



# 1 HENRY STREET, BELMONT

## Development Plan

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Figure 1. 3D Render - Henry Street Houses (Cover Page)

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Figure 2. Site Plan

# 1. INTRODUCTION

## 1.1 Development Plan Overview

The 1 Henry Street, Belmont Development Plan provides a framework for the redevelopment of 6.22 hectares of the former CSIRO site. The site is elongated on an east-west axis and is formally identified as Lot 1 on Title Plan 531517, Volume 07067 Folio 272.

The location of the land is illustrated in Figure 2 – Site Plan.

This Development Plan has been prepared in accordance with the provisions of DPO35 - *1 Henry Street, Belmont*. Specifically, the details of the indicative concept, building height and housing mix plans within Schedule 35 of the DPO are represented within the master plan.

The Development Plan also reflects the provisions of local planning policies in the Greater Geelong Planning Scheme which apply to the site.

The land represents a significant opportunity for infill residential development at a variety of densities and this Development Plan facilitates the coordinated redevelopment of the land to enable appropriate infill development to occur.

Development of the site will be sympathetic to the existing urban fabric. This will be achieved by maintaining appropriate setbacks, ensuring appropriate levels of engagement to the site's adjoining interfaces and providing areas for sufficient and meaningful public open space and landscaping.

The Development Plan seeks to locate lower density built form in the central portion of the site, with higher densities located closer to Reynolds Road and the Corio-Waurn Ponds Road interface.

The proposed urban form will complement the character of the surrounding residential area by way of built form and scale.

## 1.2 Purpose of Development Plan

The Development Plan implements the objectives and provisions of Schedule 35 to the Development Plan Overlay and the policy statements relevant to the land.

Specifically, the Development Plan seeks to:

- Provide for the use, development and subdivision of the former CSIRO Site.
- Provide opportunities for a range of housing and open space within the precinct.
- Enable future use and development that complements existing residential use within the local area.
- Provide opportunities for sustainable travel and increased use of public transport.
- Provide an integrated network of roads and paths that improves local accessibility through the site for both new and existing residents of the area.
- Encourage high quality architectural, urban design and landscape outcomes that are responsive to the site's features and characteristics, as well as the wider Belmont area.
- Apply Water Sensitive Urban Design (WSUD) treatments and best practice Environmentally Sustainable Development (ESD) initiatives in all aspects of the site's design and development.
- Promote activity throughout the site and create vibrant streets and public spaces.
- Promote permeability in the layout of buildings, open spaces and the design of the vehicle and pedestrian access network.

## 1.3 How To Read This Document

The CSIRO continues to own and manage the Site and is in the process of closing out its operations which will include the demolition of buildings and other site remediation. This document has been written for future interpretation and implementation of the development plan. It has been written on the basis that the demolition and remediation works have taken place, and the land has been transferred.

## 2. PLANNING FRAMEWORK

### 2.1 State Planning Policy Framework

The Development Plan has been produced having regard to the following key State Planning Policies:

- Clause 10 - Operation of the State Planning Policy Framework

*"Integrate relevant environmental, social and economic factors in the interests of net community benefit and sustainable development."*

*"To provide for the fair, orderly, economic and sustainable use, and development of land."*

- Clause 11.01-1 Activity centre network

*"To build up activity centres as a focus for high-quality development, activity and living for the whole community by developing a network of activity centres."*

- Clause 11.02 Urban Growth

*"To ensure a sufficient supply of land is available for residential, commercial, retail, industrial, recreational, institutional and other community uses."*

- Clause 11.03-1 Open space planning

*"To assist creation of a diverse and integrated network of public open space commensurate with the needs of the community."*

- Clause 11.04-2 Housing choice and affordability

*"To provide a diversity of housing in defined locations that cater for different households and are close to jobs and services."*

- Clause 11.04-4 Liveable communities and neighbourhoods

*"To create healthy and active neighbourhoods and maintain Melbourne's identity as one of the world's most liveable cities."*

- Clause 15.01-1 Urban Design

*"To create urban environments that are safe, functional and provide good quality environments with a sense of place and cultural identity."*

- Clause 15.01-2 Urban design principles

*"To achieve architectural and urban design outcomes that contribute positively to local urban character and enhance the public realm while minimising detrimental impact on neighbouring properties."*

- Clause 15.01-3 Neighbourhood and Subdivision Design

*"To ensure the design of subdivisions achieves attractive, liveable, walkable, cyclable, diverse and sustainable neighbourhoods."*

- Clause 15.01-4 Design for safety

*"To improve community safety and encourage neighbourhood design that makes people feel safe."*

- Clause 15.01-5 Cultural identity and neighbourhood character

*"To recognise and protect cultural identity, neighbourhood character and sense of place."*

- Clause 15.02-1 Energy and resource efficiency

*"To encourage land use and development that is consistent with the efficient use of energy and the minimisation of greenhouse gas emissions."*

- Clause 16.01-1 Integrated housing

*"To promote a housing market that meets community needs."*

- Clause 16.01-2 Location of residential development

*"To locate new housing in or close to activity centres and employment corridors and at other strategic redevelopment sites that offer good access to services and transport."*

- Clause 16.01-4 Housing diversity

*"To provide for a range of housing types to meet increasingly diverse needs."*

- Clause 16.01-5 Housing affordability

*"To deliver more affordable housing closer to jobs, transport and services."*

- Clause 17.01-1 Business

*"To encourage development which meet the communities' needs for retail, entertainment, office and other commercial services and provides net community benefit in relation to accessibility, efficient infrastructure use and the aggregation and sustainability of commercial facilities."*

- Clause 18.01-1 Land use and transport planning

*"To create a safe and sustainable transport system by integrating land-use and transport."*

- Clause 18.01-2 Transport system

*"To coordinate development of all transport modes to provide a comprehensive transport system."*

- Clause 18.02-1 Sustainable personal transport

*"To promote the use of sustainable personal transport."*

- Clause 18.02-2 Cycling

*"To integrate planning for cycling with land use and development planning and encourage as alternative modes of travel."*

- Clause 18.02-4 Management of the road system

*"To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure."*

- Clause 18.02-5 Car parking

*"To ensure an adequate supply of car parking that is appropriately designed and located."*

- Clause 19.03-2 Water Supply, Sewerage and Drainage

*"To plan for the provision of water supply, sewerage and drainage services that efficiently and effectively meet State and community needs and protect the environment."*

- Clause 19.03-3 Stormwater

*"To reduce the impact of stormwater on bays and catchments."*

## 2.2 Local Planning Policy Framework

The Development Plan has been produced having regard to the following key Local Planning Policies:

- Clause 21.02 City of Greater Geelong Sustainable Growth Framework

*"Set clear settlement boundaries and consolidate development within those boundaries in a managed way."*

*"Encourage diversity in all communities."*

*"Design healthy, walkable neighbourhoods."*

*"Strive for engagement and inclusion in all communities."*

*"Protect, restore and enhance Geelong's biodiversity and natural systems."*

- Clause 21.04 Municipal Framework Plan

This Clause identifies key urban features in Greater Geelong, including the existing urban area of Belmont which is recognised as a sub-regional centre within the City of Greater Geelong. The site is also within 1.8km of the Grovedale/Waurn Ponds shopping centre, another sub-regional centre within the locality.

- Clause 21.06-1 Settlement and Housing – Key issues and influences

*"There is a need to provide for a range of housing typologies including unit, townhouse, attached, multilevel and apartment dwellings"*

*"There is a need to maintain competition and diversity in the housing market"*

*"New infill development should be directed to well serviced areas and should be of a high design quality and respond to the locality"*

*"All development should contribute positively to the quality of the urban environment so that it may be enjoyed and respected by the existing and future community."*

- Clause 21.06-2 Urban Growth

*"To limit urban sprawl by directing urban growth to designated urban growth areas."*

*"To improve housing affordability through the maintenance of appropriate urban land supplies, the promotion of competition in the housing market and the development of a diverse range of well located housing stock."*

- Clause 21.06-3 Urban Consolidation

*"To provide for the consolidation of existing urban areas in a managed way."*

*"To encourage an appropriate range of development densities."*

*"To improve accessibility to urban services."*

- Clause 21.06-4 Neighbourhood character

*"To manage the impact of urban change on existing neighbourhoods."*

*"To ensure that new development responds to the existing neighbourhood character."*

*"To protect areas with a significant garden character."*

*"To protect areas with views to significant landscape features."*

- Clause 21.06-5 Heritage and identity

*"To ensure that urban development enhances Geelong's sense of place and identity."*

- Clause 22.01 Discretionary Uses in Residential Areas

*"To provide for non-residential and service uses which are compatible with the residential character, scale and amenity of neighbourhoods."*

*"To provide for non-residential uses which serve the needs of the local community."*

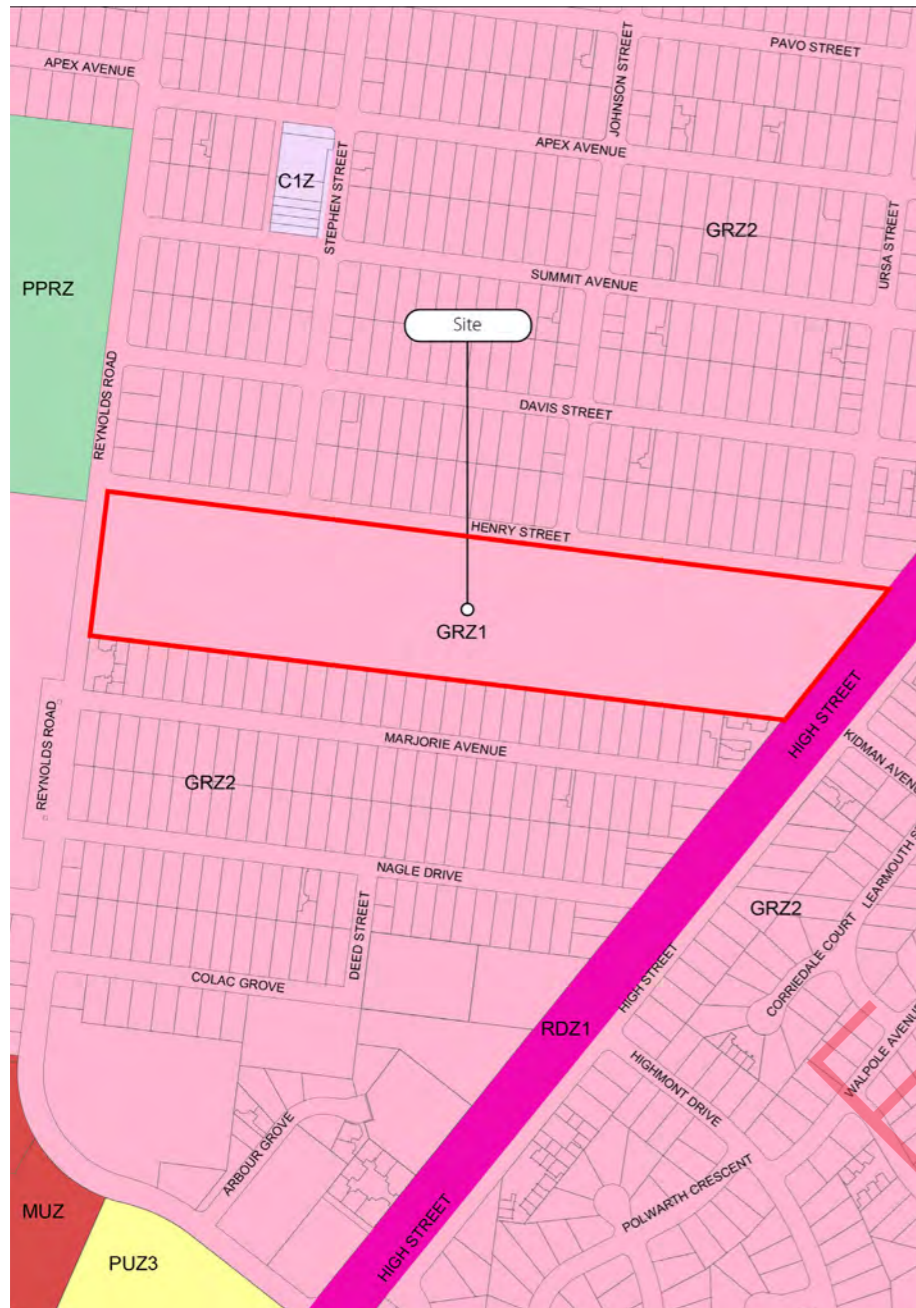


Figure 3. Zone Plan



Figure 4. Overlay Plan - Development Plan Overlay



Figure 5. Overlay Plan - Environmental Audit Overlay

## 2.3 Zone

### 2.3.1 Clause 32.04 - General Residential Zone

The site is subject to the General Residential Zone - Schedule 1.

The General Residential Zone (GRZ) affects the whole site. The purpose of the General Residential Zone is:

- *“To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *To encourage development that respects the neighbourhood character of the area.*
- *To implement neighbourhood character policy and adopted neighbourhood character guidelines.*
- *To provide a diversity of housing types and moderate housing growth in locations offering good access to services and transport.*
- *To allow educational, recreational, religious, community and a limited range of other nonresidential uses to serve local community needs in appropriate locations.”*

Schedule 1 to the GRZ does not specify any variations to the requirements of Clause 54 and 55.

The Development Plan will assist in the implementation of the objectives of this zone by encouraging residential development that respects the neighbourhood character of the area and provides a diversity of housing types and moderate housing growth.

Refer to **Figure 3 - Zone Plan.**

## 2.4 Overlays

The site is subject to two (2) overlays. These are:

- Development Plan Overlay - Schedule 35 (DPO35); and
- Environmental Audit Overlay (EAO).

### 2.4.1 Clause 43.04 - Development Plan Overlay 35

The purpose of this Clause is:

- *“To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.*
- *To identify areas which require the form and conditions of future use and development to be shown on a development plan before a permit can be granted to use or develop the land.*
- *To exempt an application from notice and review if it is generally in accordance with a development plan.”*

This Development Plan implements the requirements of Schedule 35 to the Development Plan Overlay.

Refer to **Figure 4 - Overlay Plan - Development Plan Overlay**

### 2.4.2 Clause 45.03 – Environmental Audit Overlay

The purpose of this Clause is to ensure that potentially contaminated land is suitable for a use which could be adversely affected by any contamination.

The EAO requires that before a sensitive use (residential use, child care centre, preschool centre or primary school) commences or before the construction or carrying out of buildings and works in association with a sensitive use commences, either:

- *“A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970; or*
- *An environmental auditor must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.”*

In accordance with the intent and requirements of this clause, the site will be fully remediated prior to any sensitive uses commencing on site, including construction or carrying out of works for a sensitive use.

Refer to **Figure 5 – EAO Plan.**

## 2.5 Particular Provisions

### 2.5.1 Clause 52.01 – Public open space contribution and subdivision

This clause requires that a proponent seeking to subdivide land must make a contribution to the Council for public open space as required under Section 18 of the Subdivision Act 1988.

More specifically, clause 52.01 requires that *“A person who proposes to subdivide land must make a contribution to the council for public open space in an amount specified in the schedule to this clause (being a percentage of the land intended to be used for residential, industrial or commercial purposes, or a percentage of the site value of such land, or a combination of both).”*

The schedule to clause 52.01 requires a 10% contribution for public open space for a subdivision of 10 or more lots on land zoned for residential purposes. This can be provided as a combination of land and cash-in-lieu contributions.

### 2.5.2 Clause 52.06 – Car parking

The purpose of Clause 52.06 is:

*“To ensure that car parking is provided in accordance with the State Planning Policy Framework and Local Planning Policy Framework.*

*To ensure the provision of an appropriate number of car parking spaces having regard to the demand likely to be generated, the activities on the land and the nature of the locality.*

*To support sustainable transport alternatives to the motor car.*

*To promote the efficient use of car parking spaces through the consolidation of car parking facilities.*

*To ensure that car parking does not adversely affect the amenity of the locality.*

*To ensure that the design and location of car parking is of a high standard, creates a safe environment for users and enables easy and efficient use.”*

### 2.5.3 Clause 52.34 – Bicycle Facilities

The purpose of this clause is to encourage bicycles as a mode of transportation as well as ensuring that there are safe and accessible storage facilities provided as part of any new development.

Bicycle parking spaces should be provided in accordance with Table 1 at Clause 52.34-3 and as part of any public open space areas (subject to Council approval).

### 2.5.4 Clause 52.36 – Integrated Public Transport Planning

The objective of this clause is to ensure that development supports public transport usage, can easily access a safe, attractive network and does not adversely affect the efficiency of the existing network.

### 2.5.5 Clause 54 - One dwelling on a lot and residential buildings

Clause 54 applies when developing a single dwelling on a lot less than 300 sqm.

The purpose of Clause 54 is as follows:

*“To achieve residential development that respects the existing neighbourhood character or which contributes to a preferred neighbourhood character.*

*To encourage residential development that provides reasonable standards of amenity for existing and new residents.*

*To encourage residential development that is responsive to the site and the neighbourhood.”*

### 2.5.6 Clause 55 - Two or more lots on a lot and residential buildings

Clause 55 applies to applications seeking to construct a dwelling if there is at least one dwelling existing on the lot, construct two or more dwellings on a lot, extend a dwelling if there are two or more dwellings on the lot, construct or extend a dwelling on common property, or to construct or extend a residential building.

The purpose of Clause 55 is as follows:

*“To achieve residential development that respects the existing neighbourhood character or which contributes to a preferred neighbourhood character.*

*To encourage residential development that provides reasonable standards of amenity for existing and new residents.*

*To encourage residential development that is responsive to the site and the neighbourhood.”*

### 2.5.7 Clause 56 – Subdivision of Land

Clause 56 applies to those applications seeking to subdivide land in the General Residential Zone (amongst others) that provides for residential development.

The purpose of Clause 56 is:

*“To create liveable and sustainable neighbourhoods and urban places with character and identity.*

*“To achieve residential subdivision outcomes that appropriately respond to the site and its context for:*

- Metropolitan Melbourne growth areas.
- infill sites within established residential areas
- Regional cities and towns”

*“To ensure residential subdivision design appropriately provides for:*

- Policy implementation.
- Liveable and sustainable communities.
- Residential lot design
- Urban landscape.
- Access and mobility management.
- Integrated water management.
- Site management.
- Utilities.”

## 2.6 Other Planning Considerations

### 2.6.1 Housing Diversity Strategy (City of Greater Geelong, September 2008)

The housing diversity strategy aims to:

- Provide for the development of a range of housing types and densities in the City of Greater Geelong, to meet the City's existing and future housing needs;
- Provide certainty to the existing and future community with regards to where different housing types and densities will be generally supported or discouraged by Council; and
- Provide for the development of a sustainable overall urban structure in the City of Greater Geelong.

The strategy recognises a range of housing types that generally fall into the following categories:

- **Conventional housing** Single detached dwellings on lots generally ranging between 500 and 1,000 square metres (sqm). The development of an area for conventional housing generally results in a gross residential density of 10 – 15 dwellings per hectare
- **Medium density housing** The provision of two or more detached or attached dwellings, townhouses or apartments on a site below four stories. The development of an area for medium density housing generally results in a gross residential density of 20 – 40 dwellings per hectare.
- **Higher Density housing** Attached townhouses or apartments, usually more than 3 storeys in height. The development of an area for high density housing generally results in a gross residential density of more than 40 dwellings per hectare.

The strategy highlights the growing population of Greater Geelong and the need to accommodate this growth. The City's aging population is highlighted as a key group that need to be accommodated now and in the future.

There is an emphasis on reducing urban sprawl by encouraging development in existing urban areas, particularly areas that are well serviced by infrastructure and facilities. Ultimately this leads to less pollution, less environmental degradation, better accessibility to services and healthier communities.

Future planning applications should have regard to the objectives of this strategy.

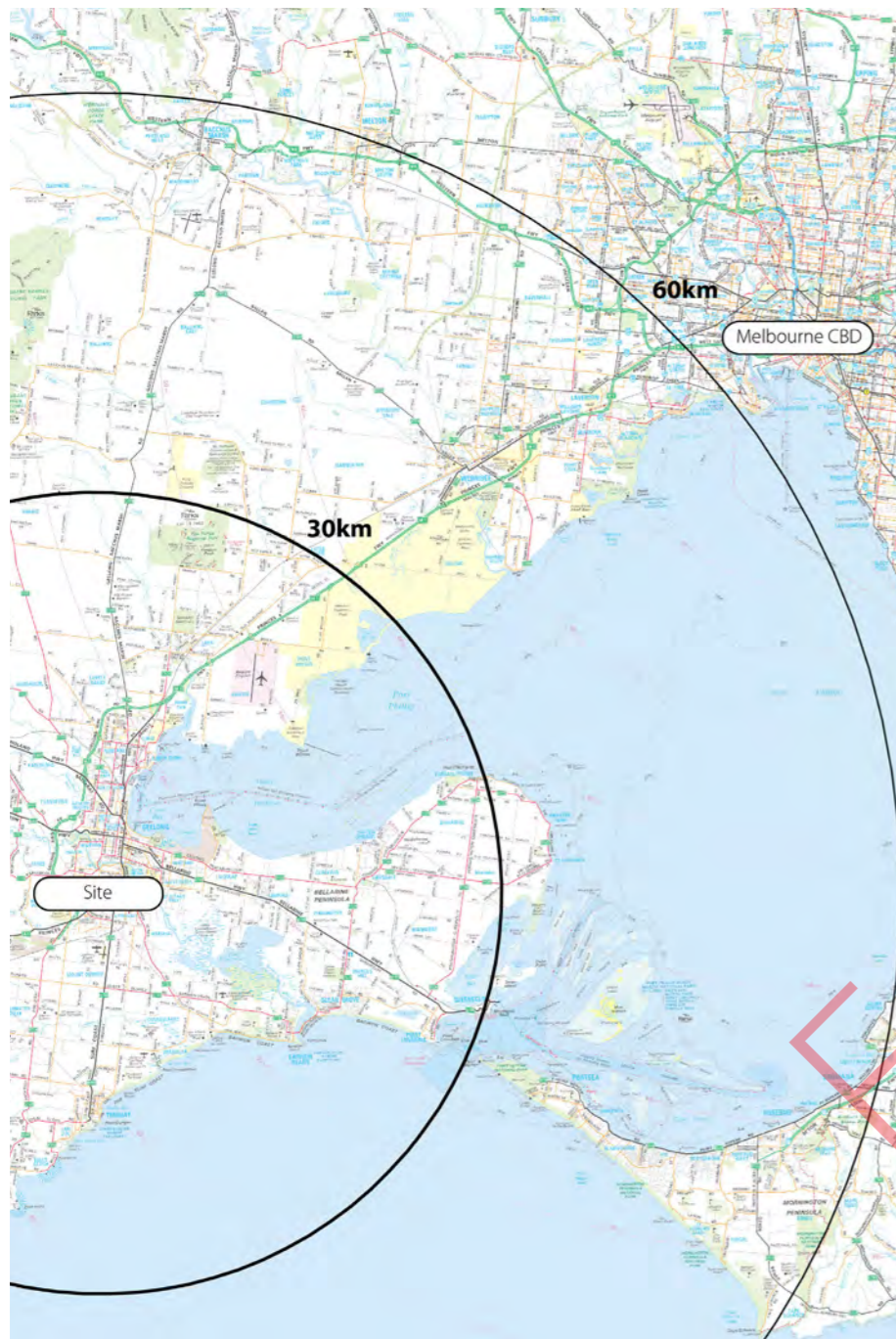


Figure 6. Regional Context Plan

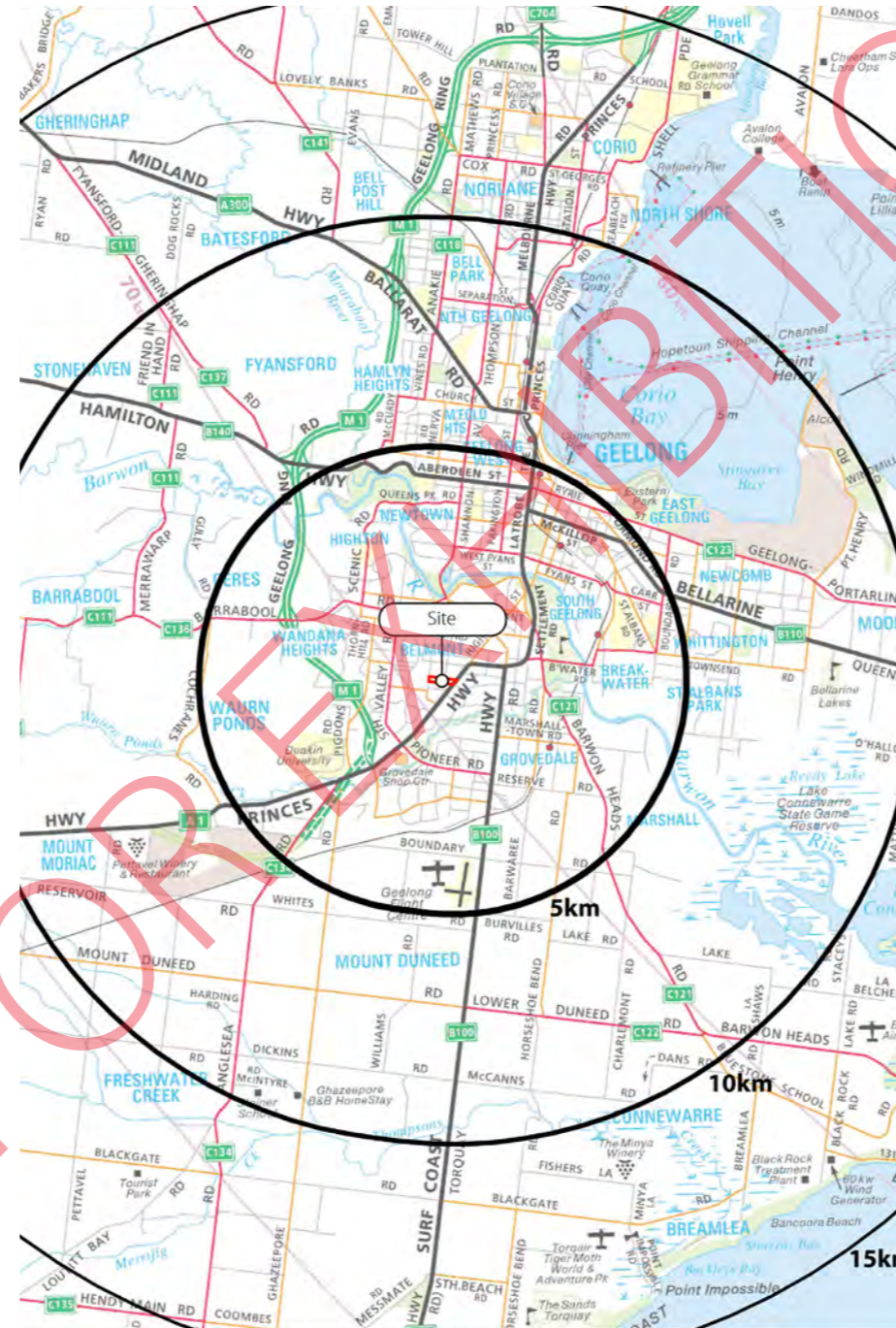


Figure 7. Greater Geelong Context Plan

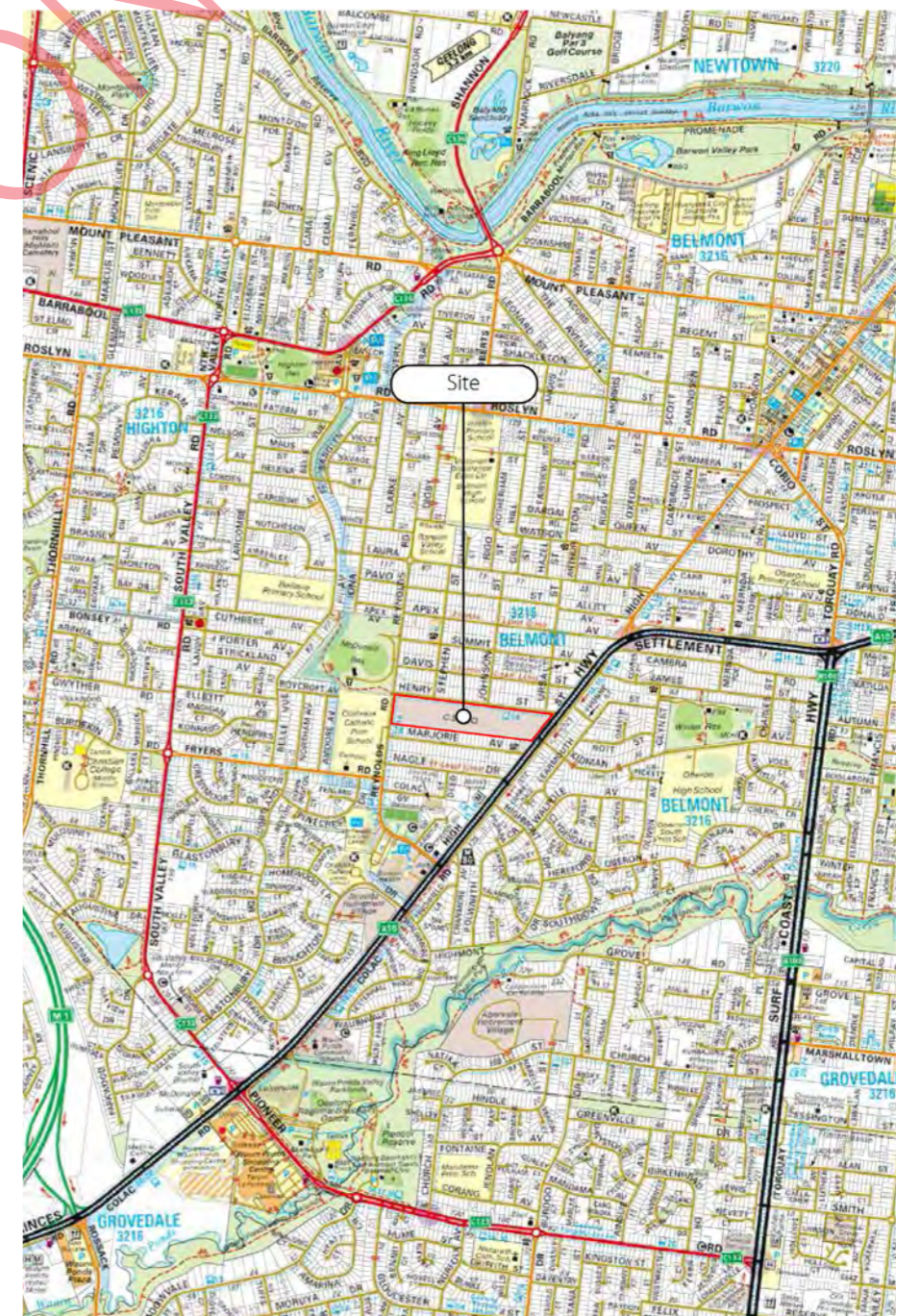


Figure 8. Locality Plan

### 3. SITE ANALYSIS

#### 3.1 Site Location

The site is located in Belmont, within the City of Greater Geelong.

The Site is approximately:

- 4km south-west of the City Centre of Geelong.
- 2.5km from Marshall Station on the Warrnambool - Geelong train line.
- 3km from the Deakin University Waurnd Ponds Campus.
- 1.8km from Waurnd Ponds Shopping Centre
- 2.2km from Epworth Geelong facility

The Site is well serviced by arterial roads with direct frontage to Corio-Waurnd Ponds Road and Reynolds Road to the west. The Site abuts bus route No. 1 (along Corio-Waurnd Ponds Road) and is in within easy walking distance of No. 40, 41 and 42 bus routes.

The Site is largely surrounded by conventional density residential uses north, south and west. The residential built form in the surrounding area is primarily characterised by one and two storey detached dwellings on lots averaging approximately 650sqm. Many of the surrounding local streets feature mature trees with the majority of dwellings set back from primary road frontages.

The western boundary of the site is opposite to the Clairvaux Catholic School and McDonald Reserve, providing a substantial area of open space for residents within the vicinity of the area.

The site has good pedestrian connection to surrounding public open space including the Barwon River Parklands and the Waurnd Ponds Valley Parkland as well as the Belmont Subregional Centre (to the north).

Belmont is identified as a 'Subregional Centre' which refers to the Commercial 1 Zoned land along High Street (between Roslyn Street and Mt Pleasant Road) and provides extensive employment opportunities as well as higher order retail services including a 24-Hour Kmart and the Belmont Village retail facilities.

Refer to **Figures 6-9 - Context and Locality Plans.**



Figure 9. Site Context Plan



### 3.2 Site Features

The Site has accommodated the CSIRO wool and fabric textile and manufacturing activities since the 1950s. This use has since ceased.

There is one existing crossover onto Corio-Waurn Ponds Road (to the east), six existing crossovers along Henry Street (to the north) and no existing crossovers to Reynolds Road (to the west). A bus bay is located along Henry Street (opposite the Johnston Street intersection), and is approximately 70m in length.

There is a formal pedestrian footpath along Reynolds Road and Corio-Waurn Ponds Road, with only small segments of footpath along Henry Street.

The Site exhibits a large number of trees of varying scale and size, predominantly confined to the perimeter of the Site or in linear planted zones in the western half of the site.

The Site is affected by a gently sloping topography, with a fall of approximately 12 metres from the boundary at Reynolds Road to the Corio-Waurn Ponds Road boundary. The Site is not subject to any significant views.

The Site is not affected by any easements.

There are a number of existing trees on the Site, which will be removed as part of the Site remediation.

Refer to **Figure 10 - Existing Site Features Plan**.

Figure 10. Existing Site Features Plan

### 3.3 Site Opportunities

#### 3.3.1 An urban renewal opportunity

The former CSIRO Site is recognised as a significant redevelopment site for the City of Greater Geelong, due to its size, location, and opportunities for re-development.

The Site is well located in proximity to local services and amenities, including educational and recreational facilities.

The Site presents a unique opportunity for Medium Density Housing and the provision of an area of public open space.

The Site will stimulate social connections between the Site and surrounding areas. The proposed public realm network will be fundamental to achieving this.

In a broad sense, redevelopment of this Site will assist in meeting the density and sustainability targets of the City of Greater Geelong.

Refer to **Figure 11 - Opportunities Plan**.

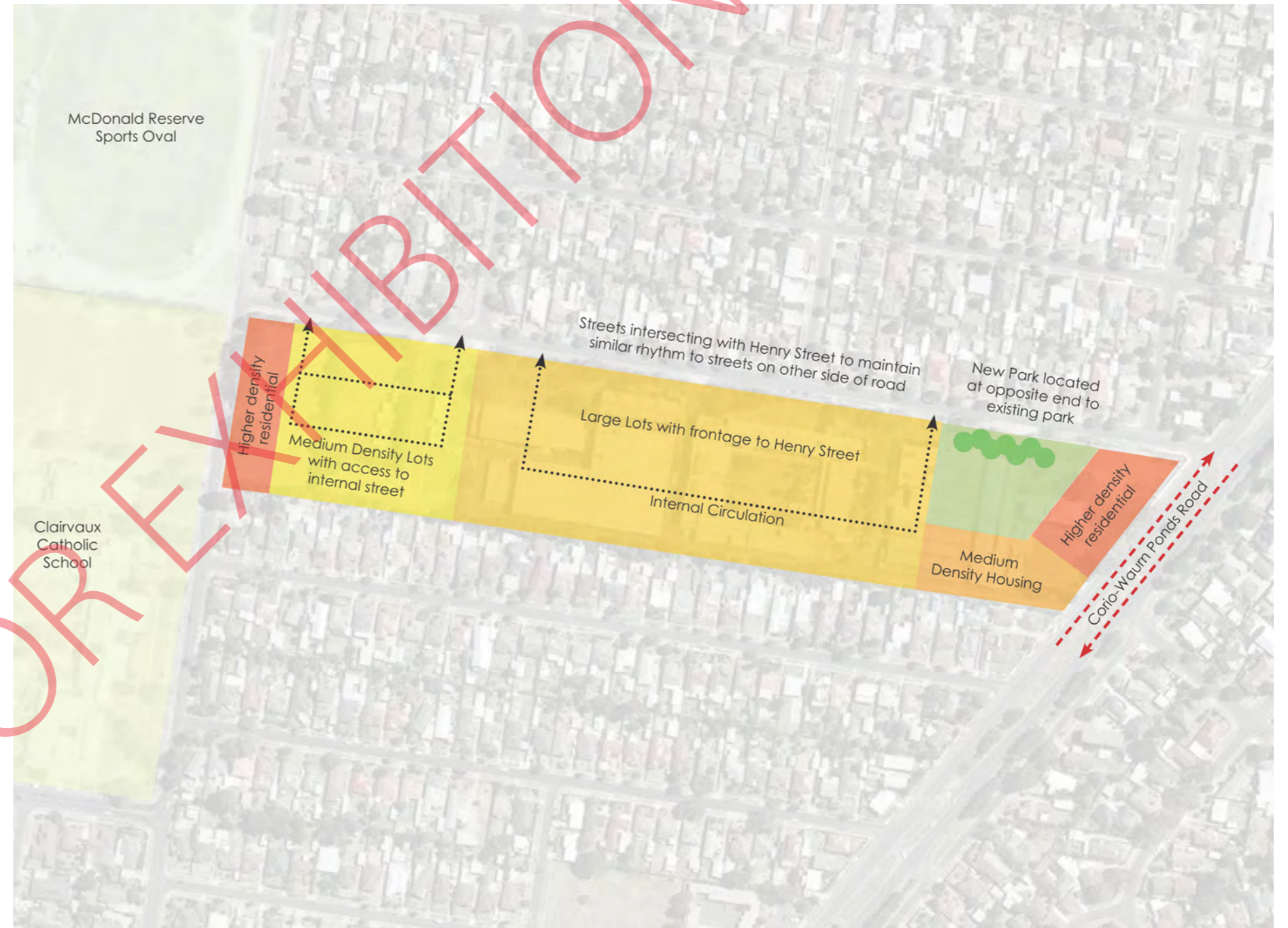


Figure 11. Opportunities Plan

## 4. THE MASTER PLAN

### 4.1 Policy context

In accordance with the provisions of Schedule 35 to the Development Plan Overlay, the 1 Henry Street Development Plan includes the following vision and design and built form principles:

### 4.2 Vision

*"1 Henry Street will be a diverse residential community which is anchored around an area of open space and landscaped streetscapes. A diversity of housing choice represents a variety of high quality options for residents who enjoy good access to nearby community facilities."*

This vision is tied together by 'tried and tested' urban design principles of walkability, health, mixed use, social interaction, connectivity, character and housing diversity resulting in a best practice, model neighbourhood for this strategic infill site.

These principles support the objectives and principles of the Development Plan Overlay Schedule 35 - 1 Henry Street, Belmont.

The Development Plan proposes a vibrant neighbourhood with a diverse range of activities, housing types and recreational opportunities for future and nearby existing residents. Key attributes of the proposal include:

*"Rehabilitation and regeneration of a local undeveloped site.*

*Diverse mix of housing to cater for a variety of household types.*

*Usable high value open spaces for the whole community.*

*Bicycle and pedestrian prioritisation that will encourage healthy lifestyles.*

*Sensitive interfaces and transitions with compatible development forms and scales.*

*Potential for complementary ground floor commercial facilities (such as a food and drink premises, convenience retail etc.) located along Corio-Waurn Ponds Road to service local residents.*

*New homes comprising a mix of dwelling types, including apartments, terrace housing and detached and semi-detached homes."*

Each of these features is described in the following section and visually represented on '1 Henry Street, Belmont Development Plan' - Figure 12.



Figure 12. Indicative future development of site

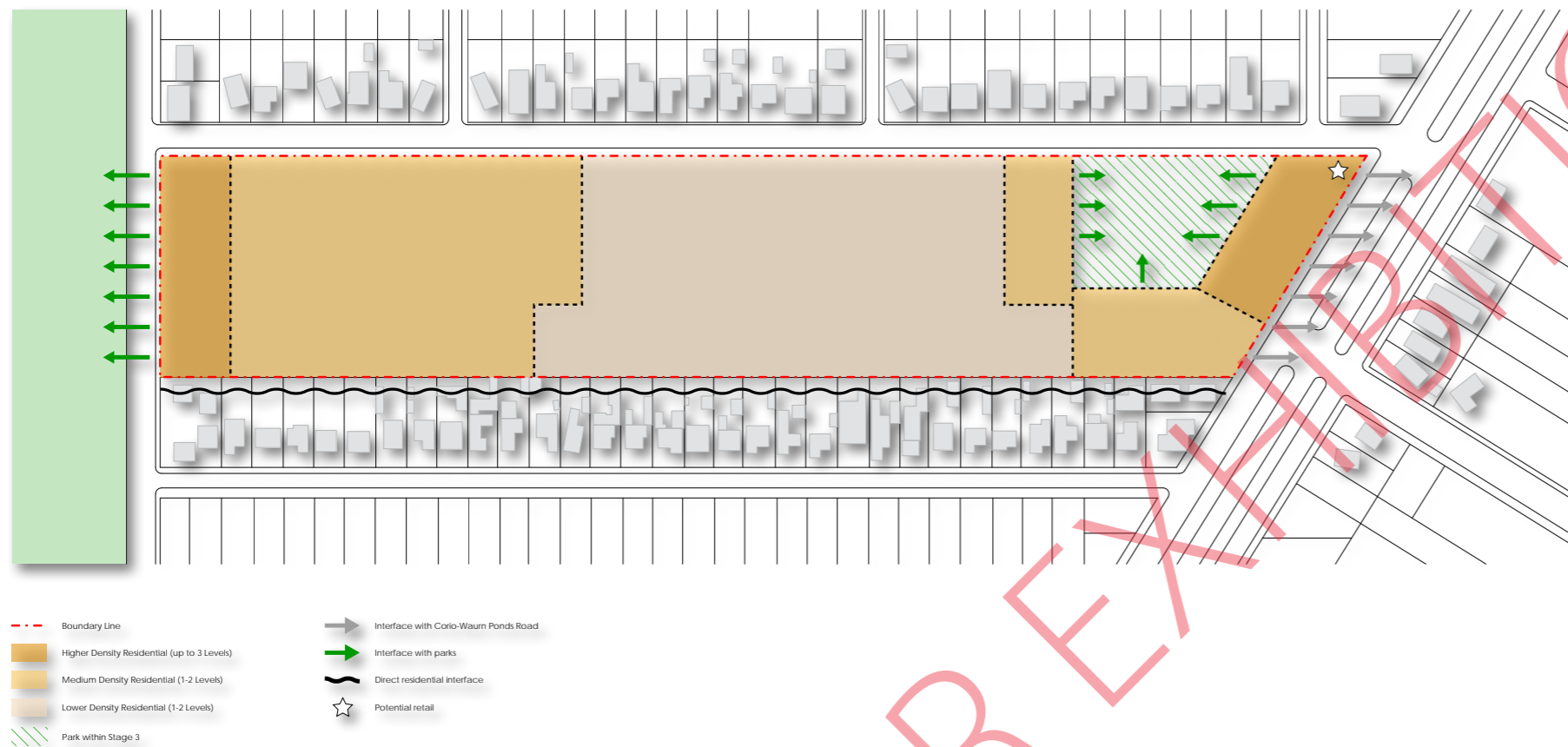


Figure 13. Development Plan Housing Density Diagram

## 4.3 Key Features

### 4.3.1 Land Use

The proposed land use includes a mixture of residential, commercial, community and recreational open space.

#### Residential

The residential areas contain a mix of densities, including detached dwellings (lower density), townhouses (medium density) and apartment style living (higher density) up to 3 storeys. Third storey elements will be recessed to reduce the dominance of buildings from adjoining properties and the streetscape.

The residential uses will be in accordance with the General Residential Zone - Schedule 1, and may include other integrated and complementary uses such as aged care or child care, which may be granted a planning permit in accordance with the provisions of the General Residential Zone.

#### Public Open Space

Local open space for passive and active outdoor activities is proposed within Stage 3 and will consist of an area of approximately 0.5 hectares. The open space will also provide formal pedestrian access and address to Stage 3 dwellings abutting the park.

Where practical, existing high value canopy trees should be incorporated into the open space reserve.

#### Commercial

The ground floor at the corner of Corio-Waurn Ponds Road and Henry Street has the ability to accommodate complementary retail and/or medical centre uses (subject to future approval). Vehicle access/egress would be from Corio-Waurn Ponds Road only.

### 4.3.2 Movement Systems and Access

#### Pedestrian and Cycling

A central local street with generous landscape planting will provide a more traditional streetscape feel amongst the lower density residential areas, and provide for safe pedestrian, cycling and vehicle movements. Pedestrian connections will also be facilitated by way of a continuous east-west pedestrian link through the site.

## Road Network

The internal road network has been carefully considered to promote pedestrian travel. Sensible traffic movement and speeds into and within the site are also proposed. This ensures safe and appropriate vehicle movement is achieved within and surrounding the neighbourhood.

## Car Parking

A combination of off-street car parking, front and rear-loaded garages/ carports, basement car parking and/or podium car parking will be integrated into the development for residents, workers and visitors to the neighbourhood. The site will accommodate a sufficient number of car parking spaces (in accordance with Clause 52.06) to minimise any adverse off-street parking and traffic management issues for the surrounding neighbourhood.

### 4.3.3 Public Open Space and Public Realm

The development includes an area of 0.5 hectares (approximately) of public open space for use by the community, to be delivered (i.e land and improvements) as part of Stage 3 or no later than two (2) years from the date of the permit.

This area of local open space provides for a range of activities for all residents and augments the existing open space network for the existing community.

The public open space will also provide formal pedestrian access and address to Stage 3 dwellings abutting the park.

The Local open spaces features a range of features (consistent with Council's 'Sustainable Communities Infrastructure Development Guidelines, June 2016) to define local character and provide opportunities for a range of activities. Key features include:

- Pathways;
- Natural shade;
- Park furniture, including seating and bins;
- Playspace and kick-about space;
- A hierarchy of soft landscaping including canopy trees which will offer shade and lawn.

Together these elements create a significant feature within the site to be utilised by existing and future residents in the area.

## 4.4 Design Principles

The Development Plan is informed by several key design principles:

### 4.4.1 Amenity and Connectivity

The site has been designed to deliver a high-amenity, connected space, which will be achieved through a well considered road network and overall layout.

Substantial investments in quality streetscaping and open space will make this a high quality, high amenity precinct.

### 4.4.2 Edges and Transition

This key principle recognises that the proposed development must sensitively integrate into an existing urban environment. A number of key edge treatments help enable this integration and provide an appropriate transition between new and existing development; including:

- New dwellings that back onto established residential allotments have adequate separation between new buildings and existing backyards
- Dwellings along Henry Street will be of a traditional larger housing character, with appropriate design, scale and setbacks to reflect and enhance the existing streetscape
- Gateway elements will define the entry points to the site with appropriate architecture and landscaping treatments
- Design principles which inform the treatment of edges and transitional spaces are included in the Residential Design Guidelines, found in Section 6 of this report

### 4.4.3 Streets, Connections and Car Parking

The proposed movement network for all stages of development will provide a highly permeable and interconnected neighbourhood that encourages slow moving vehicle traffic, walking and cycling.

The key features of this network are:

- A central residential spine incorporating street trees, footpaths and on street parking (stage 1).
- A private road network for stages 2 and 3 which will include a series of dedicated, high-quality pedestrian paths.

- A minimum of one off street car park provided for each dwelling.
- Visitor car parking in accordance with the rates at Table 1 of Clause 52.06

Additional street, connection and parking design principles are included in the Residential Design Guidelines, contained in Section 6 of this report.

### 4.4.4 Housing Diversity

The careful delivery of a variety of housing types will ensure this neighbourhood is sensitive to its surroundings, while encouraging a diverse population, acknowledging changing demographics in the Greater Geelong context and responding to the existing demand for housing in the Belmont area.

Housing types will include large detached houses, semi-detached dwellings, townhouses, and apartments.

Each housing type will be carefully located to acknowledge existing land uses, and to assist in framing streets and areas of public open space.

This will provide for a legible transition in density and dwelling types with high quality architecture and an exceptional level of amenity for future residents.

Precedent images for each density of housing is provided over the following pages. **Refer to Figures 14-16.**



Figure 14. Lower density precedent images



Figure 15. Medium density precedent images



Figure 16. Higher Density Precedent Images

## 5. INDICATIVE STAGING

### 5.1 Staging Overview

The implementation of 1 Henry Street, Belmont will take several years of careful and considered staging.

**Stage 1** - The central portion of the Site will be developed first and will consist of the lower and medium density residential uses.

**Stage 2** - The second stage to be developed is the western edge of the Site in the form of 2 and 3 storey attached and detached townhouses adjacent to Reynolds Road and will be serviced by a private road network.

Refer to Figures 11 and 13.

**Stage 3** - The final stage involves the interface development along Corio-Waurn Ponds Road and the delivery of the public open space located at the eastern edge of this stage. The public open space will comprise an area of 0.5 hectares (approximately).

A mix of medium and higher density of development is expected to be located in this stage. This will most likely consist of a 2-3 storey townhouses or apartment forms. Further to this, there is also potential for a future ground floor retail and/or medical centre uses.

Refer to Figure 17 - Indicative Staging Plan.

### 5.2 Timing

Figure 17 details the proposed timing of each stage. This timing and staging should be considered as indicative as development staging for a project of this nature, which is implemented over an extended time frame, is subject to prevailing market conditions and may therefore require adjustment in the future.

Infrastructure including footpaths, roads, reinstatement of kerbs etc will be provided in sequence with the staging of development (eg. footpaths abutting each stage will be upgraded accordingly on a stage by stage basis).

### 5.3 Construction Management Plan

Prior to the commencement of any works, a detailed Construction Management Plan will be prepared and approved by Council and relevant authorities. All works will be constructed in a safe and sustainable manner and in accordance with any planning and building permit conditions.

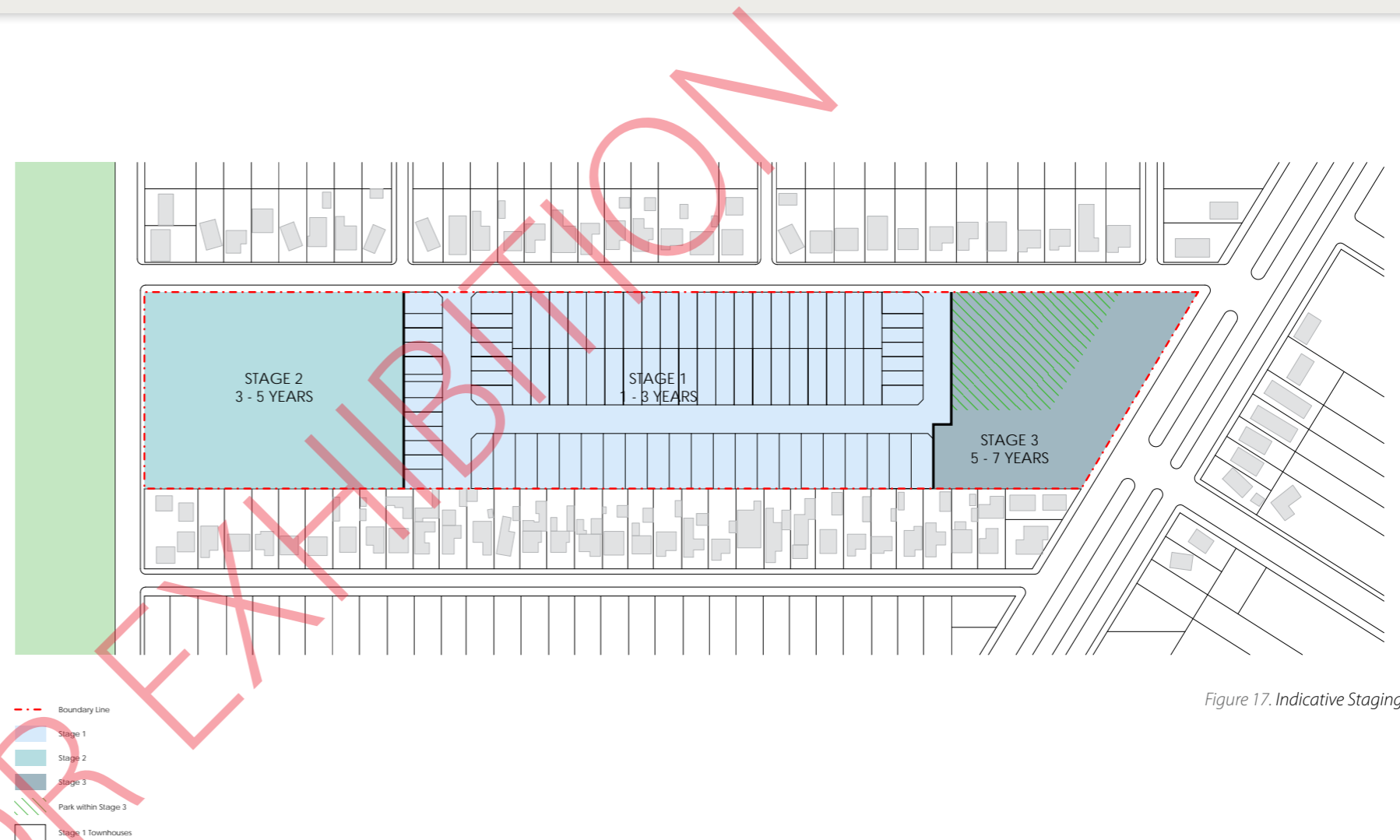


Figure 17. Indicative Staging Plan

LAND BUDGET	
TOTAL SITE AREA	62070
TOTAL NET DEVELOPABLE AREA	62070
OPEN SPACE CONTRIBUTION	10%
PARK AREA	8%
TREE RESERVES	0.8%
CASH CONTRIBUTION	1.2%

Note: The balance cash component will be paid as part of Stage 1

Figure 18. Indicative Land Budget

## 6. RESIDENTIAL DESIGN GUIDELINES

### 6.1 General Principles Policy Context

The proposed building heights and setbacks, architectural form and public realm treatments aim to deliver a vibrant and connected local neighbourhood.

Buildings will be designed to achieve a scale, mass and height which appropriately respond to the existing built form and character of adjoining streets.

The development integrates heights of between 1 and 3 storeys to ensure amenity provisions regarding solar access and overlooking are achieved.

### 6.2 Residential Design Guidelines

These Design Guidelines provide guidance on the siting and built form requirements for all housing types across the Development Plan area.

The general objectives describe the outcome to be achieved across all residential types.

The general design guidelines provide direction as to how residential buildings, including apartments, terraces, townhouses, semi-detached and detached dwellings should be designed to achieve high quality amenity for residents and adjoining uses and meet the general objectives. The design guidelines focus on the following key areas:

- Building Design;
- Landscaping and Private Open Space;
- Building Access;
- Vehicle Access;
- Site Services;
- ESD Principles; and
- Internal Amenity.

### 6.2.1 How to use these Residential Design Guidelines

These design guidelines will assist the preparation of more detailed siting and design guidelines that the developer may wish to impose on future allotments. Such guidelines will be developer-driven and Council will not play a role in the regulation or enforcement of such guidelines.

Where future allotments are burdened with such guidelines, a sunset date should be included, after which point the guidelines would cease to have effect.

### 6.3 General Objectives

#### 6.3.1 Building Siting and Design

Ensure a high standard of urban design, architecture, and building materials that maximise opportunities for passive design (daylighting, natural ventilation and solar energy), good amenity and facilities for residents and respects the amenity and development potential of adjoining sites.

Ensure a range of dwelling types from one-bedroom apartments to detached homes, to accommodate a range of household types and income levels, including those on lower incomes.

Ensure appropriate dwelling types include the capacity for flexible layouts and internal rearrangement to accommodate changes in household structure and people with additional needs. For example, the potential inclusion of aged care and retirement living accommodation.

#### 6.3.2 Character

Ensure a new strongly unified character which is respectful of the existing character of Belmont.

Ensure development provides for sensitive interfaces and appropriate transition to existing developments.

#### 6.3.3 Landscaping and Private Open Spaces

Encourage a high standard of landscape architecture and space for landscaped tree planting.

Landscaping should be integrated across the overall site, respond to the surrounding context and enhance the public realm and private open space areas.

All dwellings should be able to easily access functional private or communal open space.

#### 6.3.4 Building Access

Entrances to building should be clear, easy to access and provide a comfortable transition space between the public and private realm.

#### 6.3.5 Vehicle Access and Car Parking

Vehicle access areas are to be designed to avoid conflict with pedestrian spaces and reduce their visual dominance onto street frontages. Sufficient and appropriately located car parking will be provided for all residents and anticipated visitor numbers.

#### 6.3.6 Site Services

Buildings must be designed to accommodate easy to access and functional site services, including storage areas and waste management facilities.

#### 6.3.7 ESD

Ensure that building designs, site services and waste management incorporate ESD measures.

#### 6.3.8 Internal Amenity

Ensure that all dwellings provide a high standard of internal amenity.

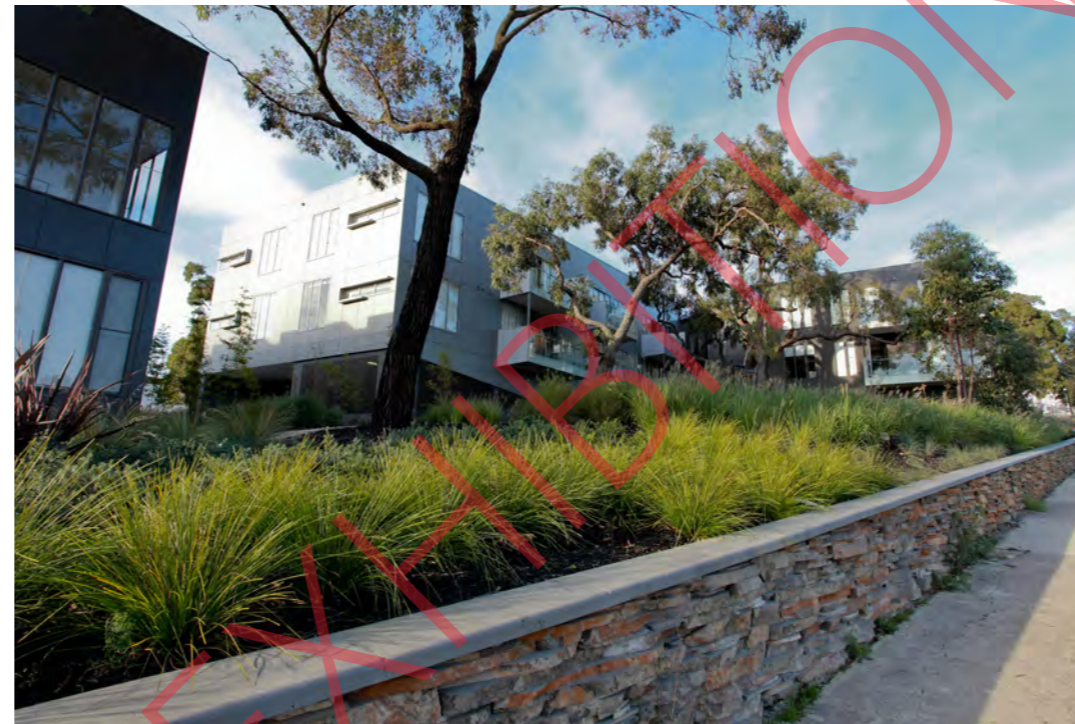
#### 6.3.9 Foundations of Community

Ensure a high quality urban design outcome which promotes social cohesion, social connections and healthy lifestyles.

## 6.4 General Design Guidelines

### 6.4.1 Building siting and Design

- Buildings should be oriented to optimise solar access to habitable rooms and private open space areas.
- Buildings should be oriented and include façade treatments which provide a clear delineation between private and public land.
- Buildings should be designed and sited to ensure an appropriate response to vistas and public open space.
- Buildings should maximise outlooks and opportunities for public surveillance.
- Buildings at corners should enhance the legibility of the urban form.
- Building orientation and separation, including upper level setbacks should be designed to maximise daylight and direct sunlight onto publicly accessible areas, including pedestrian links, communal and public open space areas.
- Buildings which include third storey elements should be designed so that the upper level is recessed to reduce the dominance of buildings from adjoining properties and the streetscape.
- Buildings should be configured to allow for natural ventilation and good breeze path between openings within rooms.
- Building design should minimise screening as a means of addressing overlooking.
- Buildings should be oriented, setback with openings created in the building form which encourage passive heating and cooling opportunities throughout different times of the year and reduce reliance on mechanical heating and cooling systems. Buildings must be designed for seasonal shading (e.g. use of eaves).
- Buildings should be sited and designed to promote crime prevention through Environmental Design (CPTED), supportive environmental for physical activity (SEPA) and universal design and accessibility principles. These will be pursued as part of future planning permit applications.

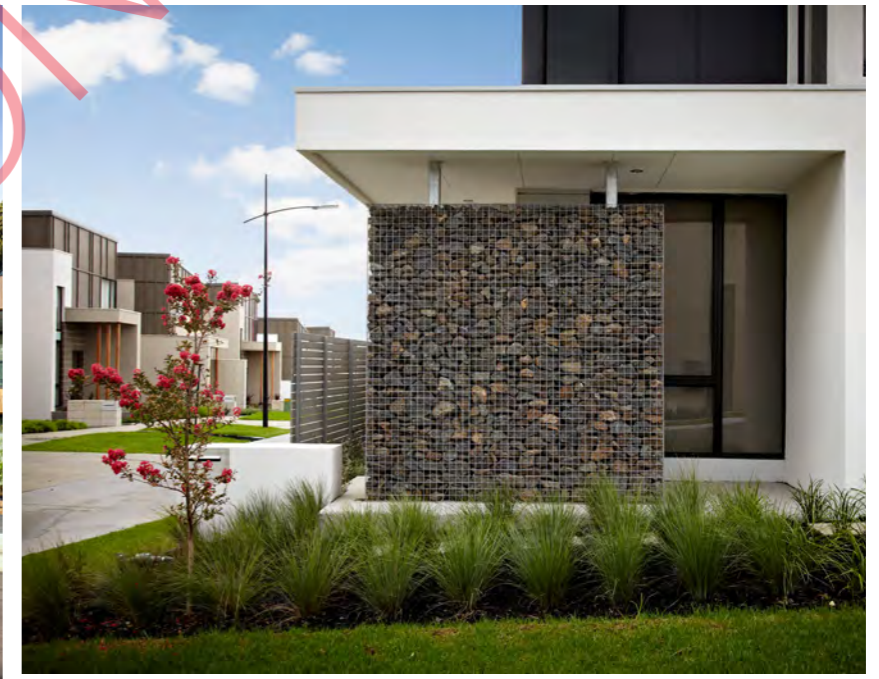


#### 6.4.2 Building Materials

- Façade design will include selected external building materials to achieve an approach that balances creativity with the demands for innovative design and construction solutions. Providing a diverse range of building materials will also assist with satisfying the needs and aspirations of the new and evolving community.
- Façade materials will include:
  - Face brick
  - Masonry or concrete blocks
  - Render
  - Painted and natural horizontal/vertical lightweight cladding
  - Timber cladding
  - Painted and natural lightweight panel systems
  - Timber battens/screening systems
  - Perforated screening systems
  - Semi-translucent panel systems.
- Roofing material will support a simple roof form that is contemporary in style and integrated into the overall building design.
- Roofing materials will include:
  - Colorbond or zincalume metal roofing
  - Low profile or slimline tile roofing (terracotta or concrete).

#### 6.4.3 Building access

- Entrances to dwellings should be clearly defined and identifiable from the street.
- Residential buildings within Stage 3 will be provided pedestrian access via a formal pedestrian link along the public open space reserve.
- Apartment building entrances and internal building spaces, hallways, lobby and elevators and car parking areas must cater for people of all abilities and provide adequate space for prams, bicycles and wheelchairs.



#### 6.4.4 Landscaping and Private Open Space

- Pervious surfaces will be encouraged through the use of grassed areas, rain gardens, permeable pavement, garden beds and on-site water detention systems as appropriate.
- Landscape design should integrate plant species and soil structures which respond to the site's levels and encourage good water management across the site and adjoining interfaces.
- All dwellings should be provided with access to private open space in the form of either ground level open space or courtyard, balcony or upper level courtyard or rooftop area; or communal open space at ground, upper or rooftop level.
- Landscaped and public open space areas will be designed to promote permeability and facilitate pedestrian activity and movement, promote crime prevention through Environmental Design (CPTED), supportive environmental for physical activity (SEPA) and universal design and accessibility principles.
- Dwellings should have no front fences except in circumstances where a fence is required for security purposes or to screen private open space in which case, a low front fence would be permitted.
- Where side boundary fences project beyond the front of the house they should reduce from 1.8m high paling to 1m high.
- Side fences along pedestrian links, open space areas and main roads will be semi-transparent except in circumstances where a solid fence is required to screen private open space.
- Built form will provide opportunities for significant vegetation and canopy trees on sites with appropriate building setbacks.



#### 6.4.5 Interface Treatment

- Pedestrian links abutting the public open space will be physically developed as part of the reserve, and will be finished to a high quality.
- Ensure that a high quality interface treatment is adopted between any new development and existing dwellings.
- The provisions of Clause 55 (ResCode) should be considered in the design of any buildings adjacent to the southern rear boundary (i.e. recessed built form at upper levels).
- A detailed landscaping treatment should be considered as part of any future planning application in order to provide a high quality interface treatment to existing residential properties.

#### 6.4.6 Vehicle Access

- Vehicle access areas should be designed to prioritise the safety of pedestrian areas and minimise pedestrian-vehicle conflict.
- Vehicle entrances should be clearly marked with appropriate signage to alert drivers, cyclists and pedestrians of the vehicle entry/exit point.
- Car parking and vehicle accessways should be designed in accordance with the requirements of Clause 52.06 Car Parking of the Greater Geelong Planning Scheme.

#### 6.4.7 Site Services

- All dwellings should include easily accessible and sufficient internal and external storage space.
- Buildings should include appropriate provision of car and bike storage.
- All bike and vehicle storage requirements will be designed in accordance with Clause 52.06 Car Parking and Clause 52.34 Bicycle Facilities of the Greater Geelong Planning Scheme.
- Waste management areas should be easily accessible for collection services, allow separation between recyclables and non-recyclables and encourage opportunities for composting and green waste.
- Waste management areas should not directly abut sensitive habitable room openings or cause adverse amenity impacts on residents or adjoining uses.
- Where possible, building services such as substations, fire services etc should be appropriately screened and located to the rear or sides of buildings.



- Letter boxes and meter boxes should be located to ensure that they do not obstruct sightline triangles described in Clause 52.06 Car Parking of the Greater Geelong Planning Scheme.
- Clotheslines should be located or screened to ensure that they are not visible from the front street of the dwelling.

#### 6.4.8 ESD

Building design should:

- Orientate all buildings to maximise sun and daylight access.
- Provide adequate measures for passive heating and cooling (e.g. seasonal shading by fixed building design elements to appropriate habitable room windows).
- Ensure buildings allow for natural ventilation.
- Orientate buildings to allow for solar absorption.
- Use building materials which avoid or reduce environmental impacts (eg. insulation, double glazing, weather stripping etc.)

Building service design should:

- Use efficient heating and cooling systems.
- Install water saving fixtures and rainwater collection and reuse systems (e.g. piping to connect to WCs or garden taps).
- Ensure energy efficient electrical design.
- Incorporate building management systems which include energy monitoring and lighting control.

Design of the waste management system should include a multi-stream waste collection system incorporating the collection of recyclable material and the opportunity for green waste and composting areas in appropriate locations.

#### 6.4.9 Internal Amenity

- Dwellings should include the potential for flexible internal rearrangements. This includes open plan living, large living spaces and access to natural light.
- Ceiling heights are to provide a sense of openness within dwellings and allow opportunities for daylight and natural air flow.



## 7. LANDSCAPE AND OPEN SPACE

### 7.1 Landscape Vision

"Our vision is to create a community that is permeable, walkable, connected and fully integrated within both its adjoining residential context and the wider community and recreational facilities of Belmont, as well as providing a high level of amenity in terms of streetscape, private gardens and open space assets for its residents."

### 7.2 Policy Context

A Landscape and Public Realm Concept Plan has been prepared by Tract Consultants in accordance with the provisions of Schedule 35 to the Development Plan Overlay.

### 7.3 Existing Conditions

The landscape concept has been influenced by the existing site conditions and the context established by the surrounding residential setting. Much of the site has been cleared of its former site features, including ground surfaces as they were contaminated by former uses. In order to facilitate the appropriate earthworks and remediation works, trees have also been removed from the site (except for those trees to be retained along Henry Street and within the park).



Figure 19. Indicative Landscape Palette

### 7.4 Landscape Principles

The main landscape design principles are as follows:

#### Permeability & Connectedness

The road and pedestrian pathway networks have been designed to enable maximum through and cross site connectivity, as well as separating pedestrian and vehicular movements where possible to reduce potential conflicts and encourage the use of the bicycle as an alternative method of transportation.

#### Integration with existing streetscape character

The existing residential streetscape character of Reynolds Road and Henry Streets is to be retained and enhanced by way of retention of key existing trees along with introduction of new street tree plantings to provide shade and amenity to its residents.

#### Public Open Space

The proposed public open space reserve in Stage 3 provides a public open space asset for the surrounding community in a prominent location, which has an excellent level of surveillance. Where practicable, existing high value canopy trees should be integrated within the open space reserve as identified in Figures 22 and 23.

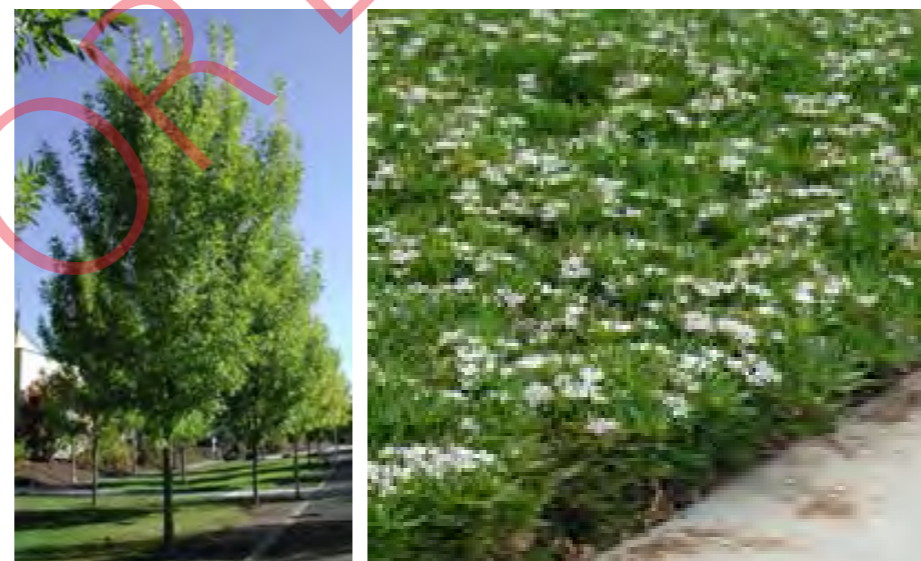


Figure 20. Landscape Palette - Soft

All other trees will be removed and no planning permit is required for their removal.

The reserve is to be interfaced by public roads on two sides (Henry Street to the north and a new Council road along the western side) and should not appear as being for the private use of Stage 3 residents.

Refer to Figure 23 for public open space concept.

#### Streetscape Amenity

Streetscapes will contain a mixture of hardy, low maintenance tree plantings which will provide a high level of shade, shelter and amenity to its residents. Native evergreen species are proposed to north-south streets to link back to the predominant native character of the area, while exotic deciduous trees will be utilised on east-west streets in order to maximise solar penetration into living spaces.

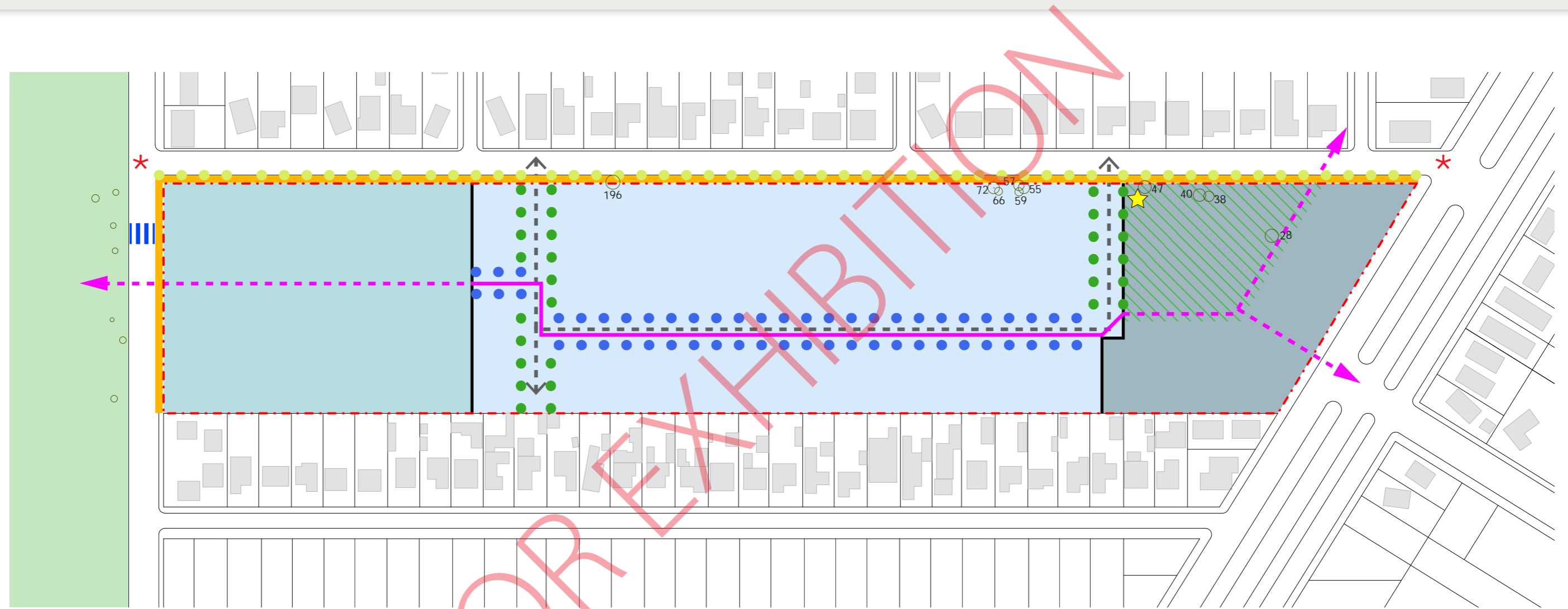
Species selected for streetscape trees include (but are not limited to):

- Himalayan Birch;
- Red flowering Gum;
- Yellow Gum;
- Crepe Myrtle;
- White Cedar;
- Manchurian Pear;
- Japanese Elm.

LAND BUDGET	
TOTAL SITE AREA	62070
TOTAL NET DEVELOPABLE AREA	62070
OPEN SPACE CONTRIBUTION	10%
PARK AREA	8%
TREE RESERVES	0.8%
CASH CONTRIBUTION	1.2%

Note: The balance cash component will be paid as part of Stage 1

Figure 21. Indicative Land Budget



- - - Boundary Line
- Stage 1
- Stage 2
- Stage 3
- Park within Stage 3
- Stage 1 road link
- Principal pedestrian link / Cross site connectivity
- Potential pedestrian link / Cross site connectivity - subject to future detail to the satisfaction of the Responsible Authority
- Pedestrian crossing connecting school & reserve
- Footpath upgraded to council satisfaction (1.5metres to Henry Street and 2metres to Reynolds Road)
- Evergreen trees to Henry Street (match existing / to council satisfaction)
- Evergreen trees to North/South links
- Deciduous trees to East/West links
- Existing Trees as per TreeLogic Report
- ★ Principal entry / Gateway
- \* Intersection upgrade at Henry St/ Corio Waurn Ponds Rd and potential intersection upgrade at Henry St/

Figure 22. Landscape design principal plan



**Legend**

-  **FUTURE STAGE**
-  Proposed future path connection
-  Pathway link
-  Native evergreen street trees to match existing, ie. *Melaleuca linarifolia*
-  Deciduous trees to corner park area
-  Feature trees to corner park area
-  Tree grove to mounding
-  Play Space
-  Seating nodes
-  Existing Trees as per TreeLogic Report
-  grassed kickabout area

Figure 23. Corner Park Detail

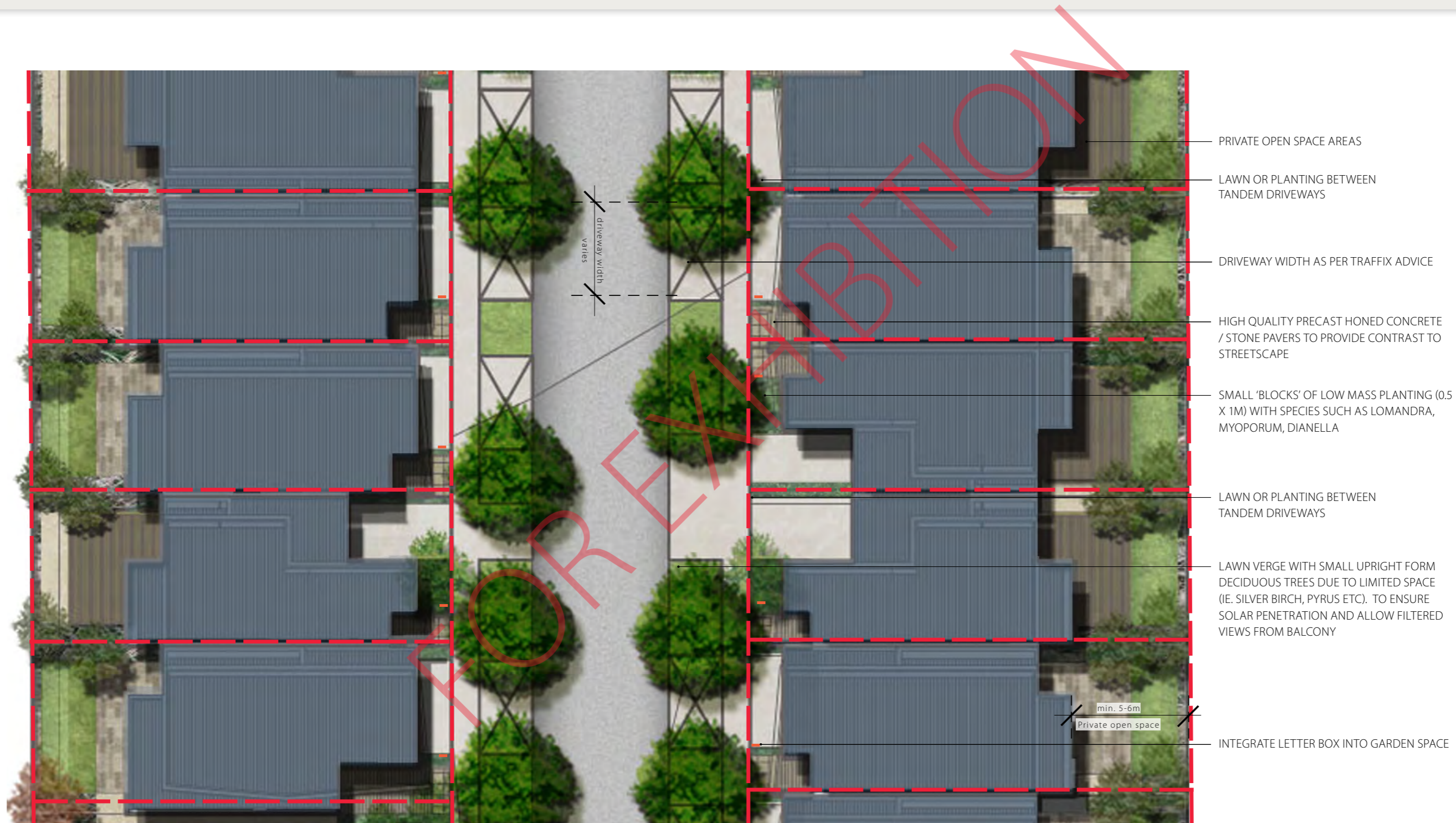


Figure 24. Indicative Streetscape Interface



Figure 25. 3D Indicative Render



Figure 26. Industrial Lot Types



Figure 27. Indicative Sectional Elevation

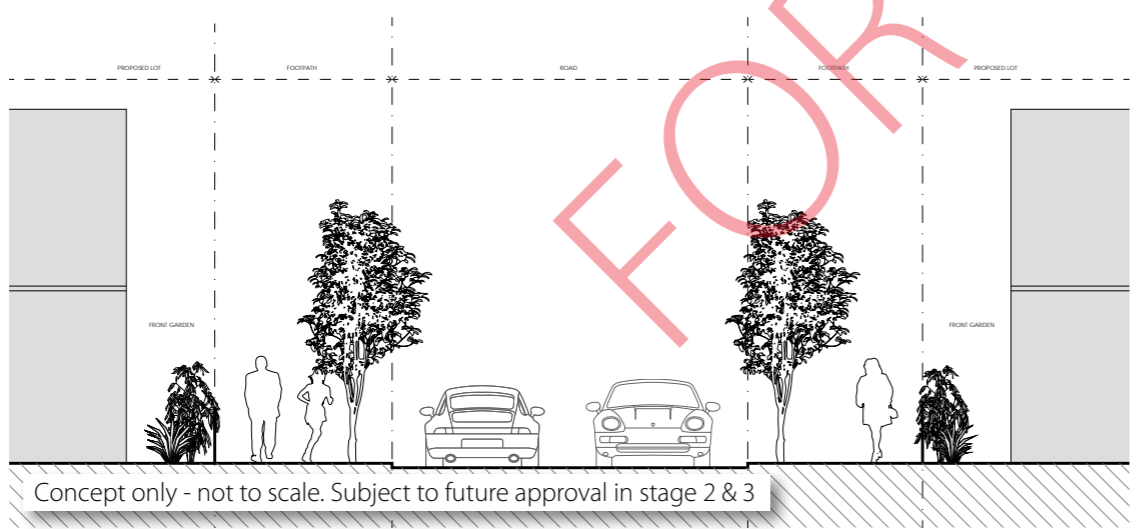


Figure 28. Indicative Typical Private Road Section

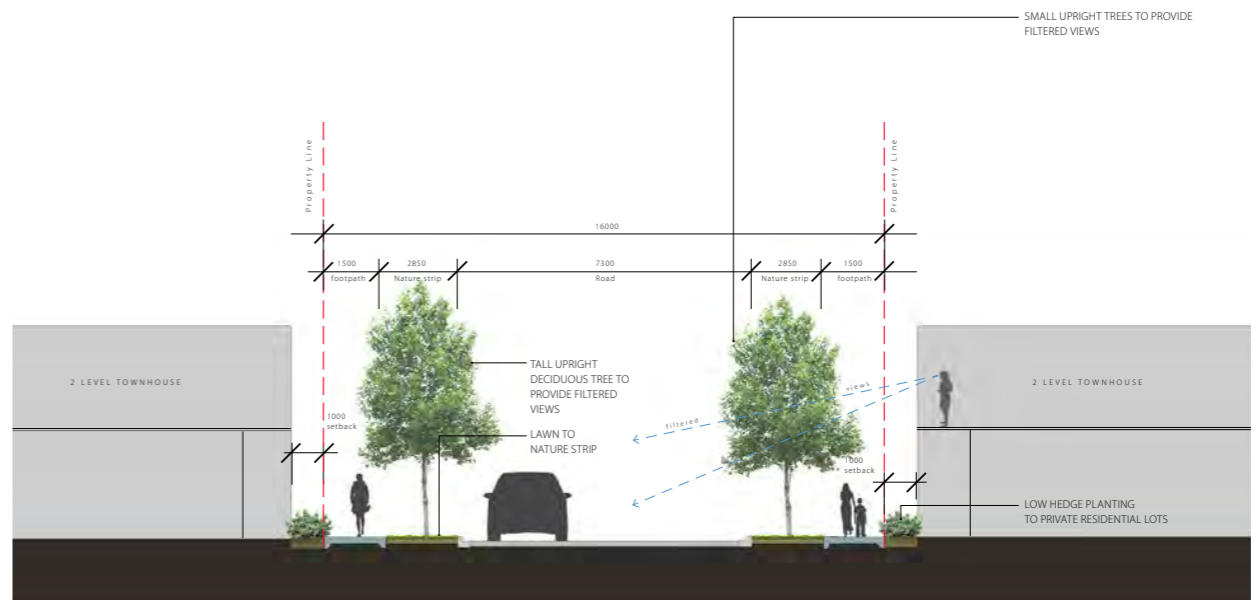


Figure 29. Typical Council Road Section



## 7.5 Interface Treatments

### Public Open Space

Pedestrian link reserves are proposed to abut the southern and eastern edges of the public open space (Stage 3). These paths will be approximately 2 metres wide and will provide a high quality urban design response to the site and will allow for access to people of all abilities.

These pedestrian links will be physically developed as part of the public open space and will also provide a high quality formal address and frontage for future dwellings/apartments within Stage 3.

### Existing Dwellings

Generous side and rear setbacks will be provided to the rear (southern) interface with existing dwellings, in accordance with the provisions of ResCode (Clause 55) of the City of Greater Geelong Planning Scheme.

Any new south facing windows will also be minimised to avoid any potential overlooking to the private open space areas of the existing dwellings. Where this is not possible, windows will be screened to a height of 1.7 metres in accordance with the provisions of ResCode (Clause 55) of the City of Greater Geelong Planning Scheme.

A detailed landscaping treatment will also be proposed along the rear boundary as part of any future planning application in order to provide a high quality interface treatment to existing residents.

Figure 30. Example Public Open Space Interface Treatment

## 8. SERVICES AND ENGINEERING INFRASTRUCTURE

### 8.1 Stormwater Management Plan

The proposed subdivision will result in a decrease in impervious surfaces resulting in a decrease in stormwater runoff volumes and contaminant loading. The City of Greater Geelong Council has identified this development as an opportunity to minimise existing drainage issues present in the downstream catchment. This has resulted in the discharge objective for the site being set to reflect the capacity of the receiving drainage system.

The Site Stormwater Management Plan (SSMP) provides guidance on the stormwater mitigation systems required to deliver design objectives and enable redevelopment of the site at 1 Henry Street, Belmont.

The objective of the stormwater management plan is to meet the conditions and requirements, set out by the City of Greater Geelong (COGG) Council in the planning application for stormwater management. Stormwater mitigation systems are designed to ensure that stormwater quality and quantity targets are met. The targets are detailed in the Stormwater Management Plan.

Numerous scenarios were considered to analyse the stormwater objectives for the Site. The approach determined to best suit the Site in its developed form is on site detention and contribution of a water quality levy.

The permissible site discharge to the east is less than the existing condition and in fact the 100-year pre-development flow of the Site, due to capacity capacity issues downstream.

East Catchment PSD: 1% AEP = 1.23m<sup>3</sup>/sec  
20% AEP = 0.63m<sup>3</sup>/sec

West Catchment PSD: 1% AEP = 0.05m<sup>3</sup>/sec  
20% AEP = 0.01m<sup>3</sup>/sec

Stormwater runoff generated within the east catchment during the 1% and 20% AEP events will be captured in on-site detention (OSD) facilities connected to effective roof areas and hard surfaces throughout the development. The OSD facilities will operate as source control measures rather than end-of-line due to the development layout and the terrain and infrastructure constraints.

Rainwater tanks (RWT) will be used as OSD facilities to enable integration throughout the development. Larger underground OSD's may be adopted for the high density apartment blocks and common property (body corporates) and to allow connection to surface runoff where required. The RWT will act as OSD using an operational setup.

End-of-line facilities will not be adopted for stormwater mitigation in the re-development of the CSIRO site as this would require significant excavation and a large footprint as the basin design would be dictated by the invert levels of the receiving downstream drainage infrastructure. This is a common constraint associated with brownfield developments.

Water quality objectives (WSUD) will be offset by paying a levy to the City of Greater Geelong (CoGG). These payments would form a contribution towards external Water Quality projects that Council would implement downstream of the site as part of the greater catchment.

Future development of the Site must adhere to the east and west catchment discharge rates using a combination of solutions such as;

- Gutters large enough to capture and convey the 100-year storm events and transfer to rainwater tanks- this could include box gutters which are sized to convey 100 year flows. With the more conventional 'house lots' eave gutters can be utilised to convey flows up to the 100-year events, through a combination of larger (tropical specification) gutter profiles and additional downpipes as required, or box gutters to capture and convey flows; and/or
- On-site rainwater tanks large enough to detain 100-year gap flows for the remainder of the lot title area to compensate for 100 year undetained flows from the lot title area (land external to the roof area); and/or
- Separate detention systems to cater for undetained flows of each title external to the roofline of the building to be installed to detain flows back to allowable/approved discharge rates.

Prior to the issuing of a planning permit for each Stage, a Stormwater Strategy must be prepared and approved by Council, accurately detailing how stormwater quantity and quality is to be managed. The approved Stormwater Strategy will then inform and direct any Section 173 Agreement.

Stormwater management must have regard to the WSUD Engineering Procedures (CSIRO), Clause 56.07 of the Greater Geelong Planning Scheme and the City of Greater Geelong Stormwater Management Plan 2002.

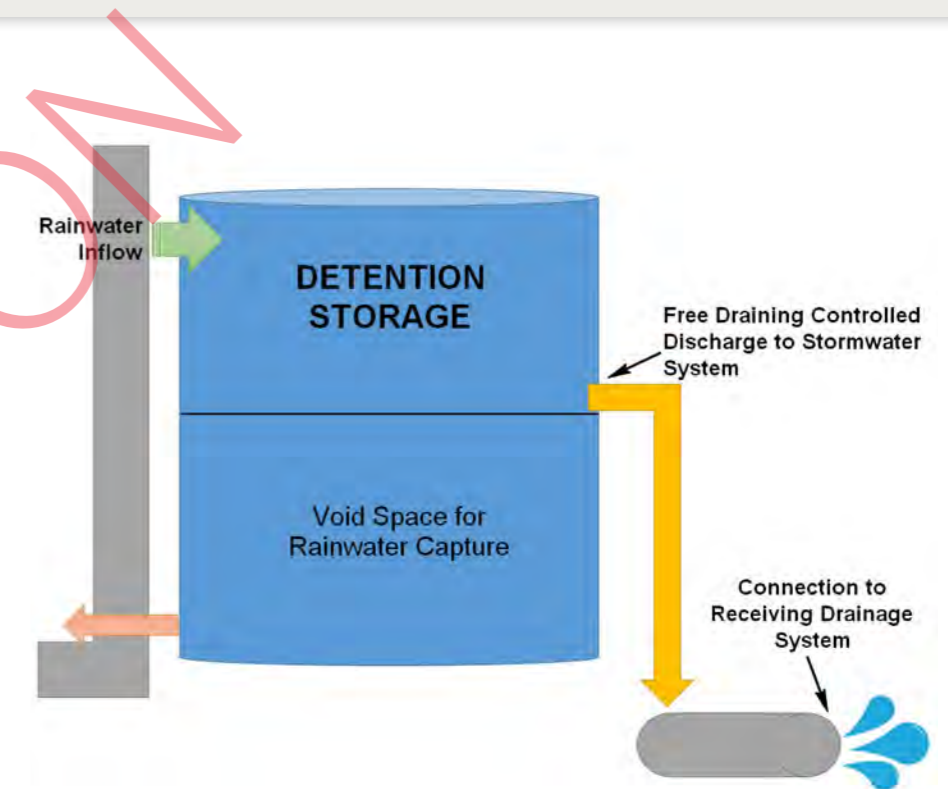


Figure 31. Indicative Rain Water Tank

## 9. TRAFFIC IMPACT ASSESSMENT

### 9.1 Policy Context

In accordance with the provisions of Schedule 35 to the Development Plan Overlay, a Road Network and Traffic Management Plan has been prepared.

### 9.2 Transport Objectives and Standards

Clause 18 of the Greater Geelong Planning Scheme outlines the State Government's transport objectives. These objectives have informed the preparation of the Development Plan. The key objectives are summarised as follows:

- Create a safe and sustainable transport system by integrating land-use and transport.
- Coordinate development of all transport modes to provide a comprehensive transport system.
- To promote the use of sustainable personal transport.
- To integrate planning for cycling with land use and development.
- Upgrade and develop the Principal Public Transport Network and local public transport services in metropolitan Melbourne to connect activity centres, link activities in the employment corridors and link Melbourne to regional centres.
- To manage the road system to achieve integration, choice and balance by developing an efficient and safe network and making the most of existing infrastructure.
- To ensure an adequate supply of car parking that is appropriately designed and located.

The overall aims and specific features of the Development Plan meet the objectives of Clause 18. This has been achieved by providing a walkable, cycle friendly urban environment through the provision of a connected and legible pedestrian and cycle network. Pedestrian paths connect with the existing residential surrounds, bus stops and local services, and will encourage residents and visitors to access the site by sustainable transport modes, rather than private vehicle.

The development provides an efficient and safe road system by proposing internal roads with access from Henry Street to allow easy and safe access onto the site.

The development will deliver the necessary amount of car parking spaces, in accordance with the car parking standard specified under Clause 52.06 of the Greater Geelong Planning Scheme. There is no intention as part of the Development Plan to seek a reduction of car parking requirements in any stage of the development.

### 9.3 Existing Conditions

#### 9.3.1 Road Network

##### Corio-Waurn Ponds Road

Corio-Waurn Ponds Road (formerly Princes Highway) is an Arterial Road and Road Zone Category 1 Road Zone under the Greater Geelong Planning Scheme. Corio-Waurn Ponds Road is aligned in a northeast-southwest direction.

Adjacent to the site, Corio-Waurn Ponds Road provides two traffic lanes in each direction divided by a central median. The north side of the carriageway also provides a wide shared parking and bicycle lane. A service road is provided on the south side. A signalised pedestrian crossing is located 80m south of Henry Street. A 70km/h speed limit applies to Corio-Waurn Ponds Road.

##### Henry Street

Henry Street is a local road providing an east-west connection between approximately 7m and 7.8m. The width provides for either a traffic lane in each direction and kerbside parking on one side of the road, or kerbside parking on both sides of the road and a single lane for two-way traffic. On-street parking in Henry Street is unrestricted.

The intersection of Henry Street and Corio-Waurn Ponds Road is an unsignalised T-intersection. A median break allows for all turning movements.

A footpath is only provided on the north side of Henry Street (i.e. not along the Site's frontage). The default urban speed limit of 50km/h applies to Henry Street. There are a limited number of street trees along the southern side of Henry Street, as well as an indented bus bay opposite the intersection of Johnston Street.

##### Reynolds Road

Reynolds Road is a local road aligned in a north-south direction between Corio-Waurn Ponds Road in the south and William Street in the north. Adjacent to the Site Reynolds Road has a carriageway width of 8.5m. The width provides for either a traffic lane in each direction and kerbside parking on one side of the road or kerbside parking on both sides of the road and a single lane for two-way traffic. There is a formal pedestrian footpath along the entire length of Reynolds Road boundary.

On-street parking in Reynolds Road is generally unrestricted, although some areas of 'No stopping 8:15am-9:30am, 3pm-4pm School Days' are located near the school.

A 50km/h speed limit applies to Reynolds Road, with a 40km/h school zone speed limit applying between 8-9:30am, 3pm-4pm School Days are located near the school.

A 50km/h speed limit applies to Reynolds Road, with a 40km/h school zone speed limit applying between 8-9:30am and 2:30-4pm on School Days.

##### Intersection and Peak Demand Analysis

A 7-day automatic tube count traffic survey of Henry Street (between Stephen and Johnson Street) was undertaken for a week beginning 26th July 2015. A summary of the results is presented in the Traffic Report prepared by Traffix Group.

The SIDRA assessment results are presented in the Traffic Report prepared by Traffix Group - Existing Intersection Performance. Based on the analysis, all movements at the intersection of Henry Street and Corio-Waurn Ponds Road operate at LOW A or at an 'excellent' level of service.

#### 9.3.2 Public Transport

The site has access to public transport with bus services located within walking distance from the site.

Bus Route 1, along Corio-Waurn Ponds Road provides a service between Waurn Ponds and Corio via Belmont, South Geelong, the Geelong CBD and North Geelong. Services operate between 6:00am-9:10pm on weekdays, 7:25am-8:30pm Saturday and 8:25am-8:30pm Sunday.

The services provides 20 min frequencies on weekdays and 30 min frequencies on weekends.

## 9.4 Traffic Impact Assessment

### 9.4.1 Traffic Generation Rates

The following estimates the traffic volumes generated by the proposed development.

- Two-bedroom dwellings with one car space are likely to generate in the order of 4-5 vehicle trips per day.
- Three bedroom dwellings with two car spaces are likely to generate in the order of 6-8 vehicle trips per day.

Given the site's location and likely mix of two and three bedroom dwellings within the subject land, the proposed dwellings are expected to conservatively generate an average of 6 vehicle trip ends per dwelling per day, with 10% of traffic occurring in each peak hour.

The above traffic rates are conservative. There may be cases where lesser rates are appropriate, such as if a portion of the site was developed for smaller dwellings or apartments.

### 9.4.2 Road Infrastructure Improvements

- The additional development traffic requires the following road infrastructure improvements as specified by VicRoads:
  1. Undertake modifications to the Henry Street/ Corio Waurn Ponds Road intersection to prohibit vehicles turning right.
  2. Create a central median opening on the Corio Waurn Ponds Road between Henry Street and Davis Street, to cater for west bound vehicles only. These works must also include the construction of a right turn lane.

These works must be completed prior to the issue of Statement of Compliance of the first stage of subdivision.

- Further planning applications may need to be supported with traffic impact assessments that consider traffic impacts and potential intersection upgrades.
- An upgrade to the Henry St/Reynolds Rd intersection will not be required for Stage 1 but may be required for Stages 2 or 3.
- Stage 2 should consider the school crossing on Reynolds Rd, and its potential modification or relocation at the developers cost. If no works are required at Stage 2 then it shall be considered at Stage 3.
- Road reserve works (road pavement, kerb, footpaths, lighting, trees, etc) to be constructed at stage of abutting land development.

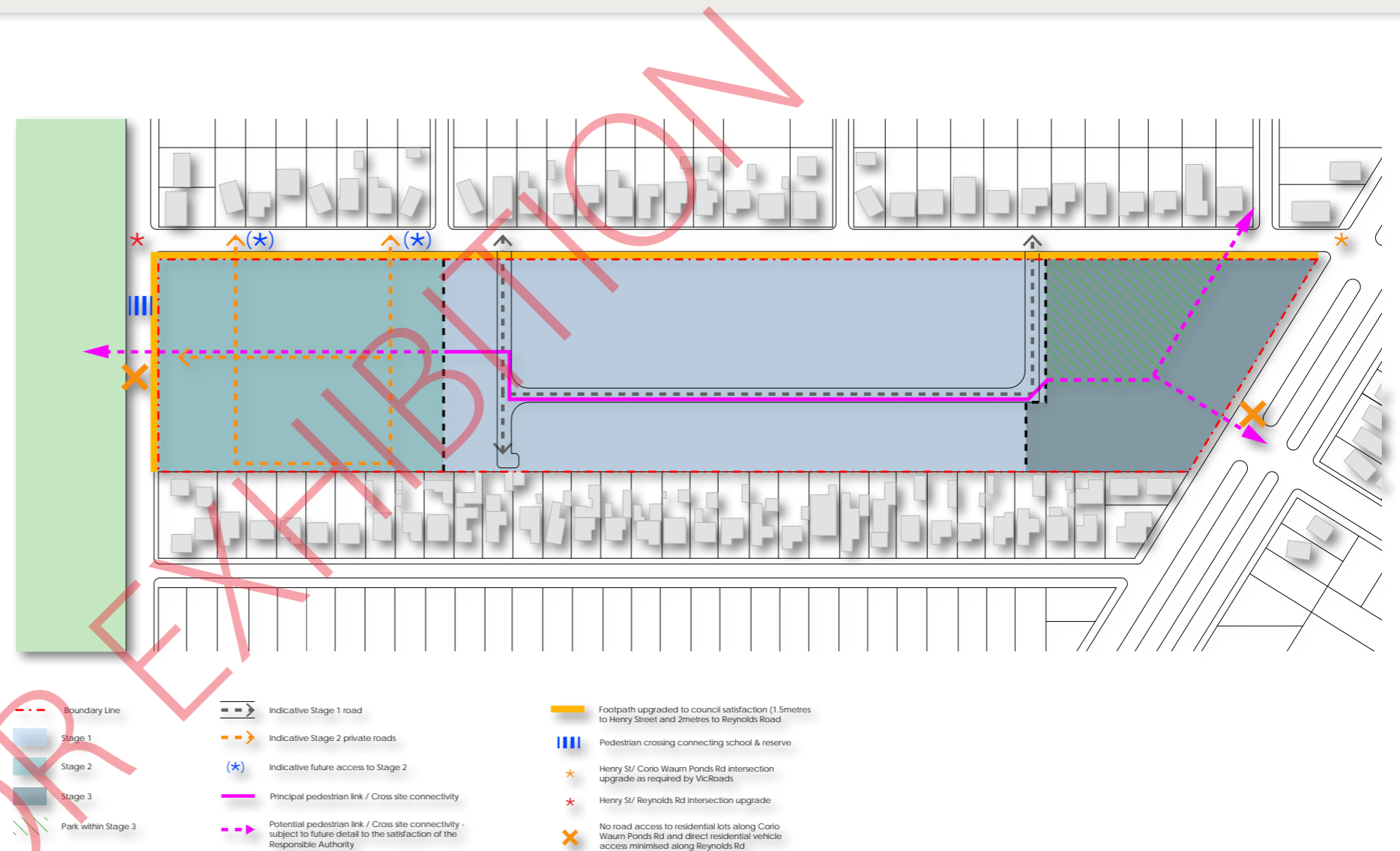


Figure 32. Road Network and Traffic Management Plan

## 10. CONCLUSION

The development of 1 Henry Street, Belmont is consistent with State and Local Government Policy which supports the revitalisation of strategic redevelopment sites and urban consolidation.

The development will offer a vibrant and sustainable residential community that will integrate with the existing urban environment and make good use of the existing services in Belmont.

The development will also provide an area of open space for residents of the Site and surrounds. The land represents a significant opportunity for a high quality infill development that will provide a unique neighbourhood identity.

Development of 1 Henry Street, Belmont, in accordance with this Development Plan ensures that the site is realised in a manner which respects the existing character of the area whilst setting a new benchmark for sustainable infill development.



Figure 33. 3D Render - Townhouses

