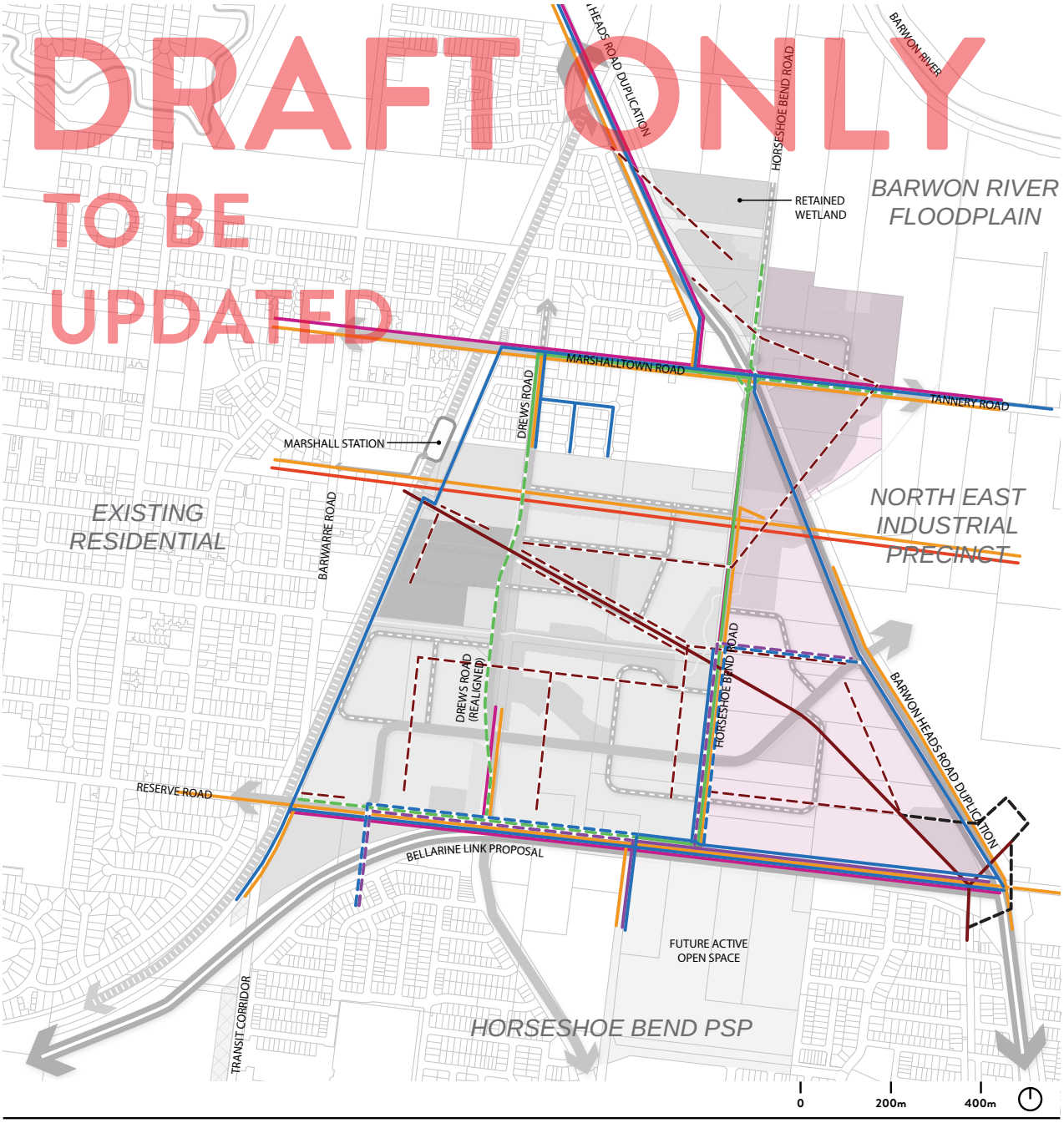
G56

Aesthetic choices in surrounds including pavements and landscaping should use contrasting patterns to assist vision impaired easily navigate the area, aid computer vision, and provide future opportunity for autonomous vehicles to easily navigate the area.

G57

Pits and cabinets of utilities should have Internet of Things (IoT) sensors to monitor performance of utilities and detect unauthorised activities.

P15. UTILITY SERVICE



KEY

CONTEXT
- Railway and Station

ELECTRICITY
- Existing High Voltage Electrical
- Existing Electrical

WATER
- Existing Water Main
- Proposed Water Main
- Existing Recycled Water Main
- Proposed Recycled Water Main

SEWER
- Sewer Easement and Existing Sewer Main
- Proposed Sewer Main

GAS
- Existing Gas Main
- Proposed Gas Main

NBM
- Existing Copper Communications
- Future NBN Service to be Provided

3.10 DELIVERY

3.10.1 PRECINCT INFRASTRUCTURE

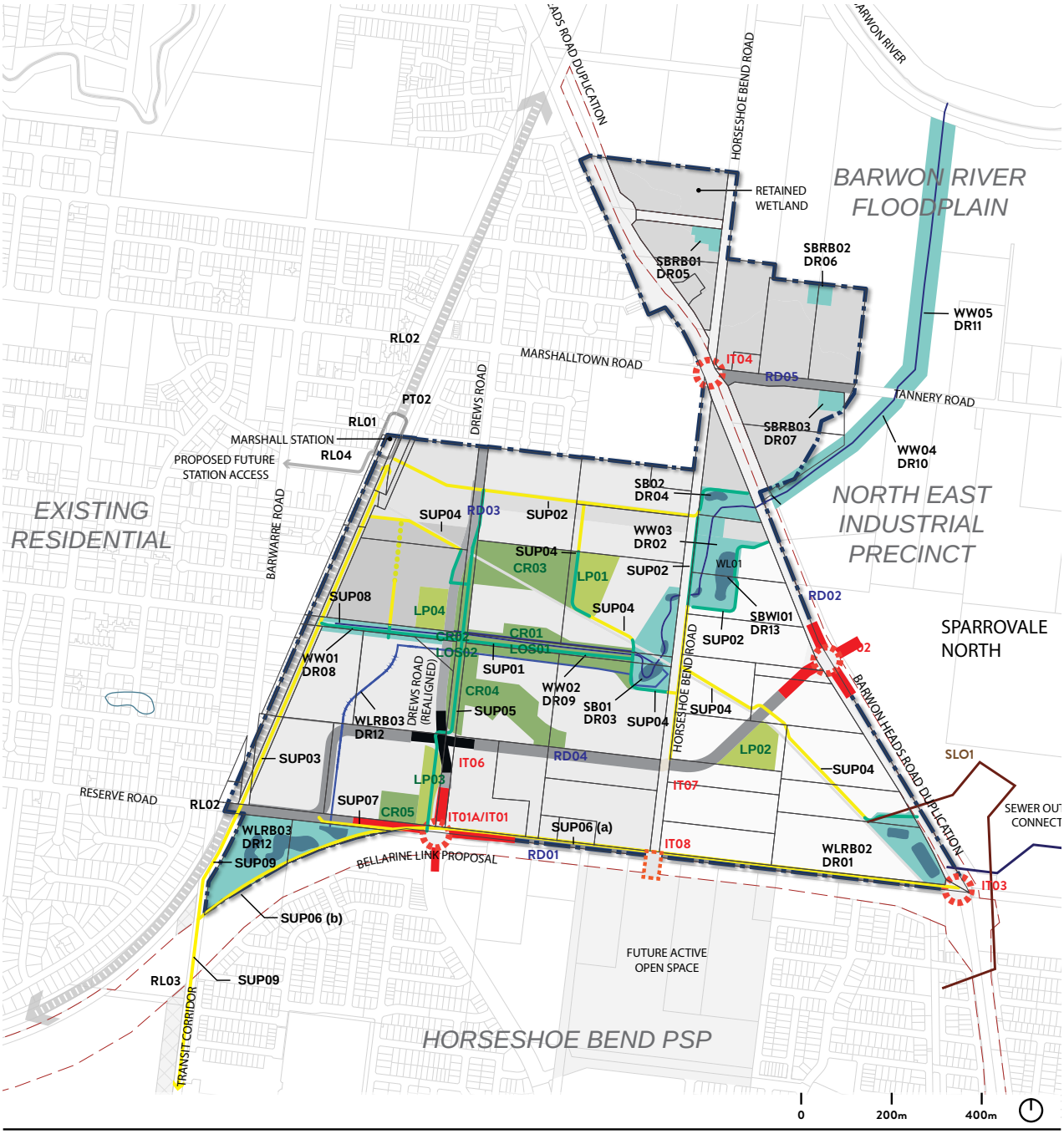
The infrastructure and services required to meet the need of the proposed development within the precinct is set out at Table 9 Precinct Infrastructure Plan.

REQUIREMENTS

R111

Utilities and other infrastructure must avoid traversing conservation areas identified in Plan 9 Native Vegetation Precinct Plan.

P16. PRECINCT INFRASTRUCTURE PLAN



KEY

CONTEXT

- Precinct Boundary
- Railway and Station

INFRASTRUCTURE – DCP ITEMS

- Proposed Main Drain (Approximate Alignment Only)l
- Asset Footprint
- Connector East West
- Connect North South
- Drainage Reserve
- Unencumbered Open Space
- Conversation Reserve
- Shared Paths - DCP items
- Shared Paths - Not DCP items
- DCP Intersections signalised
- DCP Intersections

T9. PRECINCT INFRASTRUCTURE PLAN

RAIL

PROJECT CATEGORY	PROJECT NUMBER	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Rail	RL01	Rail duplication and station	Commuter rail duplication and second platform including pedestrian overpass to connect platforms, new Marshall Station, bus, vehicle, cycling and pedestrian upgrades. Station vehicle access on Drews Road and bus only access on Marshalltown Road. Final design resolved by Marshall Station project - currently under construction	Responsible State Government Transport Authority	Under construction	No
Rail	RL02	Rail cycling and pedestrian crossings	Upgraded cycling and pedestrian crossings at Reserve Road and Marshalltown Road	Responsible State Government Transport Authority	Under construction	No
Rail	RL03	Armstrong Creek Transit Corridor	Transit corridor rail corridor public transport connection, cycling and pedestrian connection	Responsible State Government Transport Authority	Upon development of Transit Corridor	No
Rail	RL04	Barwarre Road Marshall Station Access	Property 137 Barwarre Road, Marshall - land (part) required for vehicle drop-off and pedestrian / cycle access to north-bound station platform and overpass. Property located outside Marshall PSP.	Responsible State Government Transport Authority / City of Greater Geelong	Upon subdivision / development of 137 Barwarre Road, Marshall	No

ROAD

PROJECT CATEGORY	PROJECT NUMBER	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Road	RD01	Reserve Road interim	Land and upgrade of key access street between Barwarre Road Marshall and Barwon Heads Road in accordance with cross section K of the Horseshoe Bend Precinct Structure Plan.	TBD	Upon development of adjacent satisfaction of the Responsible Authority	No
		Bellarine Link ultimate	Land and construction of arterial road between Surf Coast Highway and Barwon Heads Road. Final design to be resolved by Bellarine Link project.	Responsible State Government Transport Authority	Upon development of Bellarine Link	No
Road	RD02	Barwon Heads Road Duplication	Land and construction of 4 lane arterial road and associated signalised intersections. Final design resolved by Barwon Heads Road Duplication project - currently under construction.	Responsible State Government Transport Authority	Under construction	No
Road	RD03	Drews Road: Reserve Road to northern boundary of PSP	Land and construction of 2 lane connector to connect to Reserve Road / Bellarine Link and the northern boundary of the precinct (generally at 25 metres width, reducing to 21 or 20 metres where shown on the Cross Section Location Plan). Includes road realignment to avoid remnant vegetation in and on the boundary of the middle section of the existing road reserve.	City of Greater Geelong	Upon development of the relevant Catchment, or to the satisfaction of the Responsible Authority	Land - Yes, for all land outside the existing road reserve, Construction - No
Road	RD04	East-West Connector	Land and construction of 2 lane connector at 25 metres width to connect to Barwon Heads Road and Reserve Road	City of Greater Geelong	Upon development of the relevant Catchment, or to the satisfaction of the Responsible Authority	Land - Yes, Construction - No
Road	RD05	Tannery Road upgrade	Upgrade construction of Tannery Road into a bus capable connector road	City of Greater Geelong	Upon development	No

T9. PRECINCT INFRASTRUCTURE PLAN

INTERSECTION

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Intersection	IT01	Reserve Road / Drews Road / Realigned Horseshoe Bend Road intersection (interim)	Land and construction of 4-way signalised intersection - Reserve Road / Drews Road / Realigned Horseshoe Bend Road (referred to in the Horseshoe Bend DCP as DI_RD_2 where the Marshall Precinct has been apportioned 30% of the cost of these works)	City of Greater Geelong	Upon development	Yes
Intersection	IT01A	Bellarine Link Road / Drews Road / Realigned Horseshoe Bend Road intersection (ultimate)	Land for ultimate configuration and construction of 4-way signalised intersection. Includes truncation of Reserve Road. Final design to be resolved by Bellarine Link project.	Responsible State Government Transport Authority	Upon development of Bellarine Link	Land - Yes, Construc-tion - No
Intersection	IT02	East-West Connector / Barwon Heads Road / NEIP Connector	Land for ultimate configuration and construction of 4-way signalised intersection. Note: NEIP DCP item (D1_RD_1 3-way intersection) included within the design of the intersection. Intersection to be apportioned 50% to Marshall DCP and 50% to NEIP DCP.	City of Greater Geelong	Upon development	Land - Yes, Construc-tion - Yes
Intersection	IT03	Bellarine Link / Reserve Road and Barwon Heads Road	Land for ultimate configuration and interim construction of 4-way signalised intersection. Note: construction of ultimate at-grade intersection at time of construction of Bellarine Link (grade-separated intersection not identified in Marshall PSP)	Responsible State Government Transport Authority	Upon development of Bellarine Link	No
Intersection	IT04	Barwon Heads Road, Marshalltown Road and Tannery Road	Land for ultimate configuration and construction of signalised 4-way intersection. Final design resolved by Barwon Heads Road Duplication project - currently under construction.	Responsible State Government Transport Authority	Under construction	No
Intersection	IT05	Drews Road and Station Precinct Main Street	Land for ultimate configuration and construction of roundabout intersection (final design and function determined at detailed planning stage)	City of Greater Geelong	Upon development	No

INTERSECTION

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Intersection	IT06	Drews Road and East-West Connector	Land for ultimate configuration and construction of 4-way intersection (roundabout)	City of Greater Geelong	Upon development	Land - Yes, Construc-tion - No
Intersection	IT07	East-West Connector Road and Horseshoe Bend Road intersection	Land for ultimate configuration and construction of 4-way intersection (roundabout)	City of Greater Geelong	Upon development	No
Intersection	IT08	Pedestrian Crossing on Bellarine Link Road at Horseshoe Bend Road	Construction of signalised pedestrian crossing and a left in, left out only intersection with Horseshoe Bend Road. Final design to be resolved by Bellarine Link project.	Responsible State Government Transport Authority	Upon development	No

T9. PRECINCT INFRASTRUCTURE PLAN

SHARED USER PATH

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Shared user path	SUP01	Smith Street Greenway Reserve Walking Trail	Retain pedestrian gravel trail between Drews Road and Horseshoe Bend Road / SB01. Path improvements limited to additional toppings to remove any trip hazards. Includes upgrade of footbridge at Drews Road to be 2.5m clear width and be of durable materials as outlined in Design Note 9. Appropriate signage.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first, or to the satisfaction of the Responsible Authority	Yes
Shared user path	SUP02	Electricity transmission easement and SBWL01 / SB02 / WW03 Downstream Reach shared user path	Shared user path, appropriate signage, vegetation management and appropriate intersection with pedestrian priority. Path located within easement and drainage reserves	City of Greater Geelong	The first subdivision within Catchment A, E and F	Yes - only for that part of path located within drainage reserve
Shared user path	SUP03	Barwon Water easement shared user path	Shared user path, appropriate signage, and vegetation management. Path located within easement directly parallel to the railway line, starting from Marshall Station and ending at Reserve Road	Responsible State Government Transport Authority	Upon development	No
Shared user path	SUP04	Barwon Water Main Outfall Sewer easement adjacent shared user path	Shared user path, appropriate signage, vegetation management and appropriate intersection with pedestrian priority. Path sections located within WLRB02 and SB01 / WW02 Middle Reach, and deviates through LP01 to avoid conservation reserve. No part of path constructed within the easement.	City of Greater Geelong	Upon development of the relevant Catchment, or to the satisfaction of the Responsible Authority	Yes - only for that part of path located within LP01 and drainage reserves
Shared user path	SUP05	Drews Road Greenway Reserve shared user path	Shared user path and appropriate intersection with pedestrian priority. Includes removal of excess road pavement and revegetation to enhance greenway. Subject to road reserve closure for realigned RD03. Path also located in LP03.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first, or to the satisfaction of the Responsible Authority	Yes - both in road reserve and LP03

SHARED USER PATH

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Shared user path	SUP06(a)	Bellarine Link adjacent shared user path	Shared user path, appropriate signage, vegetation and conservation management. Path located between Barwon Heads Road and Drews Road within local road.	City of Greater Geelong	The first subdivision within Catchment D and K	No
Shared user path	SUP06(b)	Bellarine Link adjacent shared user path	Shared user path, appropriate signage, vegetation and conservation management. Path located within WLRB03 and include footbridge over bypass channel	Responsible State Government Transport Authority - value capture as part of Bellarine Link project	Upon development of Catchment D	No
Shared user path	SUP07	Reserve Road adjacent shared user path	Shared user path, appropriate signage, vegetation and conservation management. Path located within WLRB03	City of Greater Geelong	The first subdivision within Catchment D or to the satisfaction of the Responsible Authority	Yes
Shared user path	SUP08	WW01 Upstream Reach shared user path	Shared user path, appropriate signage, vegetation management and appropriate intersection with pedestrian priority. Path located within drainage reserve	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first	Yes
Shared user path	SUP09	Barwarre Road shared user path	Shared user path, appropriate signage and vegetation management located within road reserve south of Reserve Road. Path located outside PSP area	Responsible State Government Transport Authority	Upon development	No

T9. PRECINCT INFRASTRUCTURE PLAN

PUBLIC TRANSPORT

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Public Transport	PT01	Bus Services	Provision of bus services on bus capable arterial roads and connector roads	Responsible State Government Transport Authority	Upon development	No
Public Transport	PT02	Bus Stops and Station Terminal	Provision of appropriately sized, signed and located bus stops and terminal at new Marshall Train Station allowing for through movements into MPSP area	Responsible State Government Transport Authority – delivered by subdivider	Upon development	No

DRAINAGE

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Drainage	WLRB02 - DR01	Wetland, Retarding basin and outfall pipe	Land reservation and construction of Sediment Pond, Wetland and Retarding Basin. Includes culvert under Barwon Heads Road and outfall pipe extending east in unnamed road to WW06. Note 1: the proposed realignment of the Main Outfall Sewer will need to be moved northwards to accommodate WLRB02 - refer to SL01.	City of Greater Geelong	The first subdivision / development within South East Catchment K	Yes
Drainage	WW06 - DR14	Waterway outfall control (Sparrovale - Nubijt yooree Wetlands Reach)	Constructed waterway extending through the Sparrovale - Nubijt yooree wetlands. Catchment split between Marshall and NEIP Precincts draining to waterway is 15% and 85% respectively.	City of Greater Geelong	The first subdivision within South East Catchment K or to the satisfaction of the Responsible Authority	Yes – 15%
Drainage	SB02 - DR04	Sedimentation Basin and connection to Barwon Heads Road culvert	Land reservation and construction of the Sediment Basin and Waterway and associated infrastructure and the portion of SUP02 (3m shared path) surrounding the drainage basin.	City of Greater Geelong	The first subdivision within catchment A, F or B, whichever comes first	Yes

DRAINAGE

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Drainage	WW03 - DR02	Conveyance and connection to Barwon Heads Road culverts (Downstream Reach)	Land reservation (upstream of Horseshoe Bend Rd and 1.43ha downstream of Horseshoe Bend Rd) and construction of a Waterway from north of SB01 to Barwon Heads Road, including Siphon from SB01 to the southern section of the waterway.	City of Greater Geelong	The first subdivision within Catchment A, B, C, D, E and F, whichever comes first	Yes
Drainage	WW04 - DR10	Waterway outfall control (Tannery Rd Reach)	Land reservation and construction of Waterway in between Barwon Heads Road and Tannery Road.	City of Greater Geelong	Upon 57ha (50%) of the Marshall Catchment Developing	Yes – 71.4%
Drainage	WW05 - DR11	Waterway outfall control (Barwon River Reach)	Land reservation and construction of Waterway in between Tannery Road and the Barwon River.	City of Greater Geelong	Upon 57ha (50%) of the Marshall Catchment Developing	Yes – 71.4%
Drainage	SB01 - DR03	Sedimentation Basin and connection to Waterway	Land reservation and construction of Sediment Basin and Siphon and associated infrastructure and portion of SUP_04 surrounding the Basin.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first	Yes
Drainage	WW01 - DR08	Outfall and environmental flow (Upstream Reach)	Land reservation and construction of Waterway in between the Railway Corridor and Drews Road, including the construction of SUP08	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first	Yes
Drainage	WW02 - DR09	Marshall Creek (Middle Reach) and Main Drain North	Land reservation and construction of Marshall Creek (Middle Reach) within the Smith Street Greenway, and underground Main Bypass Drain North.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first	Yes
Drainage	WL01	Wetland treatment	Land reservation and construction of a Wetland. Includes the construction of a portion of SUP02 (3m shared path).	City of Greater Geelong	The first subdivision within Catchment E	Yes
Drainage	SBWL01 - DR13	Sedimentation Basin and connection to WL01	Land reservation and construction of a Wetland and Sediment Basin. Includes the construction of a portion of SUP02 (3m shared path).	City of Greater Geelong	The first subdivision within Catchment E	Yes
Drainage	WLRB03 - DR12	Wetland, Retarding Basin and Main Drain South	Land reservation and construction of a Wetland, Retarding Basin and Sediment Pond, and associated outfall pipe (Main Drain South), including shared paths SUP06(b) and SUP07. Includes formalisation of Trifolis Drain into a high flow bypass channel.	City of Greater Geelong	The first subdivision within Catchment D or to the satisfaction of the Responsible Authority	Yes

T9. PRECINCT INFRASTRUCTURE PLAN

DRAINAGE

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Drainage	SBRB01 - DR05	Sedimentation / Retarding Basin and outflow	Land reservation and construction of a Sediment Pond and Retarding Basin and associated infrastructure.	City of Greater Geelong	The first subdivision / development within Catchment G.	Yes
Drainage	SBRB02 - DR06	Sedimentation / Retarding Basin and outflow	Land reservation and construction of a Sediment Pond and Retarding Basin and associated infrastructure.	City of Greater Geelong	The first subdivision / development within Catchment H.	Yes
Drainage	SBRB02 - DR07	Sedimentation / Retarding Basin and outflow	Land reservation and construction of a Sediment Pond and Retarding Basin and associated infrastructure.	City of Greater Geelong	The first subdivision / development within Catchment J.	Yes

OPEN SPACE

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Conservation	CR01	Smith Street Greenway Conservation Reserve	Conservation and environmental improvements. Includes Native Vegetation Precinct Plan requirements, management, signage and appropriately designed fencing of conservation area. Main drains to be located outside reserve.	City of Greater Geelong	The first subdivision - the Land is transferred to or vested in Council	No
Linear Open Space	LOS01	Smith Street Greenway Linear Open Space	General improvements - integrated with waterway (WW02 Marshall Creek Middle Reach), SUP01 & SUP05, and Drews Road Greenway LOS02.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first, or to the satisfaction of the Responsible Authority	No
Conservation	CR02	Drews Road Greenway Conservation Reserve	Conservation and environmental improvements. Includes Native Vegetation Precinct Plan requirements, management, signage and appropriately designed fencing of conservation area.	City of Greater Geelong	The first subdivision - the Land is transferred to or vested in Council, and subject to road reserve closure for realigned RD03	No
Linear Open Space	LOS02	Drews Road Greenway Linear Open Space	General improvements - integrated with SUP05 & SUP01, and Smith Street Greenway LOS01.	City of Greater Geelong	The first subdivision within Catchment C or D, whichever comes first, or to the satisfaction of the Responsible Authority	No
Conservation	CR03	Northern Conservation Reserve	Native Vegetation Precinct Plan, management, signage, appropriately designed fencing of conservation area and integration with Main Outfall Sewer easement, neighbouring passive open space and Drews Road Greenway Reserve.	City of Greater Geelong	The first subdivision - the Land is transferred to or vested in Council	No
Conservation	CR04	Southern Conservation Reserve	Native Vegetation Precinct Plan, management, signage, appropriately designed fencing of conservation area and integration with Drews Road Greenway Reserve.	City of Greater Geelong	The first subdivision - the Land is transferred to or vested in Council	No

T9. PRECINCT INFRASTRUCTURE PLAN

OPEN SPACE

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Conservation	CR05	Reserve Road Conservation Reserve	Native Vegetation Precinct Plan, management, signage, appropriately designed fencing of conservation area and integration with neighbouring passive open space.	City of Greater Geelong	The first subdivision - the Land is transferred to or vested in Council	No
Passive Open Space	LP01	Northern Local Park	Land reservation (1.1ha) and passive recreation facilities including playground equipment, vegetation planting / management and general park improvements. Adjacent to fenced Conservation Reserve and integrated with SUP04.	City of Greater Geelong	The subdivision and/or development of the parcel which contains the park	Land - No (Clause 53.01 contribu-tion), Construc-tion - Yes
Passive Open Space	LP02	Eastern Local Park	Land reservation (0.8ha) and passive recreation facilities including playground equipment, vegetation planting / management and general park improvements. Adjacent to East West Connector Road and integrated with SUP04.	City of Greater Geelong	The subdivision and/or development of the parcel which contains the park	Land - No (Clause 53.01 contribu-tion), Construc-tion - Yes
Passive Open Space	LP03	Southern Local Park	Land reservation (0.7ha) and passive recreation facilities including playground equipment, vegetation planting / management and general park improvements. Adjacent to East West Connector Road, Drews Road and fenced Conservation Reserve, and integrated with SUP05.	City of Greater Geelong	The subdivision and/or development of the parcel which contains the park	Land - No (Clause 53.01 con-tribution), Construc-tion - Yes
Passive Open Space	LP04	Station Precinct Local Park	Land reservation (0.5ha) and urban park facilities, protection of native trees and general improvements. Integrated with Station Precinct UDF.	City of Greater Geelong	The subdivision and/or development of the parcel which contains the park	Land - No (Clause 53.01 contribu-tion), Construc-tion - Yes

OTHER

PROJECT CATEGORY	PROJECT NO.	TITLE	PROJECT DESCRIPTION	LEAD AGENCY	DELIVERY TIMING/ PROVISION TRIGGER/ STAGING	INCLUDED IN DCP
Sewer Line	SL01	Main Outfall Sewer Line Relocation	Appropriate space and land allocated to allow for the future relocation of the sewer confluence. Realignment moved northwards to accommodate WLRB02.	Barwon Water	Long term project	No

3.10.2 DEVELOPMENT STAGING

REQUIREMENTS

R112

Development staging must provide for the timely and coordinated provision and delivery of:

- The central waterway, wetlands and detention basins assets to the boundary to support adjacent development.
- Below ground servicing layout to be arranged to maximise tree planting numbers to ensure 25% tree canopy coverage in streets. Tree layout and canopy coverage to be represented on all civil FLP plan submissions.
- Arterial road reservations, land acquisition and construction.
- Connector streets and intersections.
- Street links between properties, constructed to the property boundary.
- Connection of the on and off-road pedestrian and bicycle network to key destinations within and outside the precinct from the early stages of development.
- Land for passive open space and conservation.
- As applicable, an approved Urban Design Framework for the Station Precinct.

R113

Infrastructure projects identified in Table 9 Precinct Infrastructure Plan, must be delivered as per the staging priority identified in the Delivery column. If the relevant infrastructure project(s) are not delivered prior to the grant of a planning permit, the planning permit application must address how and when the infrastructure projects(s) will be delivered. The delivery of these assets is to be considered alongside all of the development delivery Requirements and Guidelines in the PSP.

R114

Open space must not be delivered in a standalone stage; it must be included with a stage containing residential lots. This requirement does not apply to the drainage open space land south of Reserve Road, or a drainage reserve proposed to be delivered in the first stage of a development.

R115

The delivery of drainage infrastructure must be guided by the sequencing outlined in the Stormwater Management Strategy and Table 9 Precinct Infrastructure Plan.

Note: this staging is not definitive and a different sequence to that presented below may be appropriate, subject to approval by the Responsible Authority.

R116

Where a permit applicant seeks to proceed with delivery of an interim solution or asset, the following criteria must be met:

- the asset must not constrain nor prejudice the ultimate delivery of any other development or other infrastructure within the precinct nor constrain the sequencing and viability of other Staging Areas;
- the asset complies with the best practice requirements of the ultimate infrastructure;
- The asset complies with all requirements and guidelines in the PSP;
- it must not constrain nor prejudice the ultimate use of the land nor impact on the provision trigger for the use as defined in the Marshall Road PSP and DCP, on which the temporary asset is located;
- the asset must be able to form part of the ultimate infrastructure solution or after use, be reinstated to a condition free of any contamination and commensurate with the intended ultimate use of the land;
- the need for the interim infrastructure must be justified on the basis that previous Staging Area requirements are not capable of being delivered at the time the construction of the temporary infrastructure is proposed;
- the asset must be delivered through an agreement made under Section 173 of the *Planning and Environment Act 1987* and the proposal must comply with the best practice requirements of the ultimate infrastructure;
- all costs of the temporary infrastructure must be fully funded by the proponent; and
- the asset must be contained on land owned by the proponent or the land on which the ultimate infrastructure is proposed and must not be located on land nominated for future public use such as community, education facilities, and/or open space.

To the satisfaction of the Responsible Authority.

R117

Where infrastructure is proposed to be delivered in a staging area (SA) that precedes the delivery of required infrastructure in another SA, the onus is on the proponent to demonstrate how development can be facilitated without prejudicing the development of other staging areas and the delivery of all required infrastructure. Out of sequence development must not detrimentally impact the financial performance of the MDCP to the satisfaction of the Responsible Authority and the Collecting Agency for the MDCP.

R118

General development viability and staging will be determined largely through the availability and provision of local road infrastructure in order to access and service each development site. Within this context, development must:

- Ensure safe and orderly vehicular access to the existing arterial network;
- Provide access from an arterial, connector road or local street, constructed to the requirements of the PSP, to each new lot via a sealed road to service the development;

To the satisfaction of the Responsible Authority.

R119

Any subdivision proposal must demonstrate how the local street network connects to the wider network in a logical layout.

Streets must be constructed to property boundaries where an inter-parcel connection is indicated in Plan 10 Road Network, by any date or stage of development required or approved by the Responsible Authority.

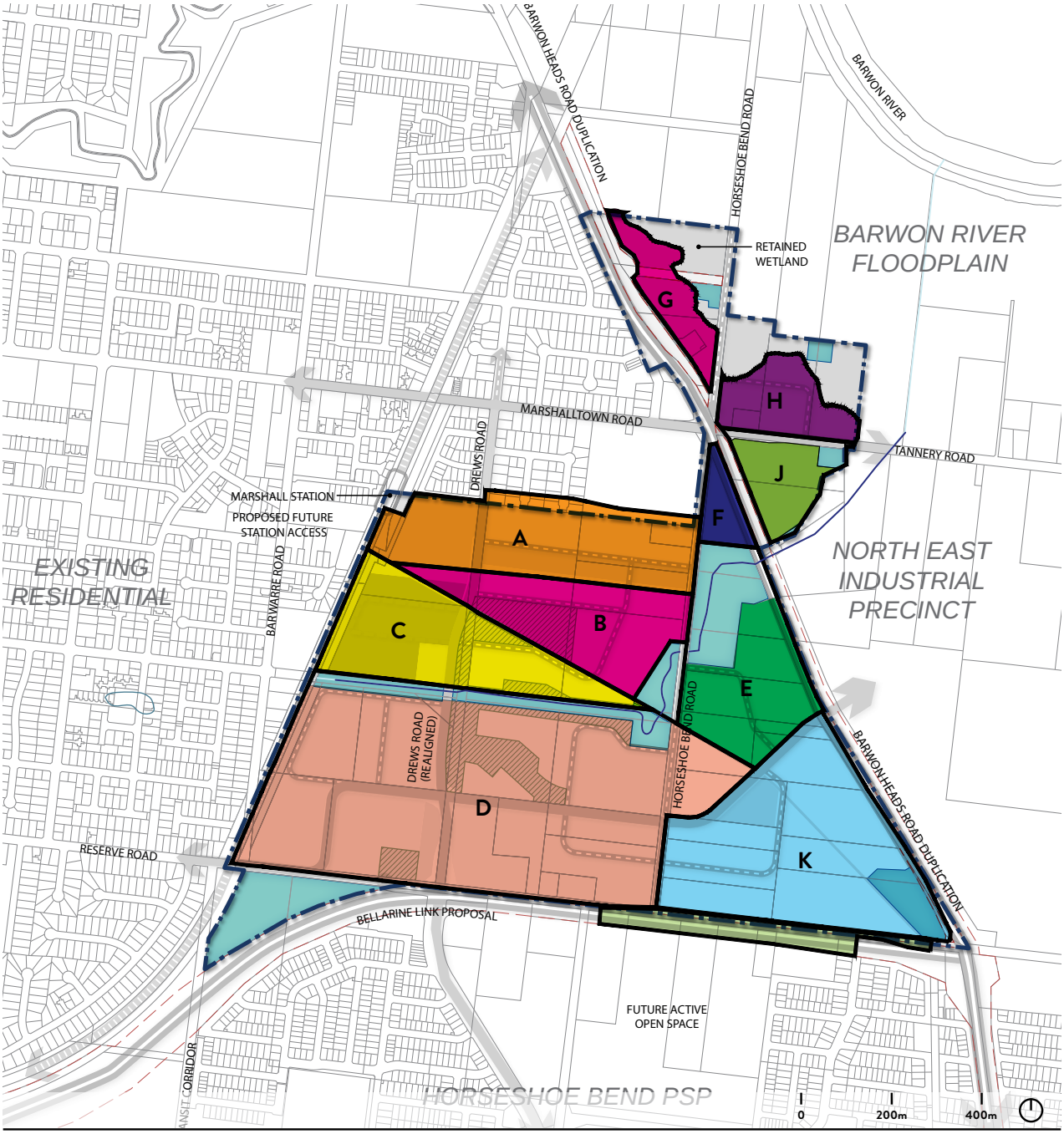
GUIDELINES

G58

If a developer wishes to apply for a planning permit that requires the provision of infrastructure, temporary or ultimate, that is out of sequence to that identified in Plan 17 Development Staging Plan, or to develop before required infrastructure is delivered, such development applications should demonstrate:

- How the development, to the extent practicable, will be integrated with adjoining developments, through the timely provision of connecting roads and walking/cycling paths;
- How community parks will be provided in the early stages of the development to prove new residents with amenity;
- How sealed road access will be provided to each new allotment;
- How any necessary trunk service extensions will be delivered, including confirmation of the agreed approach and timing by the relevant infrastructure or service provider, and;
- That the out of sequence development will not compromise the orderly delivery of the PSP and associated infrastructure.

P17. DEVELOPMENT STAGING



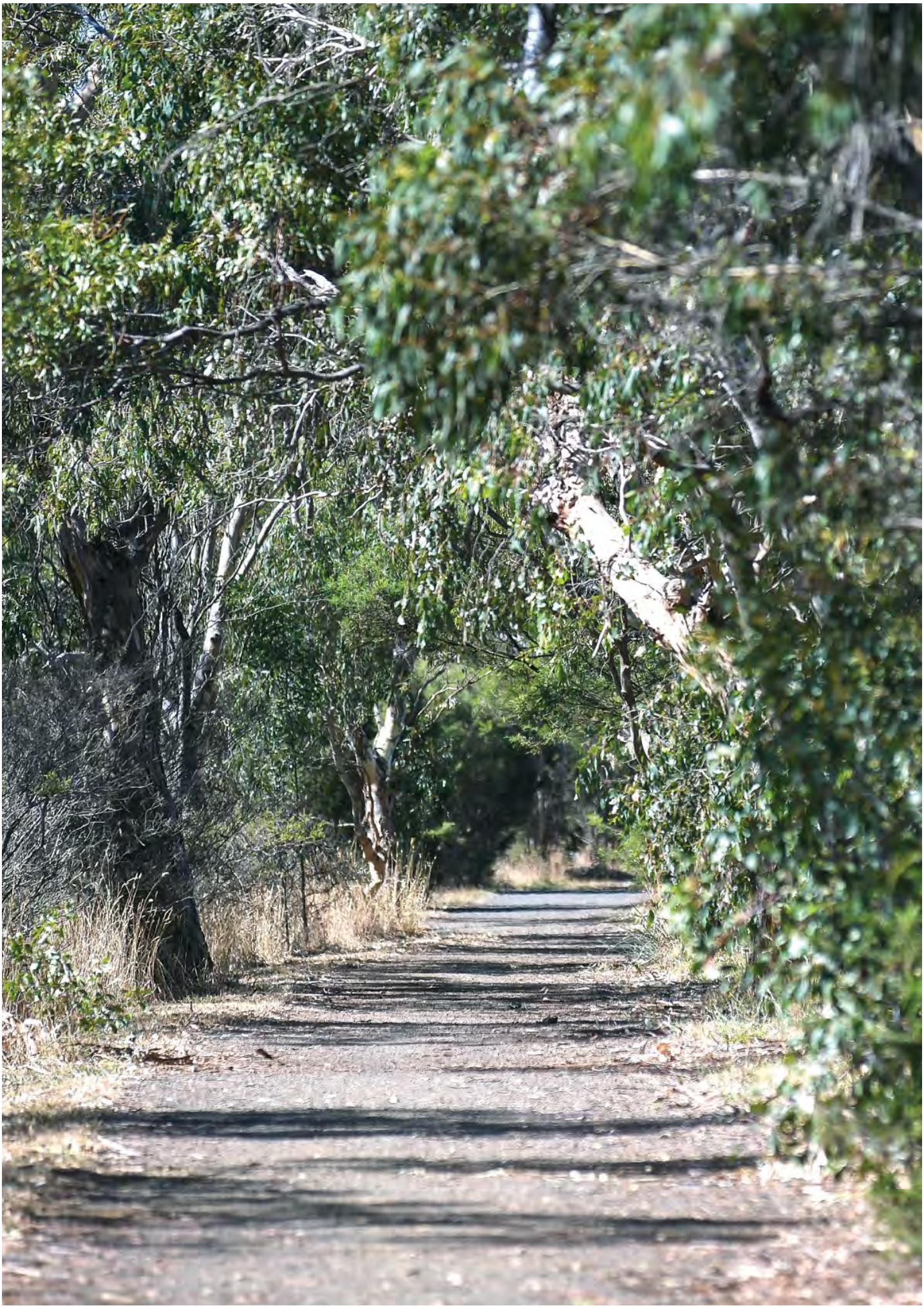
KEY

CONTEXT

- Precinct Boundary
- Railway and Station

INFRASTRUCTURE

- A — SWMS Staging Area/SWMS Catchments



3.10.3 SUBDIVISION WORKS

REQUIREMENTS

R120

Subdivision of land within the PSP must at the cost of the developer provide for all local infrastructure, other than that provided for within the Marshall DCP, including (but not limited to):

- roads and streets in accordance with the relevant cross section at Section 4.3, including:
  - connector roads and local streets
  - internal loop roads and service roads that abut arterial roads.
  - local bus stop infrastructure (where locations have been agreed by Department of Transport and Planning (DTP));
- landscaping of all existing and future roads and streets, including tree planting in accordance with Section 4.4 Canopy Cover and Tree Species List;
- intersection works and traffic management measures along all roads and streets (except those included in the DCP);
- fencing and landscaping, including along arterial roads (existing and proposed), including any acoustic fences, barriers or measures to address noise concerns from adjoining arterial roads;
- all paths including local shared, pedestrian and bicycle paths along local arterial roads and connector roads, footpaths along other roads and streets;
- waterway infrastructure;
- community parks including bridges, intersections, and barrier crossing points (except where otherwise included in the DCP);
- bicycle parking facilities;
- basic improvements to local reserves and open space (refer to R121 below);
- local drainage system where required;
- construction of culverts for waterway crossings of all streets;
- street or pedestrian path crossings of waterways and the electricity transmission line easement unless included in the DCP or outlined as the responsibility of another agency in the Precinct Infrastructure Plan.
- infrastructure as required by utility service providers including water (potable, recycled and water tapping for potential open space), stormwater, sewerage, drainage, electricity and telecommunications.

R121

All encumbered and unencumbered public open space (excluding conservation reserves) must be designed and developed to a minimum standard prior to the transfer or vesting of the public open space, including but not limited to:

- removal of all existing and disused structures, foundations, pipelines and stockpiles;
- basic levelling and spread of minimum 100mm topsoil and subsoil if required on the proposed areas of open space to provide a stable free draining surface;
- completed bulk earthworks where required fit for intended purpose;
- remediation of any contamination;
- clearing of rubbish and environmental weeds and rocks, levelled, topsoiled and grassed with warm climate grass (unless conservation reserve requirements dictate otherwise);
- a water tapping for recycled and potable water (if available);
- utility connection points as required to all boundaries of all reserves and community parks;
- canopy trees and other plantings;
- protection of trees that are to be retained including exclusion zones as appropriate;
- An independent arboricultural assessment by minimum AQF Level 5 arborist for all trees nominated for retention within the NVPP should be undertaken. Required space to be provided to maintain tree health should be in accordance with relevant industry standards (AS4970 - 2009 The Protection of Trees on Development Sites);
- soil preparation for new tree planting;
- construction of minimum 1.8m wide pedestrian paths around the perimeter of the reserve, connecting and linking into any other surrounding paths or points of interest, except where shown as a shared paths on Plan 10 Road Network;
- appropriate boundary fencing where the public open space abuts private land, or as required by the Responsible Authority;

- vehicular exclusion devices (landscape treatments, fences, bollards or other suitable methods) and maintenance access points (as required)
- installation of park furniture and recreation infrastructure to support these facilities consistent with the type of public open space listed in Table 4 Open Space Delivery Guide.

To the satisfaction of the Responsible Authority.

R122

Any conservation area to be transferred to or vested in the relevant authority must be done so in a standard that satisfies the requirements of that authority. Works required prior to the transfer include, but may not be limited to:

- Site amelioration works, such as rubbish removal, demolition of existing structures, removal of old fence lines, foundations, pipelines, farm dams or stockpiles;
- Pest plant and animal eradication as appropriate;
- repairs to and stabilisation of any existing structures to be retained onsite if appropriate; and
- any fencing required to ensure the safety of the public.;
- any works carried out must be consistent with any relevant Cultural Heritage Management Plan (CHMP), and other relevant approvals.

R123

Land required to deliver a shared user path in Plan 11 Active Transport Network which is located outside areas indicated as an open space reserve, drainage reserve or existing road reserve, must be transferred to or vested in the Responsible Authority at the time of subdivision of the land. The land required for the path is not to be credited for the purposes of the open space contribution under Clause 53.01 of the Greater Geelong Planning Scheme, whether or not it forms part of a new local street.

R124

Roads within subdivisions layouts must connect to the existing road network.

R125

Infrastructure must be designed to prevent impacts to protected vegetation within the NVPP and protection zones must be specified on plans endorsed under any planning permit.

R126

All infrastructure including roads, utilities and drainage infrastructure located within the PSP must be designed to prevent the impacts of earthworks (including stockpiles) on the health and viability of vegetation retained as per the NVPP and be supported with appropriate plans that define and set appropriate protection zones throughout all subdivisional works.

4.0

APPENDICES

4.1 PROPERTY SPECIFIC LAND BUDGET

T10. PROPERTY SPECIFIC LAND BUDGET

PARCEL		OUT-SIDE PREC-INCT	TRANSPORT											UNCREDITED OPEN SPACE									CRED-ITED OPEN SPACE	NET DEVELOPABLE AREA BREAKDOWN				TOTAL NDA (HA)	
PROPERTY	TOTAL	Part of NEIP PSP	Arterial Road	Arterial Road Intersection (Barwon Heads Road)	Arterial Road Intersection (Bellarine Link)	Arterial Road Intersection (HSB / Drews / Reserve Road	Connector Road Intersection	Drews Rd Connector Road	EW Connector Road	Existing Rail Reserve	Part of Transport or Barwon Water	Retained Existing Road Reserve	Transport Hub	Barwon Water Easements Adjacent to Rail Reserve	Conservation	Flood Overlay Land	High Voltage Electricity Utility Easement	Main Outfall Sewer Utility Easement	Drainage (Within Existing Road Reserve)	Drainage (Within High Voltage Electricity Utility Easement)	Waterway, Wetland And Drainage Reserve	Local Park	Commercial Bulky Goods	Station Precinct	Medium Density Residential	Standard Residential	TOTAL NDA	TOTAL NDA AS % OF PROPERTY
1	4.004	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.000	0.000	0.000	0.000	2.837	0.000	0.000	0.000	0.000	0.110	0.000	0.000	0.000	0.000	0.000	0.946	0.000	0.000	0.946	23.63%
2	4.561	0.000	0.000	0.000	0.000	0.000	0.000	0.361	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.000	0.000	0.000	0.000	0.000	0.000	0.548	0.000	3.543	0.000	0.000	3.543	77.68%
3	2.390	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.090	0.000	0.000	0.000	2.300	0.000	2.300	96.23%
4a	3.762	0.000	0.000	0.000	0.000	0.000	0.079	0.248	0.000	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.000	0.000	0.000	0.116	0.000	0.000	0.000	3.238	0.000	3.238	86.07%
4b	0.290	0.000	0.000	0.000	0.000	0.000	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.054	0.000	0.000	0.000	0.000	0.000	0.052	0.000	0.000	0.000	0.078	0.000	0.078	26.90%
5	2.729	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.454	0.000	2.454	89.92%
6	4.767	0.000	0.000	0.000	0.078	0.000	0.235	0.005	0.628	0.000	0.000	0.000	0.000	0.000	0.508	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.000	2.729	0.000	2.729	57.25%
7	4.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.861	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.188	0.000	3.188	78.74%
8a	2.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.221	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.812	0.000	1.812	89.13%
8b	0.411	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.411	0.000	0.411	100%
9	2.437	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.810	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.627	0.000	1.627	66.76%
10	4.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.304	0.000	0.000	0.131	0.000	0.000	0.000	0.000	0.000	0.000	1.615	0.000	1.615	39.89%
11	4.860	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.310	0.000	0.000	0.130	0.000	0.000	0.849	0.973	0.000	0.000	2.597	0.000	2.597	53.44%
12	4.052	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.015	0.000	2.015	49.73%
13	4.854	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.579	0.000	0.000	0.000	0.000	0.000	0.475	0.000	0.000	0.000	3.801	0.000	3.801	78.31%
14	2.460	0.000	0.000	0.000	0.111	0.000	0.109	0.009	0.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.100	0.000	2.100	85.37%
15	1.508	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.266	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.241	0.000	1.241	82.29%
16	1.623	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.607	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.016	0.000	1.016	62.60%
17	2.550	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.550	0.000	2.550	100%
18	0.203	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.203	0.000	0.203	100%
19	0.403	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.403	0.000	0.403	100%
20	1.748	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.743	0.000	1.005	0.000	0.000	0.000	1.005	57.49%
21	2.099	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.383	0.000	0.000	0.246	0.867	0.000	0.000	0.000	0.000	0.602	0.602	28.68%
22	2.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.740	0.000	0.000	0.000	0.000	1.294	1.294	63.62%
23	2.431	0.000	0.000	0.071	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.360	2.360	97.08%
24	2.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.106	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.913	1.913	94.52%
25	0.405	0.000	0.000	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.284	0.284	70.12%
26	2.035	0.000	0.000	0.119	0.000	0.000	0.000	0.000	0.204	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.001	0.000	0.000	0.000	1.700	1.700	83.54%
27	2.425	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.347	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.798	0.000	0.000	0.000	1.250	1.250	51.55%
28	2.402	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.322	2.322	96.67%
29	1.214	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.194	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.020	1.020	84.02%
30	1.940	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.065	0.000	0.000	0.208	0.000	0.000	0.000	0.000	1.668	1.668	85.98%
31	2.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.024	2.024	100%
32	1.642	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.642	1.642	100%
33	4.075	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.110	0.000	0.000	0.982	0.000	0.000	0.000	0.000	2.983	2.983	73.20%

T10. PROPERTY SPECIFIC LAND BUDGET

PARCEL		OUT-SIDE PREC-INCT	TRANSPORT											UNCREDITED OPEN SPACE								CRED-ITED OPEN SPACE	NET DEVELOPABLE AREA BREAKDOWN				TOTAL NDA (HA)	
34	2.408	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.612	0.000	0.000	0.000	0.000	0.000	0.000	0.797	0.000	0.000	0.000	0.797	33.10%
35	1.289	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.197	0.000	0.000	0.000	0.000	0.253	0.000	0.840	0.000	0.000	0.000	0.840	65.17%
36	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.230	0.000	0.000	0.000	0.230	100%
37	0.830	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.751	0.000	0.000	0.000	0.751	90.48%
38	2.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.200	0.000	0.000	0.000	0.000	0.000	0.000	0.806	0.000	0.000	0.000	0.806	40.18%
39	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.233	0.000	0.000	0.000	0.233	100%
40	2.205	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.472	0.000	0.000	0.000	0.000	0.096	0.000	1.637	0.000	0.000	0.000	1.637	74.24%
41	2.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.316	0.000	0.000	0.000	0.000	0.135	0.000	0.642	0.000	0.000	0.000	0.642	30.67%
42	2.089	0.192	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.237	0.000	1.659	0.000	0.000	0.000	1.659	79.42%
43	1.732	0.411	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.057	0.000	1.264	0.000	0.000	0.000	1.264	72.98%
44	2.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.054	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
45	0.891	0.000	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.877	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
A	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.208	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
B	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
C	0.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
D	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
E	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
F	0.198	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.198	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
G	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.131	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
H	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.211	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
I	0.315	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.315	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
J	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
K	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
L	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
M	0.422	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.422	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
N	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
O	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
P	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
Q	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R	0.229	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.229	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R1	1.664	0.000	0.000	0.000	0.181	0.000	0.189	0.508	0.000	0.000	0.000	0.000	0.000	0.000	0.777	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R2	1.552	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.784	0.000	0.000	0.027	0.699	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R3	2.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052	0.000	0.000	1.992	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R4	1.954	0.000	0.062	0.000	0.206	0.237	0.000	0.000	0.000	0.037	0.000	1.412	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R5	5.920	0.033	5.887	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R6	0.639	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.639	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R7	0.818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
R8	0.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
S	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
T	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
U	0.085	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.084	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
V	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00%
TOTAL	**123.596**	**0.636**	**5.949**	**0.311**	**0.576**	**0.251**	**0.619**	**1.390**	**2.707**	**1.780**	**0.691**	**5.322**	**3.205**	**1.173**	**7.538**	**4.876**	**2.275**	**0.807**	**0.699**	**0.246**	**8.847**	**2.903**	**9.864**	**4.489**	**35.378**	**21.062**	**70.793**	

4.2 STATION PRECINCT URBAN DESIGN FRAMEWORK REQUIREMENTS AND GUIDELINES

REQUIREMENTS

An urban design framework (UDF) must be approved by the City for the area indicated in Plan 18 Station Concept Design Intention.

01. The UDF must comply and respond to the intentions prescribed in:
    - The Marshall PSP (as relevant)
    - This appendix: Namely the vision statement, objectives, requirements, guidelines.
    - The Station Precinct Concept Plan.
    - The Urban Design Guidelines for Victoria,
    - any other design guidelines or strategies produced and supported by the Responsible Authority and the City that are relevant to activity centres and high-density residential development.
02. Be completed to the satisfaction of the City prior to the issue of a planning permit.

VISION STATEMENT

Marshall Station Precinct will be the focal point of the local community, maximising the rare opportunity of a greenfield location with an existing railway station, arterial roads, and proximity to Central Geelong to form a mixed-use precinct embracing new ways to live, work and travel, through the delivery of a dense cluster of medium to high density residential housing integrated with retail and commercial activity.

The Precinct will be structured on a permeable grid of public streets designed to be the principal agent for integrating a mix of activities, prioritising seamless pedestrian connection from the station to the retail & commercial areas. Blocks will be configured to optimize flexibility for a broad range of uses, encouraging multi-level built form that provides retail and commercial uses with active interfaces at ground level and residential uses on upper levels, creating opportunities for passive surveillance.

KEY DESIGN OBJECTIVES

A precinct that supports the wider economy by providing jobs and education opportunities.

- Provide high density housing with varied typologies (including small office / home office (SOHO) and mixed tenures).
- Create a retail and commercial focal point within walking distance to the Marshall Train Station and servicing the wider Marshall Neighbourhood.

A fast, reliable and connected transport network.

- Design a precinct that anchors the Marshall Station, providing safe and convenient access for pedestrians, cyclists, other public transport modes and private vehicles.
- Deliver a permeable precinct that offers multiple safe routes to key destinations for various transport modes.

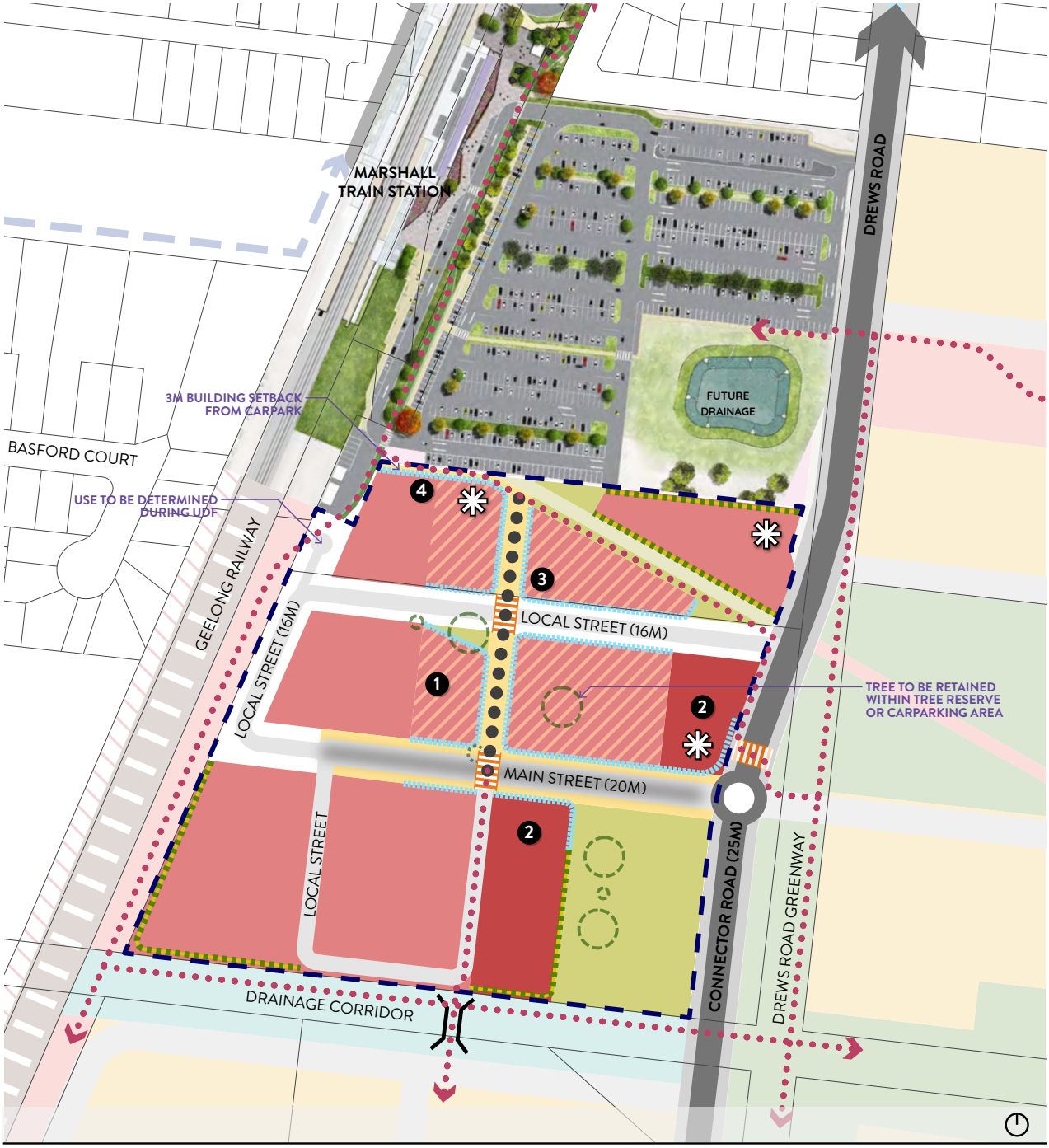
People feel safe wherever they are. An inclusive, diverse, healthy and socially connected community.

- Deliver public realm outcomes that showcase universal design, promote a sense of community and protects the human scale.
- Provide a range of services, facilities, and housing diversity to extend the Precinct's activation after hours and offer housing choice to suit different lifestyles.
- Design built form to adequately address sensitive interfaces and provide active uses at ground level with residential on upper levels to promote passive surveillance.
- Establish an intimate 'Main Street' and north-south 'Pedestrian Street' as the 'heart' of the Station Precinct, creating a unique 'destination / place' which positively contributes to the emerging character of the area.

Development and implementation of sustainable solutions. Sustainable development that supports population growth and protects the natural environment.

- Ensure built form outcomes respond to and integrate existing trees, natural and / or cultural landscape features, open space, as well as pedestrian and cycle links.
- Support the use of 'smart' technology including; street furniture, waste & recycling systems, alternative energy sources, water treatment & reuse.
- Deliver built form outcomes that showcase Ecologically Sustainable Development (ESD) principles and technology.

P18. STATION CONCEPT DESIGN INTENTION



KEY

- Station Precinct Boundary from FUS
- Connector Road
- Roundabout
- Main Street (Bus Capable)
- Local Access Street (Bus Capable)
- Sewer Easement
- Pedestrian Street (16m Refers to New Cross Section
- Train Station
- Shared Path
- Key Pedestrian Link
- Potential Community Facility
- Passive Open Space
- Medium-High Density Residential
- High Density Residential
- Drainage Reserve
- Preferred locations for Retail / Commercial Non-Resi Uses
- Indicative Trees to be Retained (refer to NVPP)
- Key Place Making Opportunity
- Activated interface for ground-level non-residential uses
- Activated interface with landscaped setback
- Indicative pedestrian bridge
- Pedestrian and Cyclist Priority Treatment
- 1 Possible Supermarket Location
- 2 Apartment Building Location with Active Corner
- 3 Key Intersection with Placemaking Potential Corner
- 4 Active Retail Edge Presented to Station

4.2 STATION PRECINCT URBAN DESIGN FRAMEWORK REQUIREMENTS AND GUIDELINES

LAND USE AND HOUSING

REQUIREMENTS

1. Ensure proposed land uses respond to the Station Precinct Concept Plan.
2. Demonstrate how the development achieves the minimum density requirements for the Precinct and provides a genuine mix of housing options and typologies that suit various lifestyles.
3. Ensure and demonstrate how proposed development will deliver high quality outcomes that showcase universal design, respond to the local climate, meet tree canopy targets, encourages street activity and active transport.
4. Provide an identifiable 'centre and heart' of the Precinct to develop a distinctive local character, sense of place and central gathering space.
5. Multi-level mixed-use development that provides a range of high-density housing typologies among businesses and services to create a walkable neighbourhood that provides locally for local needs.

GUIDELINES

1. Deliver a mixed-use precinct that showcases transport-oriented design by delivering a dense cluster of high-density residential housing integrated with complimentary retail and commercial uses. (I feel like this is repeated in multiple sections of this and whether we could just get rid of this one as a 'guideline'.
2. Allow for potential community use co-located with the local park and road frontages towards Main Street and the realigned Drews Road.
3. Concentrate retail / commercial uses at ground floor in areas identified in the concept plan. Namely the 'Mian Street' and the north-south Pedestrian Street.

MOVEMENT NETWORK

REQUIREMENTS

1. Ensure the Precinct is anchored to the Marshall Station, prioritizing connections and access to the Station for all modes of transport respecting the following hierarchy: pedestrians, cyclists, public transport users, and private vehicles.
2. Incorporate public transport services, including bus connections to access the Marshall Station and a potential bus interchange / forecourt.
3. Location, size and design of car parking, service and waste disposal areas must respond to the Station Precinct Concept Plan and show how the impact on amenity and pedestrian/cyclist priority has been minimised. UDF is required to consider car parking provisions and propose measures to prevent detrimental impacts to the public realm
4. Ensure Main Street is delivered as a primary pedestrian route and Pedestrian Street as a secondary pedestrian route, as well as interface design treatments that respond to all relevant cross sections in the MPSP.

GUIDELINES

1. Provide an accessible, permeable and functional urban structure of blocks, laneways, and streets. Ensure car parks are enclosed by built form and located at the side or rear of buildings.
2. Ensure car parks are designed to be flexible to accommodate temporary uses at non-peak times.
3. Ensure planting of suitable canopy trees and appropriate landscaping in car parking areas and dedicated pedestrian thoroughfares.
4. Limit crossovers and consolidate parking where possible.
5. Provide universal access throughout the centre and ensure all users have convenient and safe access to public spaces.
6. Provide bicycle parking facilities in safe, convenient, accessible and visible locations close to key destinations.

PUBLIC REALM & PLACEMAKING

REQUIREMENTS

1. Ensure the design concept identifies a hierarchy of public spaces that provide opportunities for a range of activities throughout the precinct and complements the urban high density character.
2. Provide connections to facilitate access to the station and bus interchange.
3. Demonstrate how the design achieves the 25% canopy coverage target set for the station precinct.
4. Provide a cohesive wayfinding strategy and design that positively contributes to the area's character and identity and showcases ESD principles and technology.
5. Provide cross sections that demonstrate outcomes of proposed built form when viewed from key viewpoints including Main Street and the Pedestrian Street.
6. Ensure provision of a high quality local park that provides amenity for a high density residential precinct.

GUIDELINES

1. Develop a public realm hierarchy that encourages social interaction and supports local events.
2. Consider retaining existing trees where possible (in addition to those specified to be retained in the NVPP).
3. Create view lines that terminate at key destinations; including open space and significant built form to improve 'place experience', walkability and sense of safety.
4. Demonstrate careful consideration to the appearance of new developments in order to define and enhance the public realm through design measures such as building modulation, massing, articulation, and use of materials.
5. Minimise visual bulk of upper floors when viewed from streets and laneways.

BUILT FORM

REQUIREMENTS

1. Ensure built form outcomes allow development to be adapted or redeveloped over time to vary uses, increase densities or employment intensity.
2. Design built form to minimise 'blank' walls and provide fine grain active edges along 'Main Street' and 'Pedestrian Street'.
3. Integrate service areas and building utilities into the façade design at ground level to mitigate any negative impacts to amenity and pedestrian experience.
4. Demonstrate how building massing and design responds to the varying interfaces in the Concept Plan, including ground level design response to primary and secondary pedestrian routes.
5. Sleeve anchor retail with fine grain retail development, particularly adjacent to the urban plaza and pedestrian streets.
6. All built form must be accessed from the public realm local street network. Internalised malls are not supported.
7. UDF to provide response to proposed building heights in Table 11.

GUIDELINES

1. On sites where a development comprises multiple buildings, the buildings should adopt a diversity of forms, typologies, and architectural language, within a cohesive design framework.
2. Locate loading, building plant facilities at the rear of buildings to avoid adverse amenity impacts.
3. Screen waste collection points to minimise amenity impacts on adjoining areas and users of the centre.
4. Built form relates to the scale of the public realm, the UDF should consider specifying maximum plot ratios for residential areas in the Station Precinct which considers providing reasonable levels of daylight, sunlight and views to the sky from the public realm.
5. All buildings should generally be built to the side boundary. Where buildings are not built to the side boundary the UDF should specify setbacks & building separation guidelines.
6. Positively address sensitive interfaces and avoid 'blank' unarticulated walls.

4.2 STATION PRECINCT URBAN DESIGN FRAMEWORK REQUIREMENTS AND GUIDELINES

SUSTAINABILITY AND ENVIRONMENT

REQUIREMENTS

1. Provide a Sustainability Management Plan, Concept Landscape Masterplan and Carparking Management Plan for the precinct.
2. These strategies should detail high-level interventions and requirements relating to: tree planting, landscaping, water sensitive urban design (WSUD), material and building style choices, lighting strategies, strategies to reduce car dependence, locations for car share, vehicle charging and parking, how existing ecology can be protected, enhanced and incorporated into the future neighbourhood.
3. Provide an aboricultural assessment of trees nominated for retention within the station precinct to inform how to safely incorporate them into the changed land use and give the trees the best chance to survive, inclusive of space to allow succession planting or recruitment.

STAGING AND IMPLEMENTATION

REQUIREMENTS

1. Demonstrate how the proposed design facilitates intensification of the Station Precinct over time by providing a staging plan and indicative development timelines.
2. Prepare a development staging plan to balance housing delivery with appropriate levels of public realm upgrades and non-residential uses.
3. Ensure development does not negatively impact on the developability of adjoining properties.
4. Deliver active and public transport connections upfront to minimise car dependence.
5. Design and development of Stage 1 to recognise the existing use of Stage 2 as commuter car parking for the Marshall Station, while responding to the long-term vision of the Precinct as a transit oriented mixed-use hub.

GUIDELINES

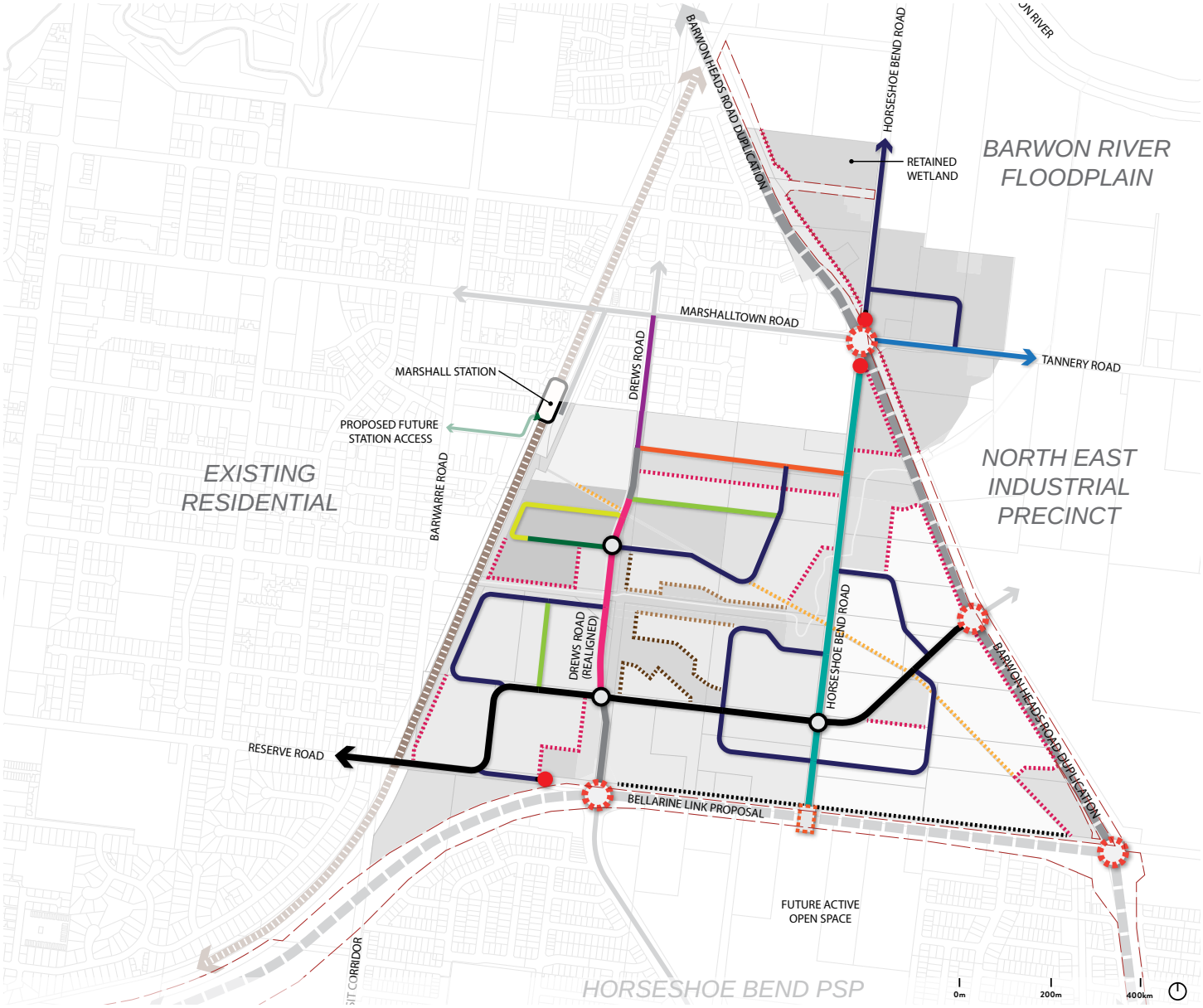
1. On sites where a development comprises multiple buildings, the buildings should adopt a diversity of forms, typologies.

T11. STATION CONCEPT DESIGN INTENTION

The following table provides expanded requirements and descriptions of the concept plan design legend items.

ITEM	DESCRIPTION
Shared Path	A 3m wide shared user path unless otherwise agreed to by the responsible authority.
Key Pedestrian Link	A 12m wide pedestrianised street (refer to cross section) complimented with landscaping, space programming and built form frontages.
Passive Open Space	This area is set aside for passive recreation and protection of the existing trees. (add area)
Medium-High Density Residential	Minimum Building height of 3 storeys.
High Density Residential	Minimum Building height of 5 storeys with strong preference for sleeved or basement carparking.
Preferred locations for retail / commercial / non-residential uses	Should any non-residential uses be proposed, these should be concentrated in the hatched areas shown on the plan. These uses should aim to activate the ground level and avoid fronting carparking areas.
Drainage Reserve	This reserve is being delivered as part of the station carparking upgrades.
Trees	Trees to be retained as per the NVPP.
Key Placemaking Opportunity	The UDF should determine how these locations can contribute towards the desired future character for the precinct. The UDF should provide design guidelines to be approved by the responsible authority.
Activated interface for ground-level non-residential uses	The UDF should include design guidance on how these interfaces can be the primary access points for future development.
Active Interfaces with landscape setback	Buildings should be setback to provide landscaping between and around buildings whilst still allowing for high levels of passive surveillance by users and residents. The landscape design of the precinct should integrate the design of the front gardens with the design of the streets and open space. Direct access for dwellings is encouraged along these interfaces. Setback to contain landscaping and footpath.
Pedestrian Priority Treatment	Key junctions marked as pedestrian and cyclist priority treatment should preferably be a raised 'zebra' stripe crossing along with other complimenting traffic calming measures.
Possible supermarket location	The concept plan identifies a preferred location for a supermarket. Any carparking proposed should minimise the amenity one public realm and preferably be under or above ground.

4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS



KEY

CONTEXT

- Precinct Boundary
- Railway and Station

MOVEMENT

- Road Truncation
- Potential Roundabout
- Signalised Intersection
- Major Road Project
- Signaled Crossing
- Arterial Road (as Labelled)

CROSS SECTIONS

- A 25m Typical Connector
- B 25m Drews Road
- C 21m Drews Road (Abutting Greenway)
- D 20m Drews Road (North of Easement)
- E 20m Key Local Access Street (Level 2)
- F 20m Tannery Road
- G 20m Horseshoe Bend Road
- H 20m Station Precinct Main Street
- I 18m Feature Local Access Street
- J 16m Local Access Street (Level 1)
- K Sewer Easement Interface
- L Electricity Easement Interface Road
- M Open Space, Drainage Reserve and Easement Interface
- N Smith Street Conservation
- O Other Conservation
- P Arterial Roads Interface

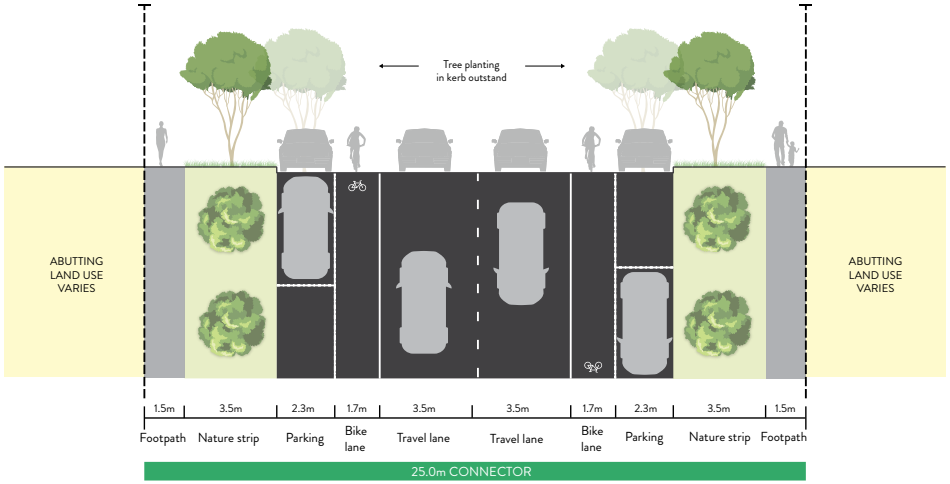
Locations to be determined at Subdivision Stage

- Q 8m Laneway
- R 4m Paper Road

4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

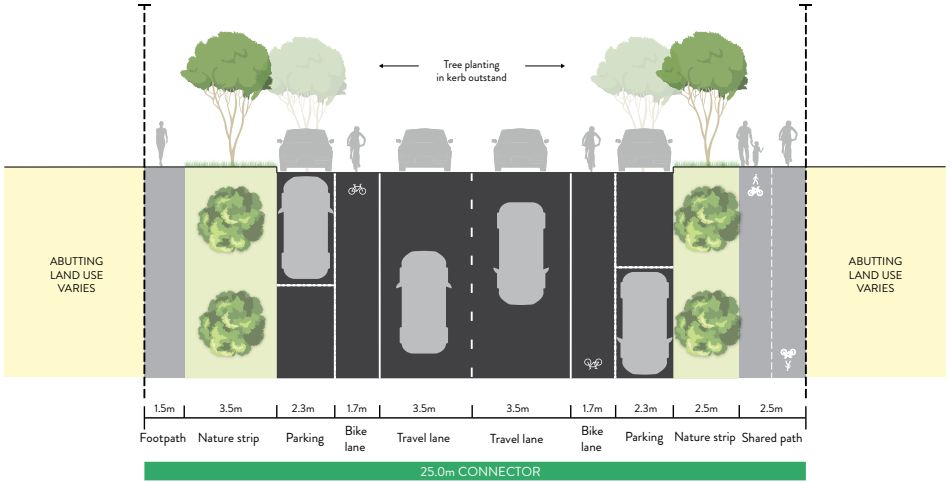
A. 25M TYPICAL CONNECTOR STREET

A



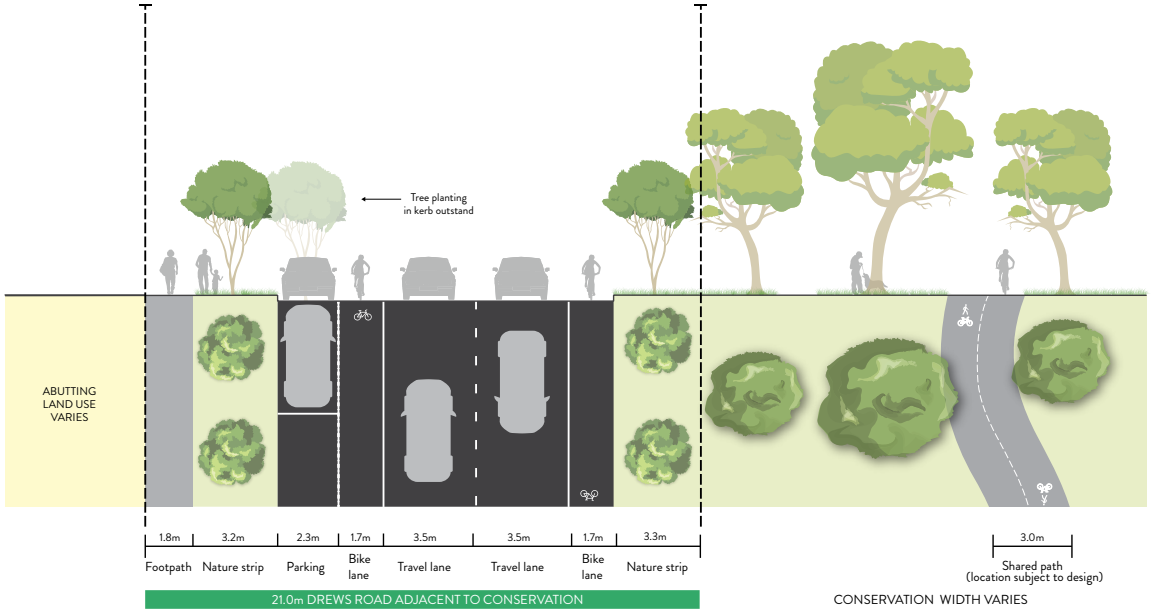
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS
B. 25M DREWS ROAD (STANDARD)

B



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

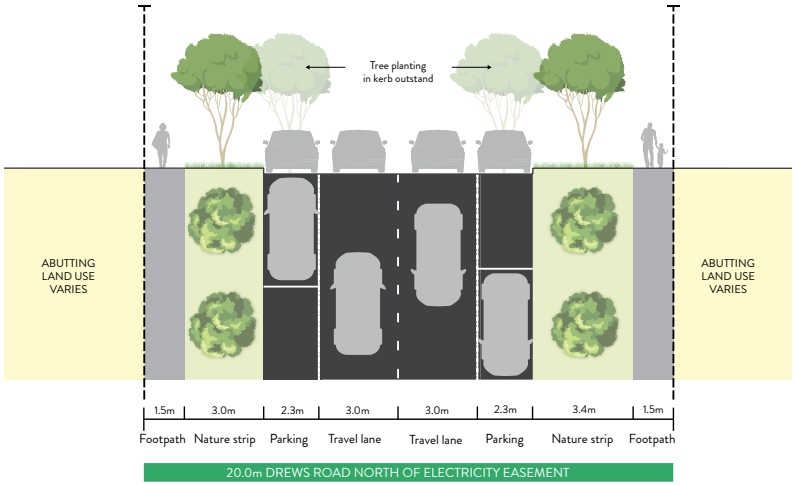
C. 21 DREWS ROAD (CONSERVATION)



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

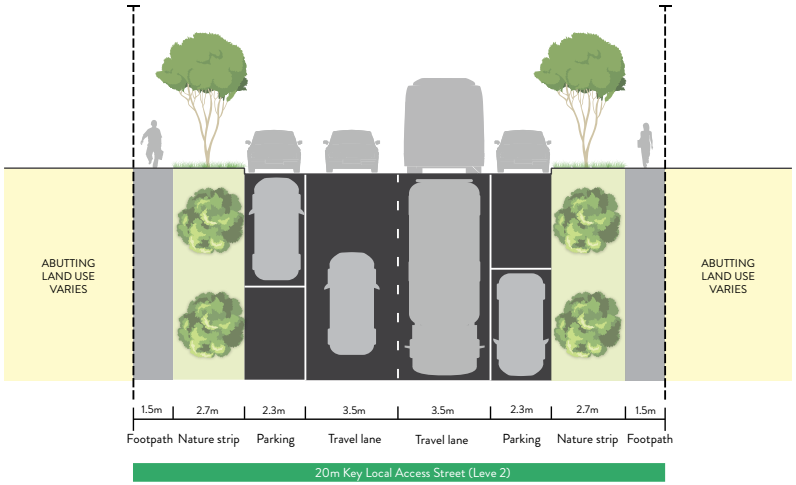
D. 20M DREWS ROAD (NORTH OF ELECTRICITY EASEMENT)

D



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

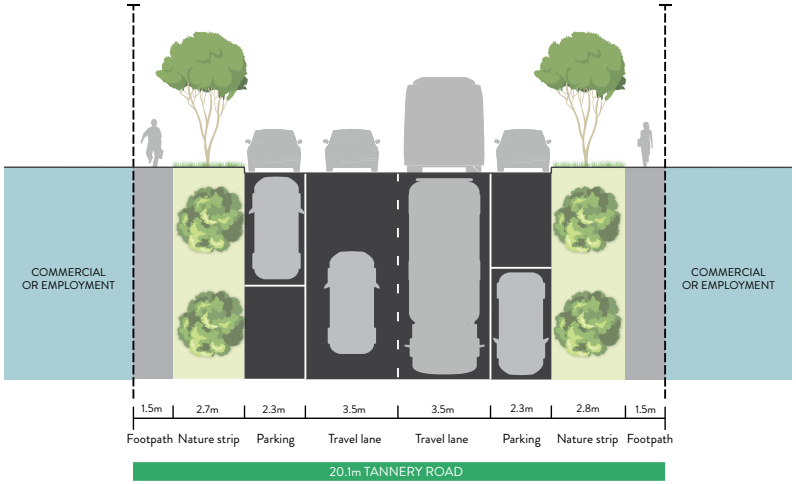
E. 20M KEY LOCAL ACCESS STREET (LEVEL 2)



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

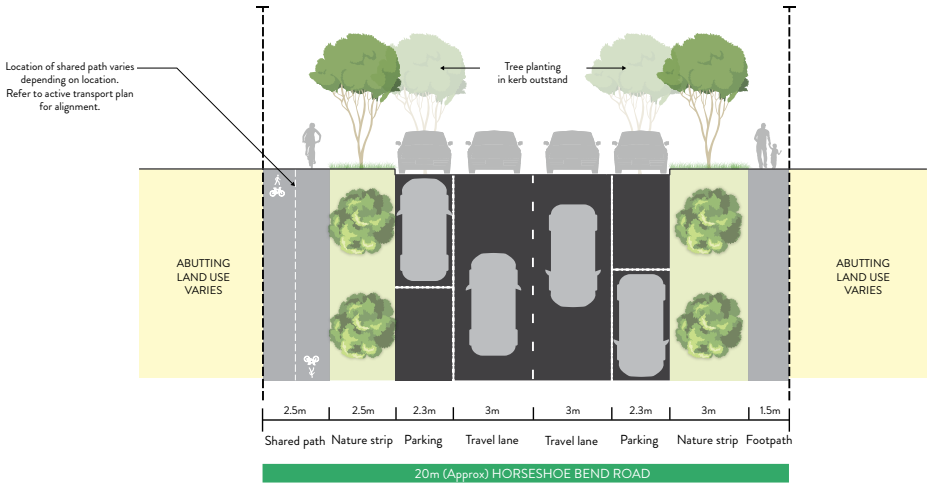
F. 20M KEY LOCAL ACCESS STREET (LEVEL 2) TANNERY ROAD

F



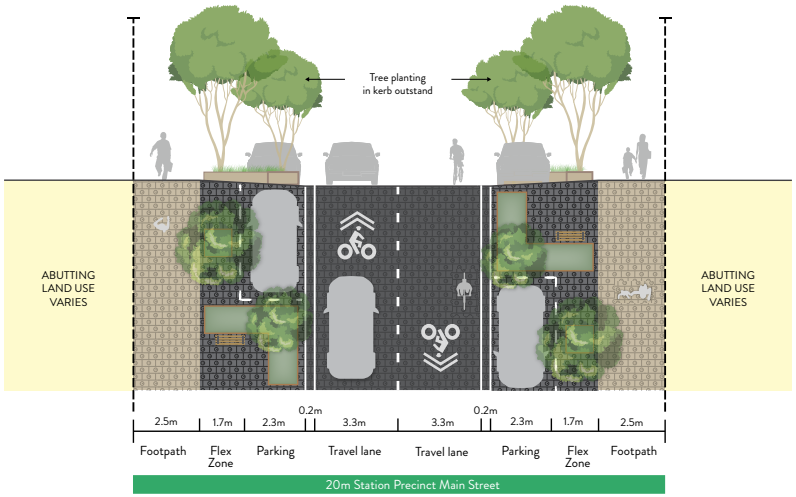
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

G. 20M HORSESHOE BEND ROAD



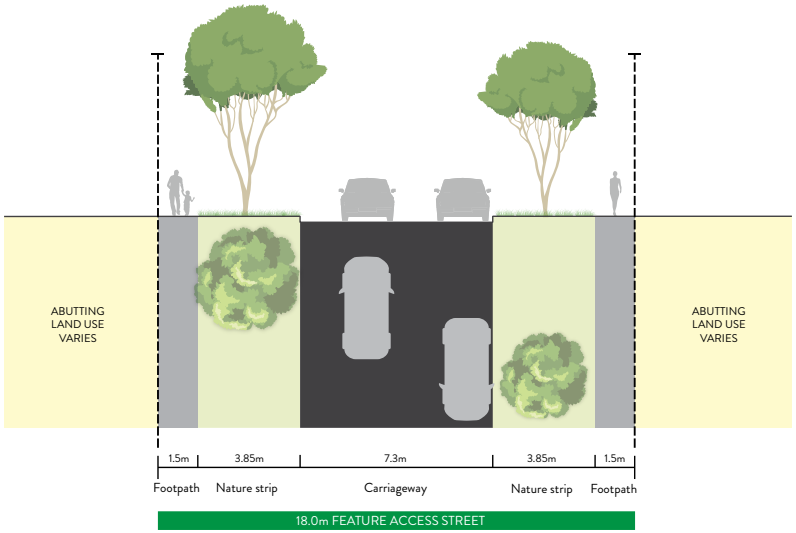
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

H. 20M STATION PRECINCT MAIN STREET



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

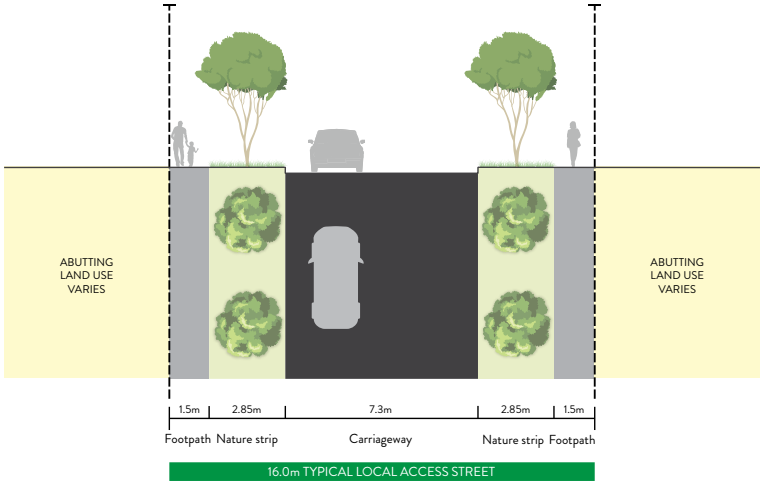
I. 18M FEATURE LOCAL ACCESS STREET



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

J. 16M KEY LOCAL ACCESS STREET (LEVEL 1)

J

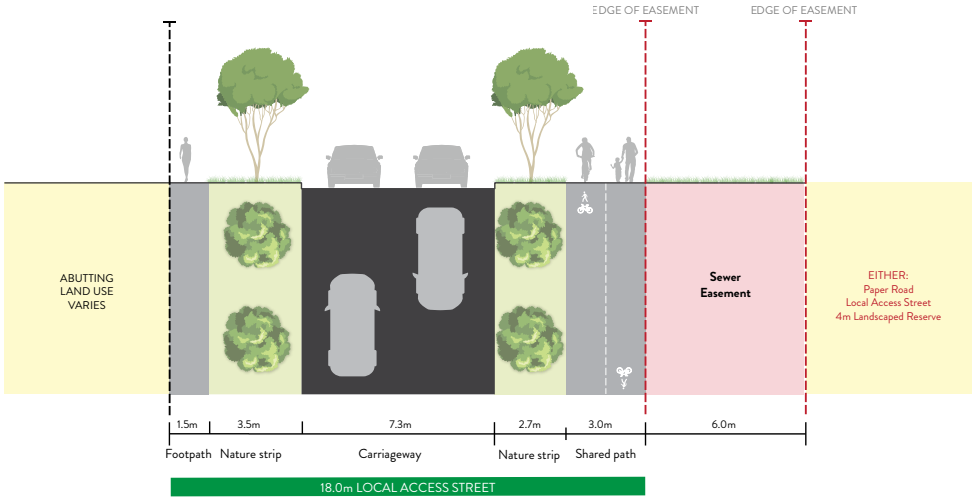


4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

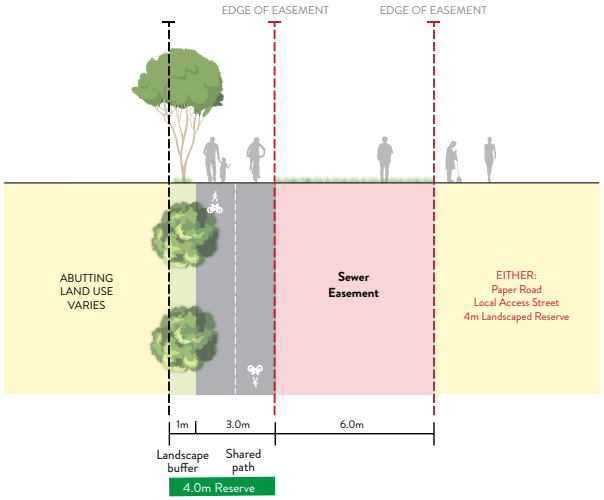
K. 18M SEWER EASEMENT

K

Option 1

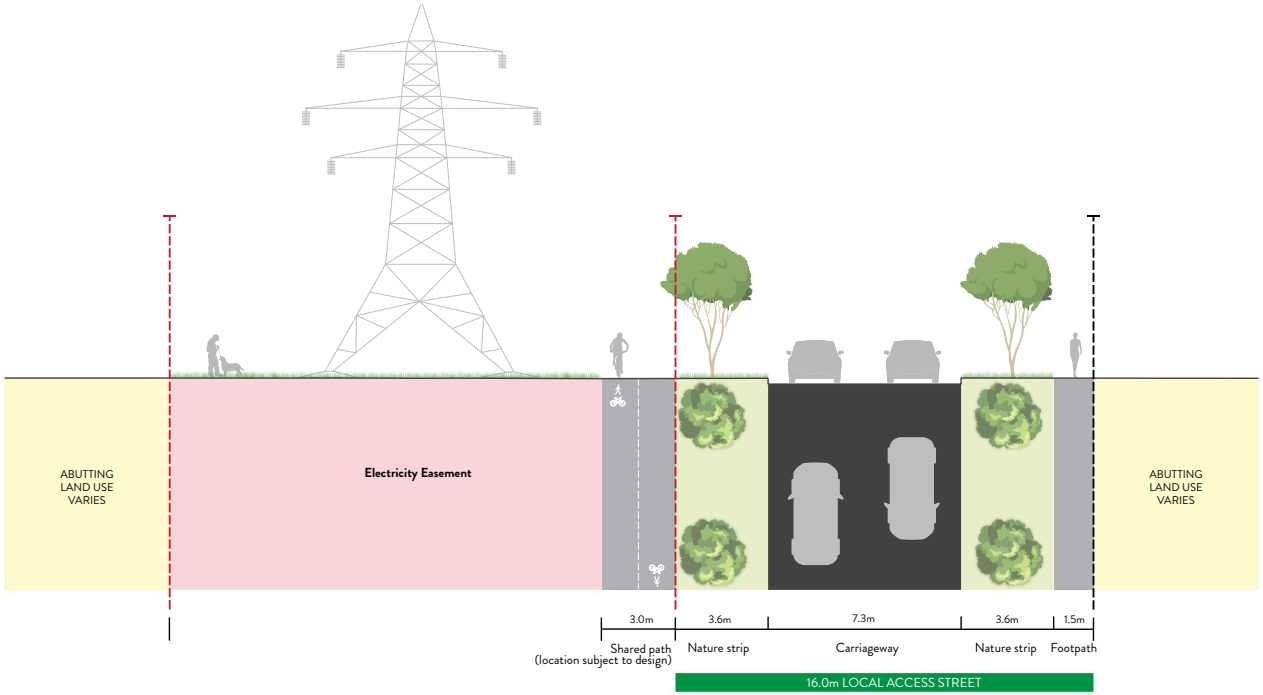


Option 2



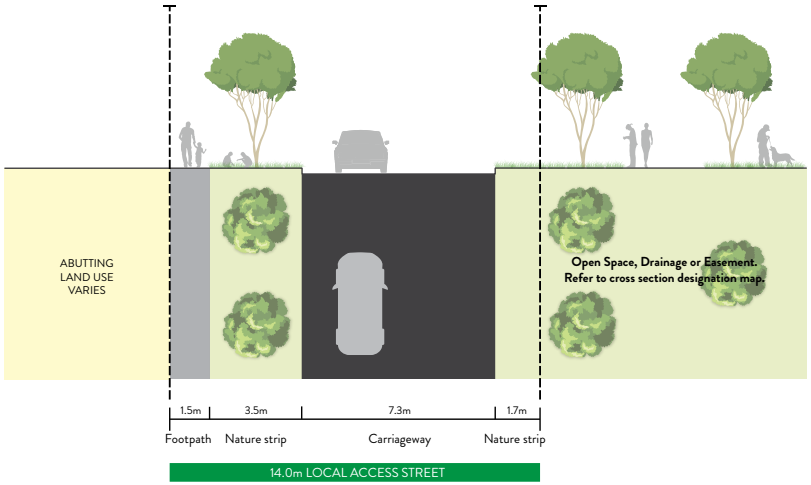
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

L. 16.8M ELECTRICITY EASEMENT INTERFACE ROAD



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

M. 14M LOCAL ACCESS STREET (LEVEL 1)
ABUTTING OPEN SPACE, DRAINAGE, EASEMENTS, BARWON HEADS ROAD



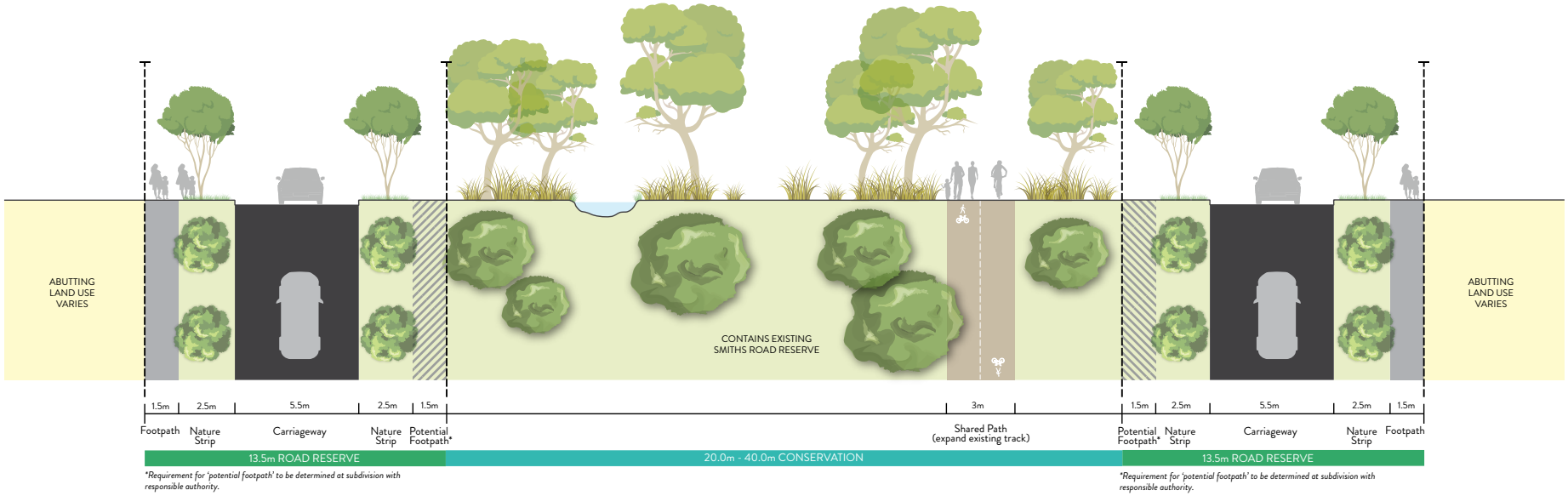
NOTE:

CARRIAGEWAY CAN BE REDUCED TO 5.5M FOR ROADS ABUTTING BARWON HEADS ROAD.

A PAPER ROAD IS AN ACCEPTED INTERFACE INSTEAD OF 14M ROAD ABUTTING SOME DRAINAGE, OPEN SPACE OR EASEMENT LOCATIONS. SUBJECT TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY.

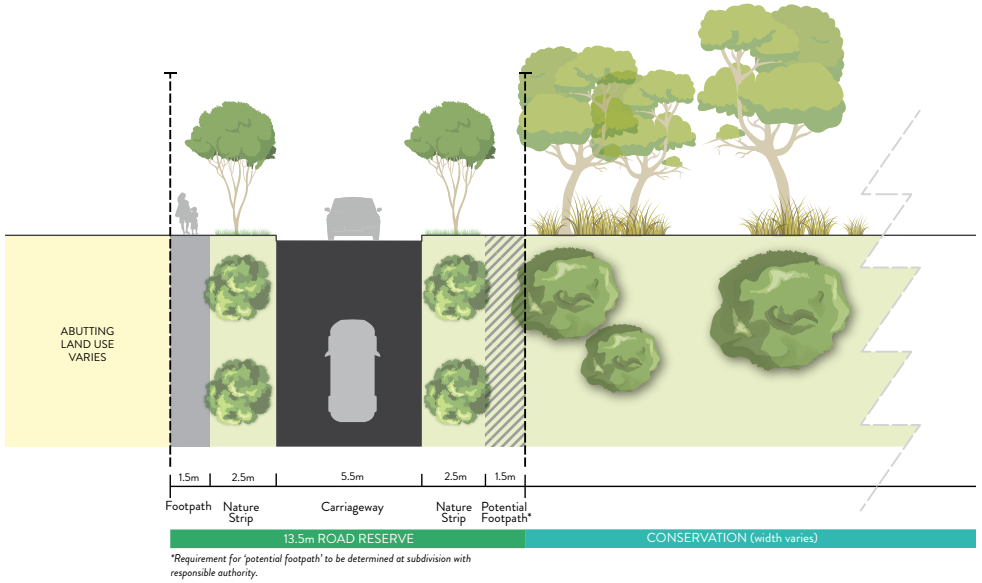
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

N. SMITH STREET CONSERVATION



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

O. 14M CONSERVATION INTERFACE

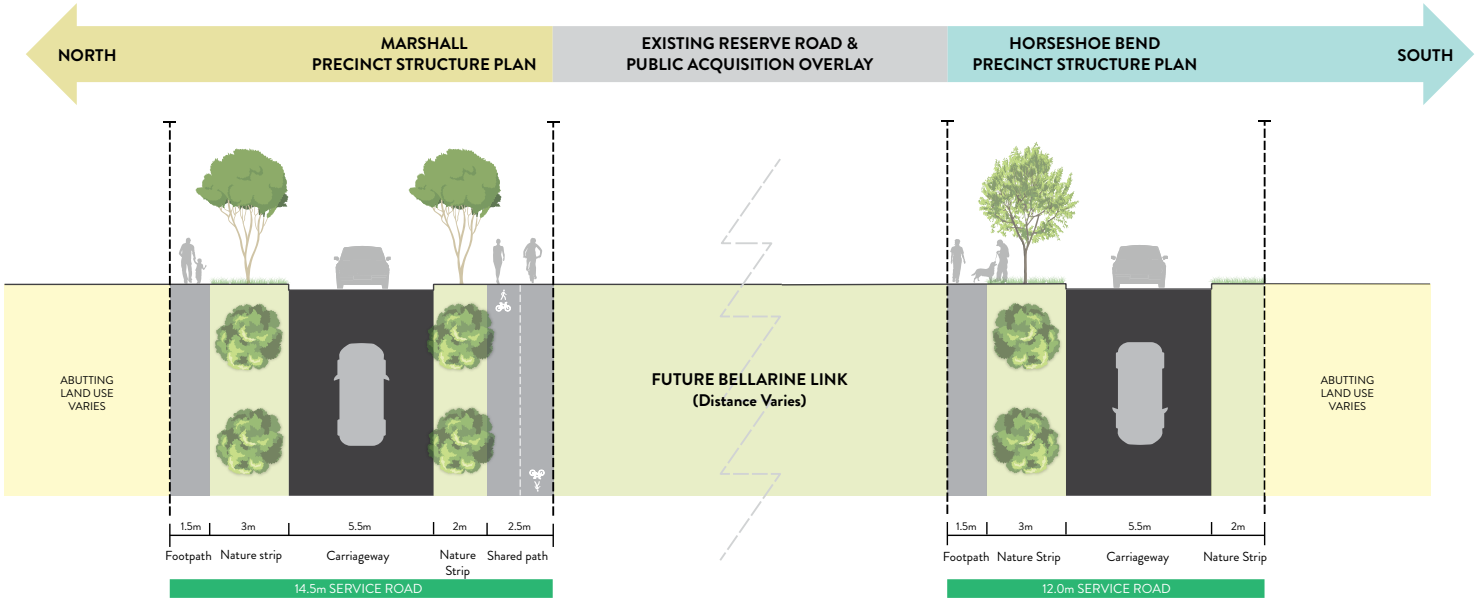


NOTE:

CONSERVATION INTERFACES SHOWN ARE INDICATIVE ONLY, AND ARE SUBJECT TO RESOLUTION OF BUSHFIRE CONSTRAINTS AND MUST BE COMPLETED TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY.

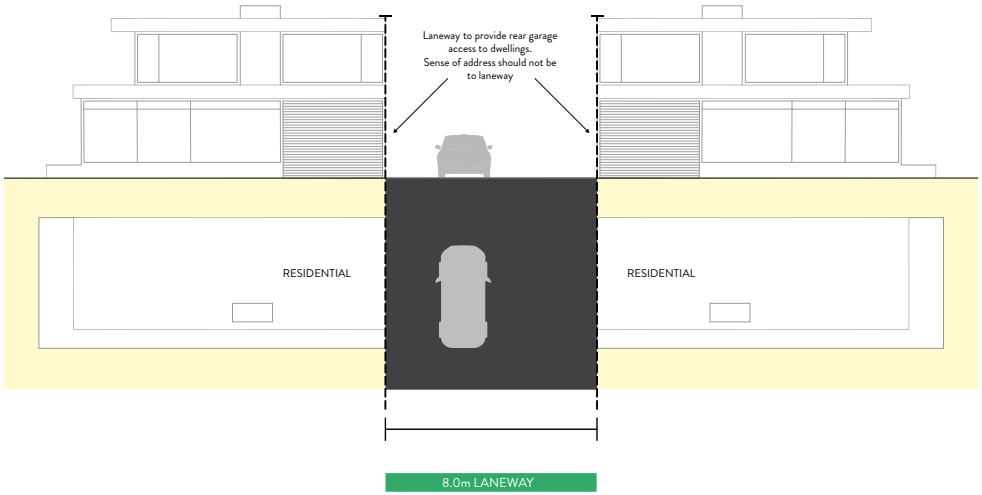
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

P. 14.5M BELLARINE LINK SERVICE ROADS



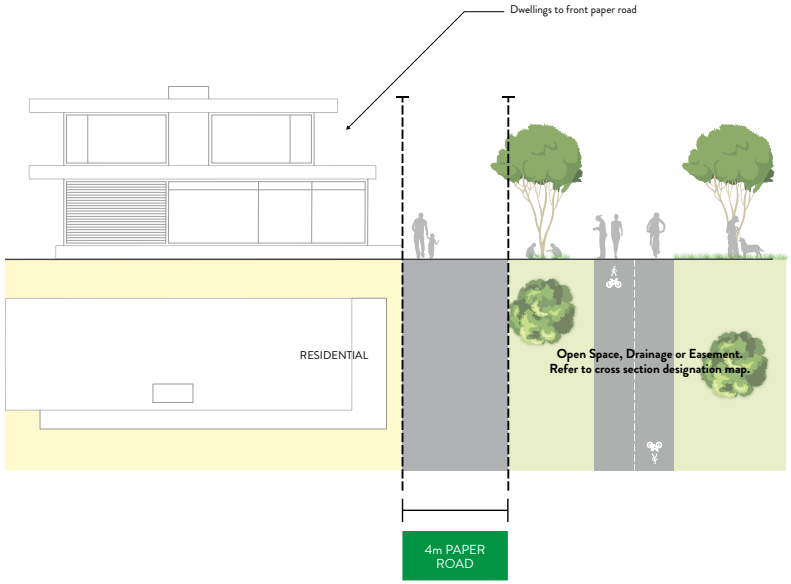
4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

Q. 8M LANEWAY



4.3 ROAD DESIGN CHARACTERISTICS AND CROSS SECTIONS

R. 3M PAPER ROAD



NOTE:

DESIGN OF PAPER ROAD TO BE RESOLVED AT SUBDIVISION AND COMPLETED TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY.

4.4 CANOPY COVER AND TREE SPECIES LIST

4.4.1 CANOPY COVER TARGETS AND CALCULATIONS

LANDUSE CATEGORY (AS PER PLAN 6)	CANOPY COVERAGE TARGET (AS A % OF GROSS LAND USE AREA, INCLUSIVE OF LOCAL ROADS AND ANY LAND IDENTIFIED TO BE PART OF THE PUBLIC REALM)
Flood Overlay	Subject to detailed design
Existing road reserve retained as road	35%
Conservation Reserve	Subject to detailed design
Utilities Easements	Subject to negotiation with Utilities Provider
Drainage Reserve	30% for passive drainage open space surrounding retention basins or wetlands.
Station & Carpark - TRZ1	Subject to negotiation with VicTrack
Proposed DCP Connector Road	40%
Conventional Residential	20%
Medium/Higher Density Residential	20%
Mixed Use - High Density Residential	15%
Commercial/Bulky Goods	20%
Credited (Unencumbered) Open Space	50%

Note:

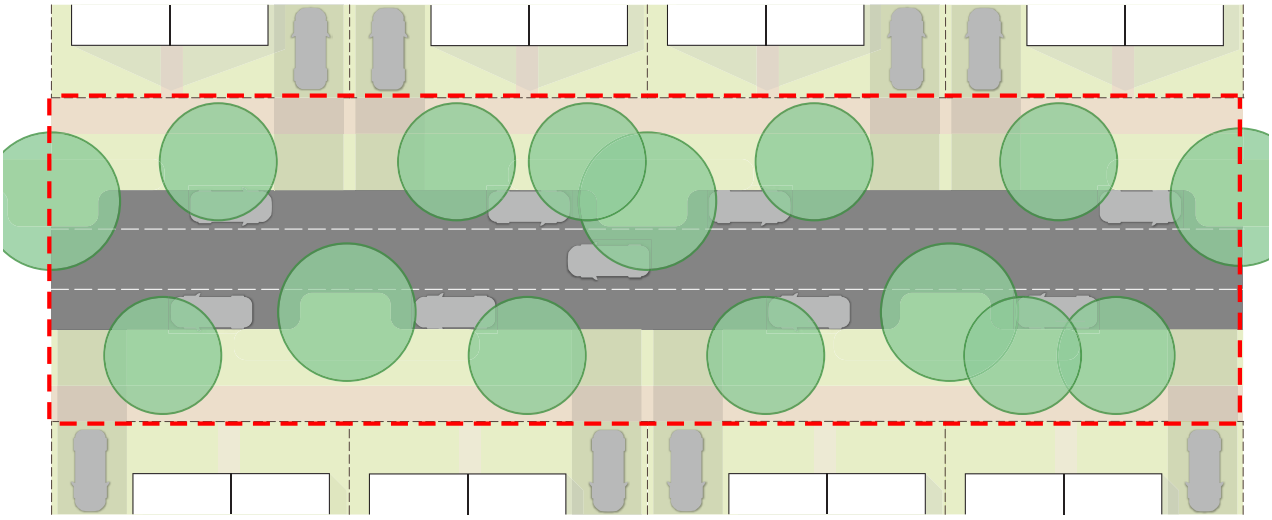
The precinct aims to provide:

- A minimum of 25% of the total tree canopy coverage within road reserves and streets
- A minimum of 50% tree canopy coverage in parking areas

CALCULATING THE STREET TREE CANOPY COVERAGE

Canopy cover required by street type can be calculated as follows:

01. Calculate 'Area A' of the public streetscape from property boundary to property boundary .
02. Calculate the canopy cover of a tree type using the radius of the canopy (πr2) 'Area B'.
03. Multiply the quantity of trees by the respective canopy area of the tree species (Area B) to calculate the total canopy cover proposed by species (c).
04. Add the canopy cover areas together to derive the total canopy cover proposed in the site area (Area D).
05. Divide Area D by Area A and multiply by 100 to arrive at the area of street canopy as a percentage



STREET CANOPY COVER = TREE CANOPY (accumulated canopy area from actual proposal) ÷ STREET AREA (street length x specified street section) X 100

Figure 1: Street canopy tree calculation example

4.4.2 MARSHALL PRECINCT STRUCTURE PLAN TREE SPECIES LIST

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MIN. N/STRIP OR MEDIAN WIDTH	NOT TO BE USED IN NATURESTRIPS	SECONDARY FRONTAGES
ARTERIAL ROAD	Angophora costata	Smooth-barked Apple Myrtle	3 – 4m		x
	Brachychiton populneus	Kurrajong	3 – 4m		x
	Corymbia eximia	Yellow Bloodwood	3 – 4m		x
	Corymbia ficifolia	Flowering Gum	3 – 4m		x
	Corymbia maculata	Spotted Gum	4m>	x	x
	Corymbia citriodora	Lemon-scented Gum	4m>	x	x
	Eucalyptus melliodora	Yellow Box	4m>	x	x
	Eucalyptus polyanthemos	Red Box	4m>	x	x
	Eucalyptus leucoxylon	Yellow Gum	4m>	x	x
	Lophostemon confertus	Queensland Brush Box	3 – 4m		x
	Melia azederach*	White Cedar	3 – 4m		x
	Platanus acerifolia	London Plane Tree	4m>	x	x
	Quercus robur	English Oak	4m>	x	x
	Waterhousea floribunda	Weeping Lilly-Pilly	3 – 4m		x

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MIN. N/ STRIP OR MEDIAN WIDTH	NOT TO BE USED IN NATURESTRIPS	SECONDARY FRONTAGES
COLLECTOR ROAD	Acacia implexa	Lightwood	2 – 3m		x
	Acacia melanoxylon	Blackwood	3 – 4m		x
	Acer platanoides 'Crimson Sentry'	Norway Maple	2 – 3m		✓
	Angophora costata	Smooth-barked Apple Myrtle	3 – 4m		x
	Brachychiton acerifolius	Illawarra Flame Tree	3 – 4m		x
	Brachychiton populneus	Kurrajong	3 – 4m		x
	Callistemon salignus	Pink Tips	3 – 4m		x
	Eucalyptus scoparia	Wallangarra White Gum	3 – 4m		x
	Eucalyptus sideroxylon	Ironbark	4m>		x
	Eucalyptus sideroxylon 'Rosea'	Red Ironbark	4m>		x
	Eucalyptus scoparia	Wallangarra White Gum	3 – 4m		x
	Fraxinus pennsylvanica 'Cimmaron'	Green Ash	4m>		x
	Fraxinus pennsylvanica 'Urbanite'	Green Ash	4m>		x
	Melia azederach*	White Cedar	2 – 3m		x
	Pyrus calleryana 'Capital'	Upright Ornamental Pear	2 – 3m		x
	Pyrus calleryana 'Chanticleer'	Ornamental Pear	3 – 4m		x
	Pyrus calleryana x Pyrus betulaefolia 'Edgewood'	Ornamental Pear	3 – 4m		✓
	Pyrus calleryana 'Southworth Dancer'	Ornamental Pear	2 – 3m		✓
	Quercus palustris	Pin Oak	3 – 4m		x
	Ulmus parvifolia 'Todd'	Upright Chinese Elm	2 – 3m		✓
	Waterhousea floribunda	Weeping Lilly-Pilly	3 – 4m		x

4.4.2 MARSHALL PRECINCT STRUCTURE PLAN TREE SPECIES LIST

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MIN. N/ STRIP OR MEDIAN WIDTH	NOT TO BE USED IN NATURESTRIPS	SECONDARY FRONTAGES
RESIDENTIAL AREAS	Acacia implexa	Lightwood	2 – 3m		x
	Acacia melanoxylon	Blackwood	3 – 4m		x
	Acer platanoides 'Crimson Sentry'	Norway Maple	2 – 3m		✓
	Agonis flexuosa	Willow Myrtle	3 – 4m		x
	Angophora costata	Smooth-barked Apple Myrtle	3 – 4m		x
	Angophora hispida	Dwarf Apple	2 – 3m		x
	Banksia marginata	Silver Banksia	3 – 4m		x
	Brachychiton acerifolius	Illawarra Flame Tree	3 – 4m		x
	Brachychiton populneus	Kurrajong	3 – 4m		x
	Callistemon salignus	Pink Tips	3 – 4m		x
	Callistemon 'Harkness'	Bottlebrush	2 – 3m		✓
	Callistemon viminalis	Weeping Bottlebrush	3 – 4m		x
	Corymbia eximia 'nana'	Dwarf Yellow Bloodwood	3 – 4m		x
	Corymbia citriodora 'Scentuous'*	Dwarf Lemon-scented Gum	2 – 3m		
	Eucalyptus leucoxylon 'Euky Dwarf'	Dwarf Yellow Gum	3 – 4m		x
	Eucalyptus scoparia	Wallangarra White Gum	3 – 4m		x
	Fraxinus angustifolia 'Raywood'	Claret Ash	4m>		x
	Fraxinus griffithii	Flowering Ash	2 – 3m		✓
	Lophostemon confertus	Queensland Brush Box	3 – 4m		x
	Melia azederach*	White Cedar	2 – 3m		x
	Prunus x blireana	Prunus	2 – 3m		✓
	Prunus cerasifera 'Nigra'	Flowering Plum	2 – 3m		✓
	Prunus cerasifera 'Oakville Crimson Spire'	Upright Flowering Plum	2 – 3m		✓
	Pyrus calleryana 'Capital'	Upright Ornamental Pear	2 – 3m		✓
	Pyrus calleryana 'Chanticleer'	Ornamental Pear	2 – 3m		x
	Pyrus calleryana x Pyrus betulaefolia 'Edgewood'	Ornamental Pear	2 – 3m		x
	Pyrus calleryana 'Southworth Dancer'	Ornamental Pear	2 – 3m		✓

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MIN. N/ STRIP OR MEDIAN WIDTH	NOT TO BE USED IN NATURESTRIPS	SECONDARY FRONTAGES
RESIDENTIAL AREAS	Pyrus calleryana 'Southworth Dancer'	Ornamental Pear	2 – 3m		✓
	Pyrus fauriei 'Korean Sun'	Dwarf Ornamental Pear	2 – 3m		✓
	Quercus palustris	Pin Oak	3 – 4m		x
	Ulmus parvifolia 'Todd'	Upright Chinese Elm	2 – 3m		x
	Ulmus glabra 'Lutescens'	Golden Elm	3 – 4m		x
	Waterhousea floribunda	Weeping Lilly-Pilly	3 – 4m		x

4.4.2 MARSHALL PRECINCT STRUCTURE PLAN TREE SPECIES LIST

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MIN. N/STRIP OR MEDIAN WIDTH	NOT TO BE USED IN NATURESTRIPS	SECONDARY FRONTAGES
RESERVES	Acacia implexa	Lightwood			
	Acacia dealbata	Silver Wattle			
	Acacia mearnsii	Black Wattle			
	Acacia melanoxylon	Blackwood			
	Acacia pendula	Weeping Myall			
	Acacia pycnantha	Golden Wattle			
	Allocasuarina littoralis	Black Sheoke			
	Allocasuarina verticillata	Drooping Sheoke			
	Angophora costata	Smooth-barked Apple myrtle			
	Banksia marginata	Silver Banksia			
	Brachychiton acerifolius	Illawarra Flame Tree			
	Brachychiton populneus	Kurrajong			
	Brachychiton rupestris	Bottle Tree			
	Callistemon viminalis	Weeping Bottlebrush			
	Corymbia citriodora	Lemon-scented Gum			
	Corymbia maculata	Spotted Gum			
	Eucalyptus leucoxylon ssp 'Bellerinensis'	Bellerine Yellow Gum			
	Eucalyptus leucoxylon ssp 'Connata'	Melbourne Yellow Gum			
	Eucalyptus melliodora	Yellow Box			
	Eucalyptus camaldulensis	River Red Gum			
	Eucalyptus mannifera	Brittle Gum			
	Eucalyptus ovata	Swamp Gum			
	Eucalyptus polyanthemos	Red Box			
	Eucalyptus viminalis	Manna Gum			
	Melia azederach*	White Cedar			
	Melaleuca lanceolata	Moonah			
	Exocarpos cupressiformis	Cherry Ballart			
	Waterhousea floribunda	Weeping Lilly-Pilly			
	Exotic species subject to approval				

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	PUBLIC SPACE	GARDEN BED	CARPARK
ACTIVITY CENTRE / COMMUNITY CENTRE	Acacia implexa	Lightwood	✓	✓	✓
	Acacia pendula	Weeping Myall	x	✓	x
	Acer freemanii 'Jeffersred'	Red Maple	✓	✓	x
	Acer negundo 'Sensation'	Box Elder	✓	✓	x
	Acer platanoides 'Columnare'	Norway Maple	x	✓	x
	Acer platanoides 'Crimson Sentry'	Norway Maple	✓	✓	x
	Acer platanoides 'Globosum'	Designer Maple	✓	✓	x
	Agonis flexuosa	Willow Myrtle	x	✓	✓
	Agonis flexuosa 'Burgundy'	Dwarf Willow Myrtle	x	✓	x
	Eucalyptus leucoxylon 'Euky Dwarf'	Dwarf Yellow Gum	x	✓	✓
	Eucalyptus torquata	Coral Gum	✓	✓	✓
	Fraxinus excelsior 'Aurea'	Golden Ash	✓	✓	x
	Fraxinus griffithii	Evergreen Ash	✓	✓	x
	Gleditsia triacanthos var. inermis 'Shademaster'	Honey-Locust	✓	✓	✓
	Lagerstroemia indica*	Crepe Myrtle	x	✓	x
	Prunus x blireana	Flowering Plum	x	✓	x
	Waterhousea floribunda	Weeping Lilly-Pilly	x	✓	✓
	Prunus cerasifera 'Oakville Crimson Spire'	Upright Flowering Plum	x	✓	x
	Pyrus betulaefolia 'Southworth Dancer'	Ornamental Pear	✓	✓	x
	Pyrus calleryana x betulaefolia 'Edgewood'	Ornamental Pear	✓	✓	✓
	Pyrus calleryana 'Capital'	Upright Ornamental Pear	✓	✓	✓
	Pyrus calleryana 'Chanticleer'	Upright Ornamental Pear	✓	✓	✓
	Pyrus fauriei 'Korean Sun'	Dwarf Ornamental Pear	x	✓	x
	Quercus palustris	Pin Oak	✓	✓	✓
	Quercus robur 'Fastigiata'	Upright Oak	✓	✓	✓
	Robinia pseudoacacia 'Frisia'	Golden Robinia	✓	✓	✓
	Ulmus glabra 'Lutescens'	Golden Elm	✓	✓	✓
	Ulmus parvifolia 'Todd'	Upright Chinese Elm	✓	✓	✓
	Waterhousea floribunda	Weeping Lilly-Pilly	✓	✓	✓

4.4.2 MARSHALL PRECINCT STRUCTURE PLAN TREE SPECIES LIST

ROAD AREA / TYPE	BOTANICAL NAME	COMMON NAME	MEDIUM DENSITY	HIGH DENSITY
MEDIUM AND HIGHER DENSITY HOUSING	Acacia implexa	Lightwood	✓	x
	Acer platanoides 'Globosum'	Designer Maple	x	✓
	Acer platanoides 'Columnare'	Norway Maple	x	✓
	Acer platanoides 'Crimson Sentry'	Norway Maple	✓	✓
	Angophora hispida	Dwarf Apple Myrtle	✓	x
	Agonis flexuosa 'Burgundy'	Dwarf Willow Myrtle	x	✓
	Callistemon 'Harkness'	Bottlebrush	✓	✓
	Corymbia eximia 'nana'	Dwarf Yellow Bloodwood	✓	x
	Corymbia citriodora 'Scentuous'*	Dwarf Lemon-scented Gum	✓	✓
	Eucalyptus leucoxylon 'Euky Dwarf'	Dwarf Yellow Gum	✓	x
	Fraxinus griffithii	Evergreen Ash	✓	✓
	Gleditsia triacanthos 'Continental'	Honey-Locust	✓	✓
	Prunus blireana	Flowering Plum	x	✓
	Prunus cerasifera 'Nigra'	Flowering Plum	x	✓
	Prunus cerasifera 'Oakville Crimson Spire	Fastigiate Flowering Plum	x	✓
	Pyrus betulaefolia 'Southworth Dancer"	Ornamental Pear	✓	✓
	Pyrus calleryana x betulaefolia 'Edgewood'	Ornamental Pear	✓	✓
	Pyrus calleryana "Chanticleer'	Ornamental Pear	✓	x
	Pyrus calleryana 'Captial'	Ornamental pear	x	✓

*Denotes or similar cultivar

4.4 CANOPY COVER AND TREE SPECIES LIST

KEY POINTS TO CONSIDER:

- Has the image and character objectives of the Precinct Structure Plan been considered, for example:
  - Has the suggested species list been reviewed within the PSP?
  - Have the road cross sections of the PSP been reviewed when compiling the proposed species list?
  - Is there an adjacent development site that interconnects and may have a master plan already approved?
- Are the trees being proposed suitable for local growing conditions?
- Are the proposed species suitable for the space in which they would be planted? (naturestrip width)
- Where will the trees be planted? (standard lots, medium density or high density)
- Does the proposed species consider the type, size and scale of the street?
- Are the trees readily available, what are growers advising?
- Will they enhance the local image and character of the area?
- Has secondary frontages (side boundaries) to homes been considered?
- Will they achieve the canopy coverage target of 25% for each street?
- Has passive solar orientation been considered?
- Are major underground services existing or proposed? (e.g. underground high voltage power and/or underground high pressure gas mains)
- Does the proposed species consider underground distribution services? (i.e. low voltage / low pressure lines / house connections etc.
- Will tree planting trigger authorisation from other referral authorities such as Ausnet, Powercor, Major Roads Victoria, Regional Roads Victoria, Vic Roads or Transport Victoria?
- Areas adjacent to natural type environments such as conservation reserves, is the proposed tree species going to compliment the trees within the adjacent space?
- Naturestrips fronting reserves, have these been considered?
- Is there any potential that the proposed species could become weedy or invasive?
- Does the client have a desire to create themes or precincts within the development that may assist in choosing the correct species palette?
- Will there be an urban / rural interface and how will this be addressed?

5.0

GLOSSARY

5.0 GLOSSARY

A

Annual Exceedance Probability (AEP)
The probability that a given rainfall total accumulated over a given duration will be exceeded in any one year.

Active open space
Land designated for formal outdoor sports. May also include passive recreation opportunities.

Active transport
Relates to physical activity undertaken as a means of transport including walking, cycling and the use of other non-motorised vehicles.

B

Blue green Infrastructure
An urban area designed to incorporate natural systems that provide the ecological and amenity value associated with urban greening, and also provide stormwater management. Often 'green' assets (trees, parks, gardens) and 'blue' assets (WSUD drainage areas and flood storage) are planned separately, however often the same asset can provide multiple services that benefit both 'green' and 'blue' objectives.

C

Canopy tree
A tree with spreading branches with a diameter no less than 3m at maturity.

Carbon Neutral
Emissions are reduced or offset to achieve 'net zero' carbon emissions targets.

Cultural Heritage Management Plan (CHMP)
A written report prepared by a Heritage advisor that assesses the potential impact of a proposed activity on Aboriginal cultural heritage. It then outlines measures to be taken before, during and after an activity to manage and protect Aboriginal cultural heritage in the area. For some activities proposed in some areas, a CHMP is required by law.

Community Facility
Infrastructure provided by government or non-government organisations for accommodating a range of community support services, programs and activities. This includes facilities for education and learning (such as childcare, pre-schools, government and non-government primary and secondary schools, universities, adult learning centres), health and community services (such as maternal and child health, hospitals, aged care, doctors, dentists, family and youth services, specialist health services); community (such as civic centres, libraries, neighbourhood houses), arts and culture (such as art galleries, museums, performance spaces), sport, recreation and leisure (such as public open space, swimming pools and other recreation), justice (such as law courts), voluntary and faith (such as place of workshop) and emergency services (such as police, fire and ambulance stations).

D

Drainage corridor (DC)
An above-ground swale, gully or impression in the landscape that carries stormwater runoff or spring water. Development Contributions Plan (DCP) The Planning and Environment Act 1987 (the Act) enables the DCP system to impose a community infrastructure levy (levy) to fund projects involving the construction of community buildings or facilities. The requirements for development proponents to contribute towards basic/ essential infrastructure required to support development of the precinct.

Design guidelines
Prepared by subdivision permit applicant as a condition of permit to address dwelling/lot level sustainability. May include considerations such as housing footprint, renewable energy generation and storage, passive heating and cooling, urban heat mitigation, ground permeability and vegetation outcomes.

Development Infrastructure Levy (DIL)
Applies to developments and contributes to funding development infrastructure.

E

Ecological Vegetation Classes (EVC)
standard unit for classifying vegetation types in Victoria. EVCs are described through a combination of floristics, lifeforms and ecological characteristics, and through an inferred fidelity to particular environmental attributes.

Encumbered open space
land that is constrained for development purposes.

- Environmental risks such as flooding and landslip
- Infrastructure and easements, such as utilities and drainage
- Retarding basins or wetlands
- Contamination or landfill
- Habitat conservation and native vegetation
- Heritage values
- Waterways and drainage
- Buffer areas
- Steep slopes

These areas may be used for a range of recreation activities (walking trails, sports fields), however is not provided as credit against public open space requirements. Environmentally Sustainable Development (ESD) A set of principles which aim to improve the health and comfort of buildings for occupants whilst at the same time reducing negative impacts on the environment. ESD can provide affordable living outcomes, improved comfort levels and environmental benefits.

N

Native Trees
Trees native to Victoria, or other native trees as listed in Section 4.4.2 Marshall Precinct Structure Plan Tree Species List

Net Developable Area (NDA)
Land within a precinct available for development. This excludes encumbered land, arterial roads, railway corridors, significant heritage, schools and community facilities and public open space. It includes lots, local streets and connector streets. Net Developable Area may be expressed in terms of hectare units (i.e. NDHa).

Net Developable Area – Residential
As for Net Developable Area but excluding commercial/ retail component of town centres and other existing or permitted non-residential land uses (e.g. golf course sites).

P

Permeable Street Network
This refers to the extent to which the urban structure permits, or restricts, the movement of people or vehicles through an area, and the capacity of the area network to carry people or vehicles. Walking and cycling is prioritised to create a direct and safe street network.

U

Unencumbered open space
Land designated for open space without encumbrances such as easements, flooding, waterways/drainage, conservation etc. Only unencumbered open space is recognised as open space development contribution.

Urban Design Framework (UDF)
An Urban Design Framework (UDF) is a strategic planning tool that sets out a design vision for the future development of a place. It includes aims for the future area which may be brought into force by a planning scheme amendment.

W

Works in Kind (WIK)
Either works or land or a combination of both that a developer provides under a WIK agreement in lieu of paying cash. Developers may elect to provide DCP infrastructure items to offset their development contributions liability, this is known as providing 'works in kind'.

6.0

REFERENCES

6.1 ABBREVIATIONS

NVPP
Native Vegetation Precinct Plan

PSP
Precinct Structure Plan

WLRB
Wetland and Retarding Basin

6.2 BACKGROUND STUDIES

Marshall Precinct Structure Plan has been prepared with reference to the following technical reports:

ENVIRONMENT

- *Marshall Native Vegetation Precinct Plan* - Ecology & Heritage Partners - October 2022
- *Marshall Precinct Stormwater Management Strategy* - spiire - December 2022
- *Marshall Precinct Preliminary Environmental Assessment (Contamination and Geotechnical) - Golder Associates* - December 2013, updated August 2023
- *Bushfire Assessment and Development Report* - Terramatrix - May 2022

MOVEMENT

- *Traffic Impact Assessment - Ratio* - March 2023

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